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Message Board

and open the virtual box and follow the wizard instructions. When I click on PCQVirtual appliance Icon, It shows me error message "couldn't mount the media."


raj99 on PCQforum

PCQ: You should extract the "tar.bz" file. This contains all the virtual appliances. To mount your DVD, insert it into your drive, open the File Browser and double click on the CD/DVD icon on the left panel.

 *Hi, recently there has been a lot of news about Asprox botnet infecting websites. How can I protect my websites against this attack?*

PCQ: Earlier Asprox botnet was being used for phishing attacks. In May it started compromising websites through a SQL Injection tool. It infects machines through a 'msscncr32.exe' binary that runs as a 'Microsoft Security Center Extension'. This binary is basically a SQL Injection tool which does a search on Google for vulnerable .asp pages and launches SQL injection attack against them. If it is able to

compromise the website successfully, it injects an iframe into the website which forces visitors to download malicious files usually 'msscncr32.exe' to infect their systems. If your websites are made in .asp or using SQL database, then make sure you have applied all the latest patches.

 *When I connect to the Internet, I don't see any packets being received, only packets are being sent. I'm using a wireless connection. When I try to check the IP address and default gateway, I get the IP address but not a gateway. How do I get this, or how do i get to know the correct default gateway so that i can enter it manually? I even did ipconfig /all but I only got the IP address, and not gateway.*

ibrahim_sh on PCQforum

PCQ: You haven't mentioned anything about the setup and which wireless router are you using. Please check whether it has DHCP. If not, then please enable that. If it still doesn't assign a default gateway, then assign the IP address of your wireless router as the default gateway. Best will be to contact your ISP and explain them the issue. □




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Three new games, Visual Studio 2008 Express Edition and 14 project mgmt tools



PCQ Professional DVD

20 multimedia tools, 17 network and mobility tools, 12 office and finance tools, 11 security tools, and 5 Linux OSes



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Leading Edge



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Finding Skilled Manpower the Web 2.0 Way

*Water water every where,
nor a drop to drink!*

I'm reminded of this quote from the ancient mariner Samuel Taylor Coleridge's poem every time I hear about the shortage of skilled manpower in India.

Sadly, I've been hearing of it too frequently from too many people lately. This is rather interesting, considering that most job sites today are overflowing with resumes.

A quick check on monster.com revealed that they have over 1.2 Crore resumes! Naukri claims that you can reach over 12 million job seekers, and likewise for other job sites. So one thing for sure is that there are enough people and jobs around. In fact, people today walk around with multiple job offers in their hands, and bargain for the best possible salary from their prospective employers.

Why then is it still so difficult to find the right candidate?

A close friend in the HR department of a company told me that it's not as if you can't find resumes on job sites. You'll find plenty of them. The problem is in finding the right candidates for the core functions of the company. Either they just don't fit the bill, or if they do, then they demand a mammoth salary.

So the only alternative is to go through head hunters or HR consultants. Recently however, a third channel has been slowly gaining the attention of HR heads and even

the head hunters themselves—the Web 2.0 enabled social networking sites. Several new opportunities have opened up there.

One such site, LinkedIn for instance, specializes in creating networks of professionals. Part of their tagline itself reads “discover jobs and business opportunities”. With their claim of having more than 19 million registered users, you have to believe them. Another site, Jobster.com has introduced a feature that helps organizations build and manage their own talent networks, which basically works on promoting referrals from new candidates or from the top performers of the company.


Similarly, other social networking sites like Facebook, YouTube, Orkut, etc also have their own advantages. Since people don't come to these sites hunting for jobs, but only to socialize, a smart recruiter can actually find the perfect candidates there. This of course is good for both the recruiter and the person being recruited. Talent can even be found on forums that have specific communities such as marketing, gamers, etc.

This is still a relatively new channel for recruiting the right talent, so we haven't heard any major successes or failures to this approach yet. But if you have any experiences to share, then do let me know.


Incidentally, starting this month, we'll have a regular section on IT careers, in which we'll be covering the hot opportunities in IT, certifications you can do, skill sets to build up, training, and much more. □

MESSAGE BOARD

Readers' View Troubleshooting advice


 *I am writing to PCQuest for the first time. I have been a subscriber of PCQuest for last 12 years. Initially I found it interesting, and then it became my necessity. Now it has turned to be my passion and love. As and when I think of something to suggest, for instance a software or an article, to my surprise, it turns up right away next time. I wonder how you read your readers' minds. The way you handled my problem with the DVDs last time is amazing. Thanks to PCQ team.*
Mohan Jit Singh Grover

Editor: Thanks for the encouraging feedback. It's always our endeavor to provide the best possible content to our readers. Do keep that feedback (good or bad) coming, so that we can continue improving our content.

 *I am a regular reader of PCQuest. The first thing I look forward to at the beginning of every month is to read PCQuest. Your magazine has a wonderful mix of of latest information and facts. I am working in Ministry of Communication and Information Technology as Dy. Manager IT, and it has helped me learn more about the latest in IT. Every single article is perfect-hats off to you guys for making it so informative and exciting every time. for me PCQ is not just a magazine, but a true guide and friend, who promises to enrich me with a pleasurable and knowledgeable issue every time. I would like to wish you all the very best ahead.*

Editor: Thank you and we'll do

our best to provide the best to live up to our readers' expectations.

 *Hi, I have a Compaq Presario 6171 AI desktop PC, purchased on Mar '03. Recently there has been a lot of performance degradation in my PC. It has become very slow. I need your help in upgrading my PC. Its configuration is an Intel P4 1.9 GHz CPU, Samsung 256MB DDR PC2100 RAM, a MicroStar 6541 motherboard, 40 GB Maxtor HDD, Windows XP Home Edition with SP2, 16x DVD with 40x CD Writer, 1.44 MB FDD, Modem, 10/100 NIC, 17" Colour Monitor, JBL Platinum Speaker system, a 200 W SMPS. My questions are:*

1) Can I upgrade the RAM? If yes, do I have to install the same PC2100 DDR RAM? If yes, is this type of RAM available in market and at what price? Should I use 2 512MB RAM or 1 1GB RAM?

PCQ: Yes you can upgrade your RAM and you should install the same PC2100 DDR RAM. Yes. You can find this RAM in the market, which costs approx Rs 2500 for 1 GB and yes go for a single 1 GB DIMM.

2) If I upgrade the RAM, would 200W power supply be sufficient? The problem with SMPS is that it's Compaq made and the slot can accommodate a similar SMPS only. So I cannot buy a higher wattage SMPS of say VIP or other brand. What to do in this case to upgrade SMPS?

PCQ: Yes, your existing SMPS

will be sufficient. but if you're upgrading your HDD too then you might need a 350W SMPS. You can choose from the slim line range of SMPS from Intex or Quantum available for approx Rs 500.




3) Is the motherboard powerful enough to bear all the above upgrades?

PCQ: Yes, your motherboard is capable of handling all these upgrades.

4) Can I add another hard disk? If yes, what type and which one should I buy?

PCQ: Yes, you can upgrade your hard drive, but it would be advisable to go for 80 GB, because some P4 machines have compatibility issues with 120 & 160 GB HDDs.

From adiarc on PCQforum

 *I am a beginner to Linux. I have installed PCQLinux 2008 you gave in your March issue. I have an AMD Processor with 256 SDRAM, and 40 GB hard disk. When I insert the virtual appliance DVD supplied with PC-Quest, it does not get detected while other CDs like Audio CDs are playing, but mp3 CDs are not detected. I couldn't install the PCQ virtual appliance. In the magazine it says to extract the index.htm file to some location* ▶

Enterprise Implementation

Debug and Tune Solaris in Realtime

SERIES

Solaris

PART II

DTrace is a utility in Solaris that dynamically tracks the behavior of any application and the operating system itself, and tunes their performance on the fly

Rakesh Sharma

Trying hard to figure out the exact faults or issues that pounced your system's performance? A tough task for system administrators indeed! Sun Microsystems has come up with a framework called 'DTrace,' in Solaris 10, through which system admins can trace down the issues on a live system, without taking it offline. Apart from this it also helps in understanding the behavior of the operating system in realtime, which in turn helps system administrators keep their systems up and healthy.

In addition, DTrace can be used by developers to get information on the list of processes that are running, and also about creation and termination of the processes. DTrace can also be used to create programs to dynamically monitor the system using the DTrace 'D' programming language. As far as the working of DTrace goes, it makes use of 'probes' which reside in the kernel of the operating system. A probe is basically a location or an activity, or simply putting it probes are sensors located in different parts of the kernel, which are used by DTrace to collect necessary information as described by the system administrator or developer, and display it. Probes originate from different kernel modules called 'Providers'. After starting DTrace, each provider is given an equal opportunity to publish his probes to the DTrace and then decide on the probe to be enabled.

Getting started

Let's begin with a simple command which makes use of two probes: 'BEGIN' and

'END.'

```
# dtrace -n BEGIN -n END
```

After the command gets executed, the following result comes up:

```
dtrace: description 'BEGIN' matched 1
probe
```

```
dtrace: description 'END' matched 1
probe
```

```
CPU  ID          FUNCTION:NAME
  0   1             :BEGIN
```

```
^C
```

```
1   2             :END
```

The 'BEGIN' probe gets fired each time you start a trace. Similarly when you end the trace the 'END' probe gets fired. In the above scenario when we hit 'Enter' key to execute the command, the trace is started, DTrace found the two probes and the BEGIN probe is fired. As soon as we press 'Ctrl' + C to terminate the trace process, the END probe gets fired and DTrace displays the information before terminating itself. Apart from the function name, which is displayed in the result, you can also view the ID associated with each probe. You can also view which CPU the probe has been executed on, in our case probe BEGIN has been executed on first CPU whereas the END probe was executed on the second CPU.

The 'D'

As said earlier DTrace also provides you the option to create custom programs with 'D' programming language. This language is almost similar to that of 'C' programming language. In the D programming you can also make use of 'C' pre-processors along with 'D' program by using the DTrace -C option. The D com-

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Keyword: DTrace

piler first loads up the description for the 'C' pre-processor from the operating system before executing the D program. But if you have some 'C' definition which does not exist in operating system or DTrace is unable to find the description, then it is better to add the required libraries inside the C source code during the C programming. The D program structure consists of three parts: first the description of the probe. In D programming every clause is started with the description of the probe. Suppose 'abc:xyz' is a probe description, so in this 'abc' is the function which will be used to match the related probe using DTrace and 'xyz' is the name. Second is the 'Condition', this is taken into account when the probe mentioned is fired. And the third is the action statement that will be performed. Technically the structure would look like:

Description of Probe

```
/predicate/
```

```
{
```

```
    Action statement
```

```
}
```

Let's see a simple 'Hello World' example of D programming, which is the best to ▶

Enterprise Implementation

start with. For this write this simple program below in the vi-editor and save it with extension '.d', say 'hello.d'.

```
BEGIN #probe description
{
    trace("hello World"); #action
statement
    exit(0); #ac-
tion statement
}
```

For executing the program write the following command on the terminal and you get the result:

```
# dtrace -s hello.d
dtrace: script 'hello.d' matched 1 probe
CPU ID      FUNCTION:NAME
0 1         :BEGIN hello world
```

The D programming provides you with some predefined macros which have '\$' as prefix such as '\$egid' for effective user ID, '\$gid' for real group ID, '\$pid' for process ID, etc. For understanding you can refer this to

the arguments that are passed to program in 'C' programming language. All the macros are converted to some process ID or user ID except the '\$[0-9]+' and '\$target' macros. Let us see another example, this time it is little complex so as to give you a better view of the D programming. In the following program we will have a probe description, predicate followed by action statement. You will also see how to pass an argument in the program. Write down the following code and save it as 'sys.d'.

```
syscall::entry
/pid == $target/
{
    @[probefunc] = count();
}
```

Execute the programme by writing the following code on the terminal:

```
# dtrace -s sys.d -c ps
```

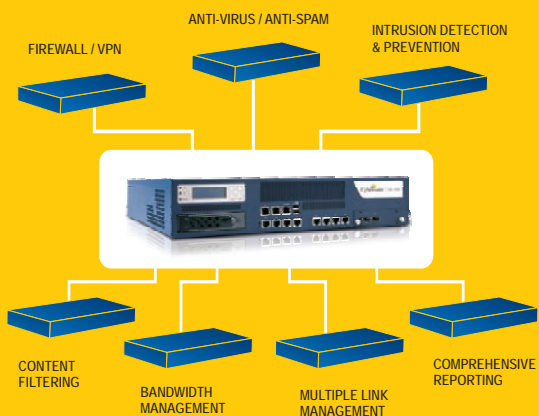
The output will be as follows:

```
dtrace: script 'sys.d' matched 231 PID
```

```
TTY      TIME CMD
3923 pts/3 0:00 dtrace
3924 pts/3 0:00 ps
3847 pts/3 0:00 sh
dtrace: pid 3924 has exited
access           1
exece            1
fcntl            1
fsat             1
fxstat          1
getuid           1
ioctl            1
memcntl         1
rexit            1
getdents         2
getpid           2
```

Complete output of this program is omitted. The program displays all the system calls by the 'ps' command made during execution. In the program above '@target' is used to accept the target process, ie ps. □

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Are Firewall and Anti-Virus Enough for Network Security?

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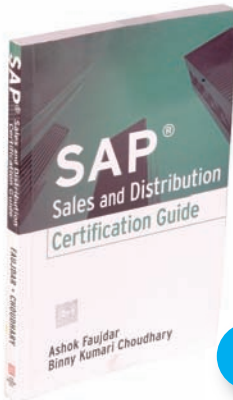
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Contest

SAP Sales and Distribution Certification Guide

SAP SD certification examination is an online test of three hours comprising many multiple choice questions. This 11-chapter book is meant to prepare and help



you to clear your concepts on SAP SD. First few chapters provide you information on certification exams, the type of questions and a few other details. Then it focuses on the broad coverage of all the concepts related to representation of the organizational structure of a company's sales and distribution department in the SAP

system. The book contains a roadmap of how to prepare for the exam, important points to learn and variety of questions on various topics. With the help of certification type practice questionnaire and two mock tests with elaborated answers, the reader can have a good trial run before they hit for the certification exam. SAP Sales and Distribution Certification Guide is primarily meant for SAP SD enthusiasts and practitioners.

This book is an useful one for SAP SD certification exam, interviews for SAP SD consultancy as well as for those who are eager to learn SAP SD. □

Author: Ashok Faujdar, Binny Kumari Choudhary
Price: Rs 395, **Pages:** 171

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Oracle Database AJAX & PHP Web Application Development

Ajax is one of the driving factors in the new Web 2.0 economy. This is a guide to help you design and deploy highly responsive data driven by Web 2.0 Applications.



Written by Web 2.0 programming experts, this book shows you how to design faster, lighter and more responsive Web applications. You will learn how to develop modular AJAX and PHP code, add dynamically updated content, and implement click-to-edit and drag functionality. It offers details on

incorporating cutting edge mash up, reporting

and communication features. The last part contains appendixes that support you to use HTML, PHP, SQL, PL/SQL. However, combining AJAX, PHP and modularity concepts allows you to create new and amazing user capabilities in your applications while at the same time reducing code support and creation time. Easy to read for both business and IT managers, it has very interesting appendixes with glossary included.

Those who are new to technology should begin here. Experts of PHP and JavaScript modularity and objects will also find this book an useful one. □

Author: Lee Barney, Michael McLaughlin
Price: Rs 495, **Pages:** 467

Book Contest, June 2008



Here's your chance to win one of these books. Answer the questions below and send them to pcquest@cybermedia.co.in with the subject 'TMH Book Contest June 2008'. Do include your full name, designation, company name, mailing address and telephone number. Results will be announced on forums.pcquest.com under the 'Current issue' thread. The last date for sending your answers is 30 June 2008.

SAP stands for?

- Systems Applications and Products
- Sales Applications and Process
- Single Application and Product
- System Application and Process

What is PL in PL/SQL stands for?

- Procedural Language
- Proper Language Product Lineup
- Product Lineup
- Post language

Absolutely Cool



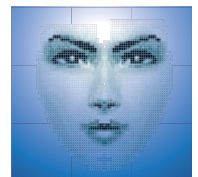
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Enterprise Implementation

Integrate data from various apps in minutes

Jitterbit is an out-of-box integration suite that can integrate data between various enterprise apps, web services, databases, XML data sources and other systems

Rahul Sah

Integrating enterprise apps for data exchange is essential for every business today, in order to ensure smooth flow of data across the organization. This sort of data integration between various enterprise apps is a complex and time-consuming process and is also not the same for every business environment. Plus it also requires significant investments and resources. Microsoft's SharePoint and BizTalk Servers are some of the integration solutions that an enterprise can opt for. But if you're on a tight budget, then Jitterbit is an excellent alternative.

Jitterbit is an Open Source alternative that provides quick, easy, and affordable integration. It is a fully graphical integration solution that provides users with a platform to create and share their integration projects. Jitterbit can be used to integrate all major enterprise apps, databases, flat-files, Web Services, and messaging systems like WSDL or JMS. It has been optimized to function over Windows, Linux, or Solaris based OSs. With Jitterbit an organization can integrate data between independent apps easily and quickly, and also have a very low cost of ownership as compared to paid integration solutions.

In the following article we will integrate data coming from a database that will be converted to an XML format and will be posted on a location in the shared file server. Doing so we will see how to configure the Jitterbit server and its client.

Getting started

Jitterbit Integration suite can be availed

from this month's PCQ_Professional DVD. It comprises of the following two components:

- **Jitterbit Integration Environment:** It has an intuitive GUI that enables the user to configure, test, deploy, and even manage the integration projects on Jitterbit Server.
- **Jitterbit Integration Server:** A scalable run-time engine that processes all operations for the integration projects. It uses a multi-threaded architecture so as to handle several transactions concurrently.

To install the Jitterbit server, extract the contents from the file `jitterbit-server-1.3.2.19-with-postgresql-win32.exe` to a directory. In this directory, run the `setup.exe` file which will initiate the Jitterbit server installation wizard. During the setup process, the wizard will prompt for installation of PostgreSQL server. If you already have PostgreSQL database server installed you can skip this step, else you can have the wizard install it for you.

Once installed, the wizard asks for credentials of database admin. You'll also be asked to create the credentials for Jitterbit administrator. After the wizard completes its job, we can ensure that the server is running by checking that JitterbitTomcat and JitterbitProcessEngine processes are running through the Task Manager.

We can install the client on the same system or on any other system on the network. The Jitterbit Integration Environment can be installed through the

DIRECT HIT!



Applies To: IT Managers
Price: Free
USP: GUI-based environment to design, implement, and deploy integration projects
Primary Link: www.jitterbit.com
Keyword: Jitterbit
On DVD: Professional\Labs\Jitterbit

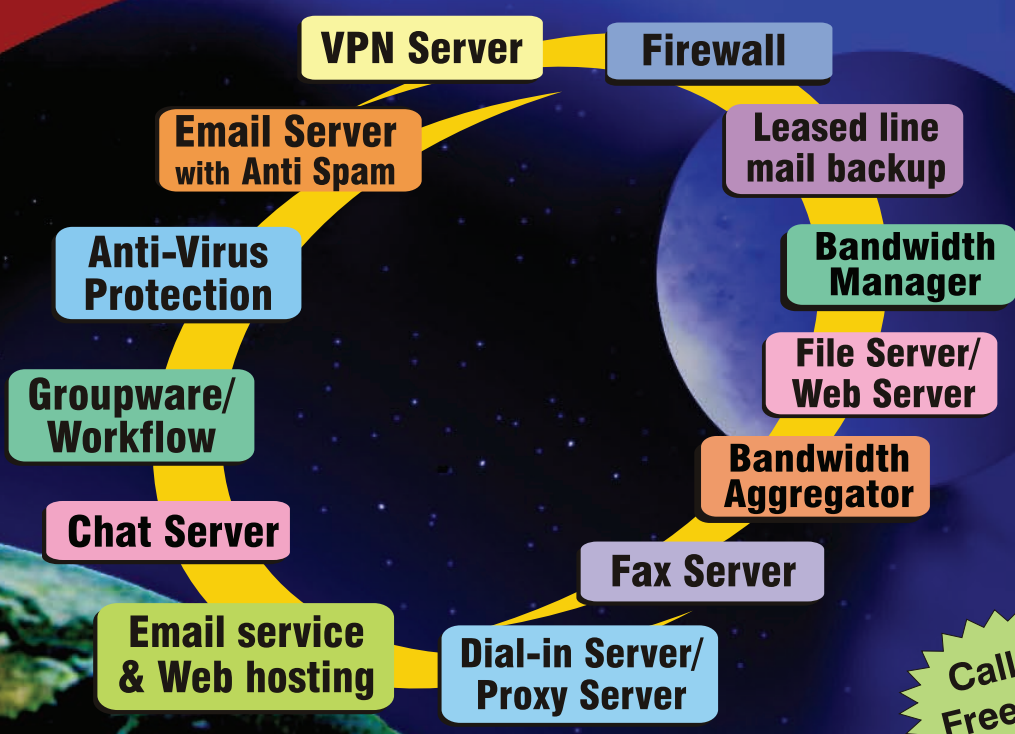
Jitterbit-client-1.3.2.5-win32.exe file on this month's DVD. This file also extracts the installation files into a directory and through the `setup.exe` file; we can install the client interface of Jitterbit by following the wizard's steps.

With the client and server installed we can proceed with the integration of data between disparate sources, but before that we must ensure that the database server (PostgreSQL) is running. If it's not, then it can be started from Start Menu programs>PostgreSQL and then click on the Start Service option.

Starting Integration Project

Launch the Jitterbit Integration Environment, and from the options select the Create New Integration Project and name the project as TestBuild. Then click the Create button that will launch the main Integration environment screen. To test the integration as we create it, we must connect to the Jitterbit Integration Server. Clicking on the Login button on the main toolbar launches the Login window. Enter the credentials that you mentioned during the installation process. ▶

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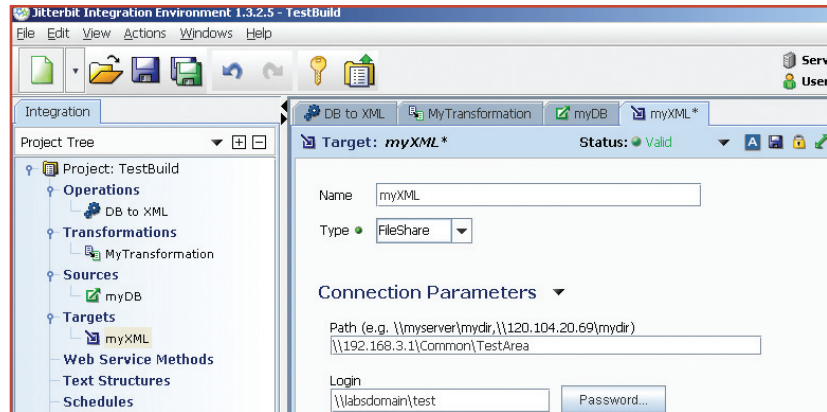


Rainmail Intranet Server
 World class network infrastructure at your fingertips

Enterprise Implementation

Upon successful connection to server, the user ID and the server name appear on the top right corner of the interface. Since we are getting data from a database and converting it to an XML file, we will define a complete operation for which we will be having the source, target, as well as transformation details.

To create a new operation goto File > New > New Operation. In the operation window give a name to the operation and from activity dropdown menu, select Transformation. Now comes the part of defining the source. Click on the button next to the Source file and from the pop-up menu select Create New. A new Source window will open up. Give the name for this as MyDB and Type as database. For connection parameters, select driver as PostgreSQL ANSI and enter the server name or IP address for the PostgreSQL database (in our case it's localhost as we installed the client and server on the same machine). Now save the source details and through Test connection button, we can test the source's connectivity to the database.



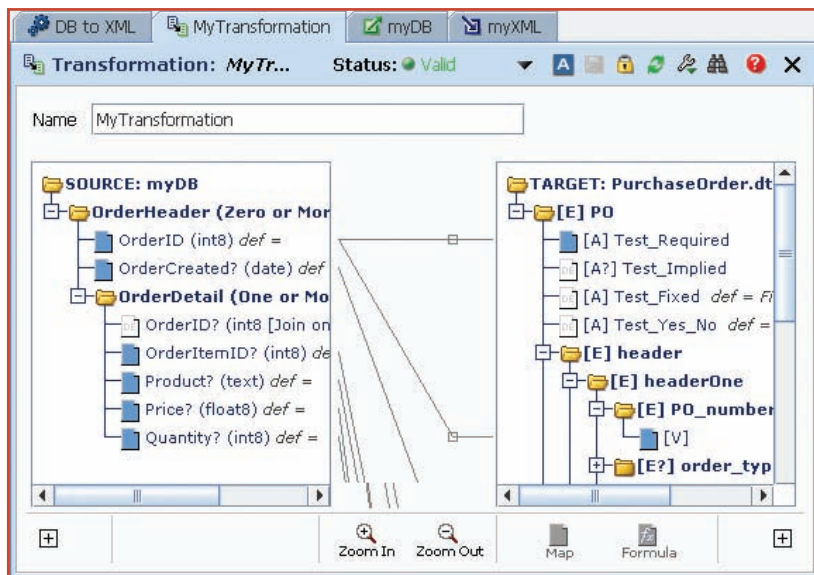
For defining the target parameters, we have to specify the shared file server path and its login along with the name of file

After defining the source, we need to define the target. Target defines where you wish to put the information. In our case it's going to be an XML file to be saved on a shared file server. From the project tree, right-click on Target, and select New Target as option from the pop-up menu. Fill the fields as shown in the visual. Now comes the part of defining the transformation.

Transformation lets you map data from the source to a target format. In our

case it will be tables from the MyDB database that will be mapped to an XML file. When you create a new transformation, a window opens where you have to define the source and target formats and in following steps you have to map the respective tables and their fields to the structure of the XML file. This XML file formatting can be done by specifying a schema or dtd (document type definition) file. For mapping the source fields to the target fields, select the sources filed and then selecting its corresponding target filed. Clicking on the Map button will establish the mapping relationship between them. Once the mappings have been defined, Jitterbit tests transformations on-the-fly by uploading sample data and running the test. To do this, click on Transformation toolbar's Toolkit button and select Test > Transformation.

Upon saving the transformation details, we can activate this operation by first deploying the project on the server by clicking on the Deploy button on the main toolbar and then clicking on the Activate button in the operation's toolbar the operation gets placed on the server's queue for execution. Jitterbit can similarly be used to source data from ERP apps and make that data available in a standardized format for other applications to consume. □



To establish mapping between source and target, select appropriate elements from both panes and click on Map button

 CXO Speak

CXO Speak

On
**The relevance
of IT for their
business**

**Expert opinions from
CXOs of India's
leading enterprises on
the issues faced by
their industries and
how they use IT to
stay ahead**



Congratulating the IT Visionaries

The challenging business environment will force life insurance companies to rethink the fundamentals of their business

Deepak Satwalekar

CEO and MD,
HDFC Standard Life Insurance

The Indian Insurance sector has come a full circle. It started as an open market, became nationalized, and it's back to being liberal again. Things today however are different. More players are vying for market share, there's much more competition, and lots of other issues. Deepak tells us about the issues that plague the Indian insurance sector, and how his company has been using IT to surge forward.

Q HDFC Standard Life recorded an impressive 63% YoY growth in the previous financial year. How much of that success can be attributed to the usage of IT?

IT is integral to our business. It is not a separate stand alone function. The use of appropriate technology has helped drive sales processes, new business processing, claims administration, and almost every function within the organization.

This growth has been enabled by collaboration of the employees, Internet based self servicing for our Financial Consultant community, and our retail and group (company) customers.

IT has been used laterally to increase productivity, and to execute customer servicing processes in a cost effective manner.

Q What's the relevance of IT for HDFC Standard Life Insurance's business?

IT is all pervasive in our organization. We have refocused IT around the business drivers. The application of critical technology has been crucial in developing successful business partnerships, implementing effective outsourcing arrangements and having the ability to create, analyze, handle and distribute huge amounts of data across geographies to create value for all stakeholders.

IT has enabled us to create a centralized virtual organization where time and distance are irrelevant.

Digitized workflow solutions have enhanced the quality of policy administrations as well as improved customer servicing.

The absence of paper moving around has resulted in enhanced customer data confidentiality - something which is critical to our business.

We are further dependent on IT to ensure integrity of our policy administration systems and thereby the inputs for Insurance valuation.

We have initiated a COBIT (Control Objectives for Information and related Technology - www.cobit.org) process for Change Management and are working towards its certification.

Our objective is to leverage technology to enhance the productivity of a mobile work force, achieve growth with sustained performance by building strong processes, and create a service

differentiator in a converged financial services market.

Q What are some of the key issues that plague the Indian insurance sector?

There are a few issues that face the insurance industry that I would like to highlight.

The first is regulatory convergence. In an increasingly fast converging financial sector, we need to remove sectoral regulatory walls and pockets of arbitrary decision making,

in favor of a cross sectoral regulatory framework spanning across narrow boundaries of individual regulatory agencies.

Second would be the issue of risk management. A more volatile business environment, increasingly stringent regulatory requirements, complex products and restrictions on hedging instruments, will require insurers to significantly upgrade their enterprise wide risk management capabilities.

The third issue relates to the absence of proper performance measurement metrics leading to distortions in product features and sales practices.

The fourth issue would be something which corporate India is facing - the shortage of skilled and trained human resources. This could be the one overriding factor that could stunt the growth of the industry or expose it to significant unplanned risks.

And finally, the challenging business environment will force life insurance companies to rethink the fundamentals of their business.

They will need to concentrate on the core fundamentals - focus on and successfully meet customers' needs, make optimal use of technology to improve product offerings and level of service and abide by a philosophy that shirks short cuts and unethical practices. □

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CXO Speak



Prabir Sengupta

Vice President, Finance & IT, ITC WillsLifestyle

Q Manufacturing is fast emerging as a strong vertical in IT usage. What is the relevance of IT for this segment?

The competitive battles of the future will be won and lost in the supply, manufacturing and distribution networks, not in the front office, by companies that are highly adaptive and relentlessly efficient—all in real time. IT has a huge bearing on the existence of any organization, more so in the manufacturing world. The ability of the organization of the future would be to adapt to the challenges of manufacturing like Shorter New Product Development and Launch, more product variants, Increasing Regulatory Compliance, Cost Reduction, Increasing Demand Forecast Error, Demand driven Dynamic Supply Networks. All this would only be possible with real time integration of Information technology with the businesses to harness the capability of these processes. Information technology is and will continue to be the critical success factor in the

Q Retail is fast emerging as a strong vertical in IT usage. What is the relevance of IT for this segment?

Information Technology is absolutely mission critical for the retail industry, especially 'speciality apparel retail', the business we are in. At one level, it is like a basic operating machine for certain key processes, such as retail billing & customer engagement, and distribution centre operations, where, without IT enablement, given our volumes and complexity, such operations are just not possible. Additionally, IT enables us to plan, monitor, and course-correct our business—and in that sense, our IT platforms and processes are like the 'eyes & ears' of the business.

Q A slew of challenges at the retail sector, how does IT combat these?

Challenges are many and huge, but if I were to pick some, they would be—A very distributed and customer facing footprint; A very large number of new SKUs that have to be

transformation of these processes to beat the best in the world.

Q A slew of challenges at the manufacturing sector, how does IT combat these?

The ability of having the shop floor intelligence, integrated PLCs linked to business processes to adapt to changing business needs, exceptions based reporting, efficiency of supply chain to take optimized decision making, moving to a supply chain that works on consumption rather than the forecast will be critical to the organization. In today's competitive world, the ability of tight integration with marketing and sales function and flow of relevant information, trends and patterns, integrated product life cycle management, and the supply networks will differentiate the 'best runner' companies from the 'also ran.' And IT has a key role to play in the transformation of all these processes.

dealt with every season; Seasons and their overlaps; and finally multiple processes and people.

Our IT systems and processes address all these challenges and help create visibility—a common scoreboard and dashboard for everyone within the business—resulting in superior internal efficiencies and higher order customer satisfaction.

Q How does IT help ensure the strength of your sector? What are your future strategies?

We began our IT enablement journey, about four years ago and today, we believe, we have built capabilities that are amongst the finest in this industry. The RFID initiative is a small, but important cog in our overall IT capability building process, the core, of which, we have, more or less, completed. However, in our endeavour to continuously improve, some of the projects and add-ons that are on the boil at the moment, are further enhancements in the retail, distribution and the CRM areas.



Dheeraj Sinha

Head—Corporate Management Services, Apollo tyres

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CXO Speak

Q Over the past few years, have you witnessed any major change in the way IT projects are being deployed by Indian organizations?

Looking from a larger perspective, to make IT as an enabler of business, the major trend which is going on presently is the deployment of end-to-end solutions. They could be either in-house end-to-end solution from vendors or outsourced services. By end-to-end solution what I mean is that customer does not want to put any effort in terms of integration of systems alongwith the system

software and application etc. They would want the implementation partner to look at right from the selection of the application to the hardware and software, which would integrate in. Also, there are a lot of outsourcing trends. IT companies prefer to outsource segmented part of their activity, while non-IT companies prefer to outsource most of it.

Q You would have been involved in many complex IT implementations. Based on your experience, tell us that single most important ingredient

required for a successful IT project deployment.

In today's scenario, manpower is a big challenge. The most important ingredient would be getting dedicated a project manager who could implement the project in a time-bound manner.

Q Any advice that you would like to give CIOs on IT project management.

Once an IT project starts and a charter is made, it should be looked at every stage to know as what are deliverables and work accordingly. That would ensure success in a long way.

Q What is happening on IT implementation front across different industries. What kind of implementations are in demand these days.

IT has become an enabler for businesses across verticals now. The finance and Insurance industry is doing a lot in IT. Even manufacturing is trying to become very competitive and agile in terms and products. The other area, which is gaining lot of momentum, is the government sector. Departments in the government have started to automate a lot of their activities.

Q Could you give some tips on how CIOs can save cost and get the best ROI out of their IT implementation?

Looking at the overall IT cost and after the cost of hardware it is now choosing the application and doing a very good project management, to get maximum advantage of the systems. At the sametime, continuing with older system takes much more integration and operational hazards. Newer systems can help them possibly become more and more online. Also, web technologies can help them get better ROI. So, having end-to-end approach of IT and integrating it with operational management of the company is necessary. □



RD Grover, MD, CMS Computers

“ Looking at the overall IT cost and after the cost of hardware it is now choosing the application and doing a very good project management, to get maximum advantage of the systems ”

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CXO Speak

Q Manufacturing is one of the oldest industries today. In fact, whenever anybody wants to give an example of IT usage, the manufacturing industry is always taken as reference. Where has it reached today as far as IT goes?

As an organization we've come a long way in manufacturing. Our basic financial systems and fundamental systems are already in place. The job that remains now is to leverage existing systems to improve cycle times and delivery performance, and use systems to take cost out of our system. We've come a long way with our supply chain capabilities, wherein we're well connected with our channel partners and distributed through web-based technologies, and we've extended many of our ERP apps to partners and suppliers. We already have strong supply chain systems in pockets in Europe and North America. We now want to take those capabilities and extend them to other parts of the world.

Q ERP is an extension of MRP. So when we look at IT in manufacturing, is it about taking ERP to the next level or is there anything new emerging? Eg. integrating IT with manufacturing equipment, tools, etc, and pull out data for analysis, etc.

Probably the way to think about it is to extend IT as much into the shop floor as possible. For instance, we take our ERP into the shop floor and leverage the way we manage our supply chain, and how we operate across the board in the shop. We tie it into equipment and pull out quality information. We have manufacturing execution systems, from which we can mine information for defects. That's an opportunity to bring the two pieces together.

Q SOA is a hot buzzword, with vendors aggressively pushing its architecture and how it can benefit your business. Yet, even after many years, you don't really hear too many success stories. What are your comments? Is it really on your cards?

SOA is interesting and something we've dabbled in, but it's not something that we've deployed at this point. It's only in limited development efforts and we are trying to leverage its capabilities and learn from it than anything else. The jury is still out there on whether SOA will deliver on its promise. There are a lot of pilots that demonstrate benefits and

“ We take our ERP into the shop floor and leverage the way we manage our supply chain, and how we operate across the board in the shop ”



William W. Blausey Jr.
VP and CIO of Eaton Corporation, a global \$12.4 billion diversified industrial manufacturer

really achieve quick turnarounds, and bring together components, but the jury is still out.

We focus on the processes and functionality we're delivering as opposed to the architecture underneath and how we deliver it. So whether it's green capabilities that we drive in the plant, or how we connect to a customer on order management, the tools for doing so

are of interest for information technology experts. Whether such capabilities are built with SOA or something else, the customer or plant manager doesn't care. As long as we're achieving capabilities with regards to building apps, integrating apps, delivering functionalities, it doesn't matter to them. So while SOA might be a viable opportunity, I'm not entirely sold on it yet.

Q Manufacturing is one segment that has the maximum competition. From an IT standpoint, how do you remain competitive?

First of all, we're really trying to leverage technologies to create value in the organization. Streamlining processes, improving our business processes, taking out waste, that still is one of the objectives. In our plants, reducing working capital, really driving improvements with those manufacturing systems is one of the ways we take out cost and be cost competitive. The other piece of the equation is to improve processes related to customers, interact with them, and deliver capabilities on the front end of the business. We have some 50000 external consumers of our apps that sit out on our extranets, and are business to business oriented. Many of those apps link customers as tightly as possible. We have systems that allow us to link our planning and supply chain information with either suppliers or customers, making it beneficial for those organizations to work with us and finally take cost out as much as possible.

So it's really focused in two spots—improving our own operations and the supply chain linkage into the customers and suppliers, and tightening that link. We've recently started deploying more CRM-related apps that take time out of our sales force and allow us to get a better picture of our customer base across the diverse business we have at Eaton. The electrical business just deployed a pretty sizable 1000 person field service deployment that allows them to manage warranty and field service tickets to stream line internal processes and become more responsive. □

CXO Speak

How do you use IT to manage a 40,000 strong employee base? We talk to the CIO Reliance Industries to find out how he's using IT in sync with the company's overall strategy.

Q You obviously need a large IT team to manage such a large employee base in Reliance. How do you keep your team encouraged and motivated through intermittent phases of highs and lows?

Reliance has a very entrepreneurial culture. Each employee at every level is encouraged to take ownership. The motivation therefore flows from the way the organization works overall. IT being a very important component of the organization that provides service to each and every aspect of the organization, the overall motivation levels remains very high.

Q How has IT helped in streamlining the processes of Reliance and its 40,000 employees?

IT provides a 'Common Glue' to the entire organization and provides consistency of experience to all employees and other stake holders. The common IT enabled processes from marketing and sales to production, from logistics to commercial, across Reliance group ensure that the organization provides consistent services and experiences to its internal and external clientele.

The benefits in terms of scale it offers to the organization are immense and can be fully appreciated only when one works in such a large organization spanning across several business, several sites, several continents and several thousand employees.

Like any other large organization we too depend heavily on technology to carry out our day to day operations. IT in that sense has to be completely aligned with business and the entire focus of our team is to provide

business centric, state-of-the-art solutions.

SAP has helped bind the entire organization seamlessly in almost all functional areas. Today we are the largest SAP installation in India. We have a strong

Effective use of IT Project Management system ensures that we remain delivery oriented, effective and accountable in all the areas we work in.



Ashish Chauhan
CIO, Reliance Industries

team in each area of technology to support the business needs. As a culture, we continuously strive for improvement and work towards global benchmarks in all the areas in which we work. Effective use of IT Project Management system ensures that we remain delivery oriented, effective and accountable in all the areas we work in.

At IT, we feel proud to be working for such an organization which is known for its scale, speed, accuracy and flexibility. We feel proud to be able to contribute in our own small way, as a team, in this great movement called Reliance.

Q What is the current growth strategy for the company and how much of IT is involved in it?

Reliance motto is 'Growth is Life'. From its establishment 30 years ago till date when it has become a US \$ 35 billion - Fortune Global 100 sales behemoth, Reliance has thrived on use of new technology. IT acts as one of the important pieces in the overall growth strategy of the company. IT team is involved from strategy to planning to execution to roll out to operations, maintenance, change management etc. In essence IT is an integral part of the growth strategy of the company.

Today, Reliance is considered amongst the pioneers in innovative and most effective users of IT in the world in each areas of business it operates in largely thanks to the involvement of the leadership team in a hands on manner.

Q Moving towards 'Green IT' makes sense both economically and environmentally. What advice would you like to give to others in this respect and what is RIL doing in this respect?

'Green IT' at Reliance is a 'Way of Life'. The philosophy has to touch each aspect of IT - from planning to execution and operations.

Good thing about 'Green IT' in today's context is that it is not only morally correct. It is also becoming economically efficient to follow.

Like any visionary corporation across the world, Reliance is taking a leadership role in using 'Green IT' across all its manufacturing locations, offices and other establishments. □

Fighting the Monster called Infrastructure Complexity

Anil Chopra

While organizations are busy deploying new IT projects, they must not forget that their IT infrastructure is becoming more complex and difficult to manage. Here, we dissect the various causes of infrastructure complexity and ways to combat this menace

It's big and scary and has its tentacles spread all over the place. There's no escaping it because it's everywhere, including your scariest of dreams. It scares away IT managers and gives CIOs sleepless nights. No we're not talking about a monster from a horror film, but something that lurks around within your own IT infrastructure. It's called the IT Infrastructure complexity monster, and it grows bigger with every new IT project deployment you undertake.

Indeed, while we're all busy implementing exciting new projects, the IT infrastructure complexity monster is gradually becoming more powerful. Unless it's controlled, it could actually reduce employee productivity and increase your costs. It shouldn't happen that

one day this monster becomes so big that your IT infrastructure starts managing you instead of the other way round. It may sound unbelievable, but it's true.

Take a simple example of email. It's a real productivity tool, but if your employees forget all their other work and start checking their mails every five minutes, start sending jokes and chain mails to friends and colleagues, it becomes counter-productive. This can actually happen when they have unlimited access to email. The same argument holds true for unlimited web browsing.

Let's move to a more complex example. You give your employees an ERP solution to book customer orders, a CRM solution to handle customer com- ▶

plaints, and an SCM solution to track customer order shipments. They will be so busy shifting between multiple applications and learning how to use them that they will actually take longer to do their jobs (and by the way, they'll also be checking their emails every five minutes and sending jokes and chain mails to friends and colleagues!). They will also be busy with other applications you've provided them, like the Intranet to file leave applications, the usual Office Suite to work on spreadsheets and presentations, possibly an HR system to determine how many leaves they have pending (and by the way, they will be checking their email!!).

Your IT team will also be very busy handling employee complaints, running between so many servers, storage, and networking equipment, monitoring application performance, storage and CPU usage, handling interoperability issues between different applications, and doing routine administrative tasks. So everybody is indeed busy doing their work, but it's actually more about managing complexity than anything else. This is obviously not what you really wanted. It just gradually crept into your system. Now, unless it's controlled, it will chew up your management costs and force productivity to take a nose dive.

So the million dollar question is, how do you combat this monster? What should be your strategy? The answer of course is to try and extract as much as possible out of your IT infrastructure. But that's easier said than done, and in this story, we'll try to find some answers.

The main culprits

The first step to reducing complexity is to understand the reasons behind it, and there can be many, some of which could come as a surprise. While there would be many that are unique to your organization, there are

some that are common to all. We'll look at the common ones.

Legacy systems

The older your organization, the more complex your IT infrastructure is likely to be, because it would have a lot of legacy systems. There would be all sorts of operating systems, all sorts of networking equipment, different service providers, and applications all over the place. As soon as you bring in a new application into the system, you're going to face integration challenges. You'll have to redefine old processes according to your setup, and establish new ones. Add to that the high rate of obsolescence in IT, and you have a lot of complex legacy to manage.

Organizational growth

Yes, believe it or not, but organizational growth is definitely one of the causes behind increased IT infrastructure complexity. While growth is good for any organization, it poses a lot of challenges for the IT department. Growth can be of two types—new acquisitions and expansion. Both have their own distinct set of challenges. New acquisitions involve inducting a new company into your system. It will have its own IT infrastructure, and a completely different set of business apps and processes as compared to yours. It will have a different work culture, people with different mindsets, and a completely different set of processes. Bringing them into your system, getting people to adopt your policies and practices, integrating their systems into yours can be extremely challenging and time consuming.

The other type of growth is expansion, wherein your organization enters new markets, opens new branches, etc. This would require putting up IT infrastructure in new branch offices, ensuring their con- ▶

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View Point

BILL BLAUSEY,
VP and CIO, Eaton Corporation

Eaton has a diverse manufacturing business, and continues to expand through new acquisitions. What challenges do you face while bringing a newly acquired company into your system?

It's something we spend a lot of time on, and we have a fair amount of experience in the integration process. The challenge generally is beyond infrastructure. The first 90 days are spent in putting people on email, network, getting them into Eaton, etc. That's hardly a challenge. The real challenge from an application perspective is the business and financial systems. Even those are as much as the challenge as the ERP systems. Some organizations we buy may have 30 different ERP systems, 30 plants and an entirely different set of processes for each one. So bringing them in, have them adapt our processes, and migrate them towards our standard manufacturing environment takes the maximum time and effort.

The other challenge is people. Often in any organization, people are self contained, and have their own culture. The IT organization may be distributed, centralized

and may not match our organization. We spend a lot of time educating new employees about ourselves, what our IT organization is, and make them comfortable about the opportunities in a company that's as big as ours.

What about your existing IT setup? How much of that gets altered when you bring in a new company?

We standardize as much as we can and as fast as we can. Email is moved to Exchange, network is moved to AT&T global network. We generally pick up environments, move them into our data centers, and virtualize the environment. Even if the apps are different, we move them into our desktop environment, on our Dell PCs, which we've now shifted to HP. We get them on our Intranet. All of that happens very fast. And then we look for issues and synergy opportunities. If they have outsourced to a service desk provider, we swing it over to our service provider. If they have relationships for hosting, we put hosting into our own data center. We look for synergy opportunities to take out cost.

nectivity to HO, finding skilled manpower to manage the setups there, and ensuring that your data center is capable of handling the additional load brought in by those branches. So while setting up a new branch may not be too difficult per say, it increases network complexity, making it ever more difficult to manage.

Growing mobile workforce

While a mobile workforce is a boon for every organization, it has become the bane of most IT departments. This workforce comprises of both laptops and PDAs. They're out in the field and require remote con-

nectivity into your system. For this, you need to ensure that you have a secure remote access system in place, which is accessible from anywhere. The larger the mobile workforce, the bigger the challenge. You also have to worry about the security of your own network when these mobile users connect to it. They could be infected, and bring down your entire network. What you need are solutions to secure them. A third challenge is in ensuring the security of data on those devices. What if they get stolen? How do you ensure that data in those devices doesn't fall in the wrong hands? ▶

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More applications

When you don't have good business applications and process automation, you spend time and energy convincing the management about deploying them. But when you do have them, they pose a different challenge altogether. How do you ensure that they're integrated and work together seamlessly? For instance, you implement ERP for automating your business processes, and a CRM to handle your customers. Since customers are a part of your ERP system already, it would be only natural for you to expect that the CRM application will jell with it smoothly. Unfortunately that doesn't always happen. The CRM application has its own unique set of features, and might require information in a format that the ERP system can't really provide. So you end up creating hooks between the two applications.

Integration between multiple applications isn't the only problem. Having so many applications is another problem in itself. When every employee has to access multiple apps to do his or her work, it reduces productivity because a lot of time is spent shuffling between them. The challenge then is to provide all information on the same interface.

More equipment in the data center

This is a no brainer. When you install new applications, you need the requisite hardware for them—more servers, storage, power, and connectivity. As you continue deploying newer applications, your data center becomes a veritable mess of equipment from so many different vendors. The number of servers increases, power consumption grows by leaps and bounds, application performance deteriorates, storage capacity rises and data is kept all over the place in so many different islands, and much more. So much so that managing data center com-

plexity is a topic in itself.

Fighting the complexity monster

The million dollar question now is how do you reduce IT infrastructure complexity? Obviously, there's no magic wand that you can swing and get the answer. You need to treat it just like any other IT project. It should have an objective followed by a set of tasks to achieve it. This may sound very difficult, but if it's broken up into smaller pieces, it becomes more manageable. The objective for instance, could be as simple as reducing down your IT budgets by a certain percentage. Or it could be to save the organization a certain amount through better usage of existing IT resources. The rest of the things will automatically fall in place.

Fighting complexity has to be a continuous process, otherwise you'll never be able to achieve your objective. Let's now look at some of the ways to combat complexity.

Standardize

One of the biggest nightmares in any IT infrastructure is to have a heterogeneous environment with different systems, applications, and platforms. This requires multiple management systems, which in turn requires manpower with different skill sets. For instance, even a simple thing like the desktop PC can become a nightmare to manage if there are multiple hardware configurations and Operating Systems. So the thing to do is to standardize whatever you can—Operating Systems, email systems, hardware, vendor selection process, procurement process, etc.

Standardization will actually improve the robustness of your IT infrastructure, and there are enough management standards out there to follow, such as ITIL, COBIT, etc. Many vendors have also defined their own IT infrastructure optimization frameworks

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and best practices, which you could use for reference. If for instance, your IT infrastructure is primarily Windows based, then you could follow Microsoft's Infrastructure Optimization Model (IOD).

Virtualize

This one doesn't need an introduction, because everybody is talking about it. Even leading research firms like Gartner suggest that virtualization will have a tremendous impact on how IT is managed and deployed. Server virtualization is already a hot favorite amongst most organizations, and is being used to reduce the number of servers in the data center. There are other forms of virtualization available as well, which promise to simplify the IT infrastructure considerably. These include virtualization of desktops, storage, applications, and networking. That pretty much covers everything in the IT infrastructure. Many companies have deployed virtualization. This time for instance, we received two projects from Infosys and ICICI Bank on server virtualization. These have considerably reduced the total number of hardware servers in their data centers, and even promise to reduce complexity and power consumption, improve manageability and server usage.

Consolidate

Virtualization isn't the only way of doing consolidation, which is why we've kept this point separately. You could for instance, remove all the different islands of storage in your data center, and put them on a single large storage box. Or you could remove multiple rack servers and replace them with blades. You could go for a UTM device instead of multiple individual security devices. You could even go for a single network that carries all your voice, video, as well as data traffic. All this would obviously lead to lesser

A few solutions to reduce data center complexity

We could write a book on the number of solutions available to manage data centers, so we won't even attempt to do that here. Instead, we'll look at a broad set of offerings from a few vendors who have a specific focus on providing software solutions to reduce data center complexity.

IBM Systems Director: A suite of server and storage management products, which can manage configurations, discovery, health and status monitoring, power, and even virtualized environments. The solution has a number of useful extensions for managing data center capacity, energy consumption, remote deployments, virtualization environment and much more.

Microsoft System Center Configuration Manager 2007: This was earlier known as Systems Management Server. In its new avatar, the solution allows automated and easier deployment of servers in the data center, as well as for doing configuration changes and system updates.

Symantec Data Center Foundation: A suite of solutions to manage data protection, storage, servers and applications in the data center.

Virtualization solutions: There are a number of virtualization solutions that help reduce data center complexity by making more efficient use of hardware resources. Some well known players in this field include VMWare, Citrix, Virtual Iron, Plate Spin and Microsoft.

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equipment in the data center, which in turn would improve manageability.

Centralize

Instead of having hundreds of servers, storage, etc all over the place, it's best to centralize them today. If your organization has branch offices all over the country, then centralization makes a lot of sense. This is simply because finding and deploying skilled manpower in all the branches is a major challenge. Many organizations today are therefore moving all their applications and servers into a single, central data center. This improves manageability considerably.

Keep it simple

The best way to fight complexity is to of course keep the vision as simple as possible. Keep a simple vision for everyone, so that they can easily follow it. If the vision itself is complex, then everything else is likely to be.

Drive commoditization

You don't have to use bleeding edge technology all the time. It costs more, both in terms of cost of acquisition as well as maintenance. Things get commoditized in the IT world very fast, so learn to take advantage of that. At the same time, remember that IT equipment becomes obsolete very quickly well, so don't purchase equipment that's reaching the end of its lifecycle. You'll end up spending more on its maintenance and administration!

Recycle equipment

Don't throw away equipment until its completely useless. You'll always find an application for it. That's because what's low-end for one user could be high-end for another. At the same time, if you must replace equipment, then donate your old equipment while

they're still in working condition to the needy outside the organization, such as a school. It will improve your organization's CSR image.

Enhance current infrastructure with minimum investment

Better integration

Tighter coupling between various applications is the need of the hour, otherwise your employees will continue to toil with shifting between multiple application interfaces. As most of the applications today have a web based front-end, one should take advantage of that and try to consolidate their views on a single web page.

Use managed services

Finding skilled manpower to manage various aspects of your IT infrastructure is a key challenge, according to various surveys we've done in the past. As your organization grows, it would require different experts for managing the storage, security, servers, connectivity, etc. One of the solutions to the problem is to go the managed services way. Outsource one or more of these tasks to an external agency, who then take care of bringing the right manpower in to do the job. Managed services can include outsourcing specific parts of your IT infrastructure management to total outsourcing, wherein the complex IT infrastructure, right from the equipment to its management is outsourced. Nothing really belongs to the organization. They just worry about their business.

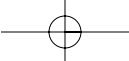
Lastly, please keep in mind that fighting complexity is not a free activity, i.e. there will be investments involved. Just as you invest in a business application so that your organization can earn more, you also need to invest in reducing complexity to save cost. The rest will automatically follow. □

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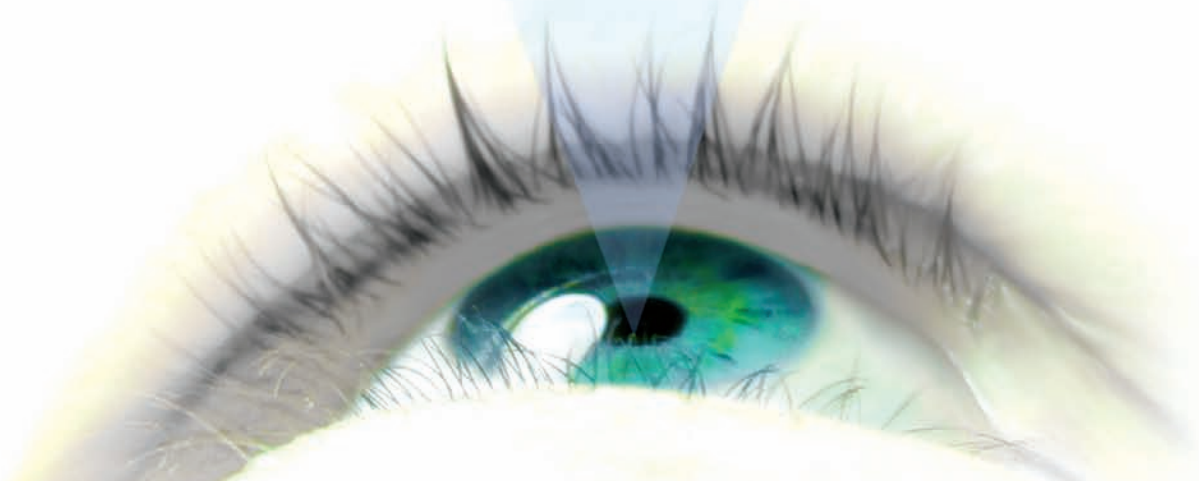
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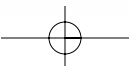
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benefits were going to foreign countries. The remaining projects were moved to the second stage, wherein we asked for a detailed report about the project. Here, we asked for complete project details, right from the specific business or social benefits that they deliver to the technologies used, and even the financials involved. Many projects dropped out at this point, and we finally received detailed audit forms of 106 IT projects. This was higher than what we received last year.

Once we received the detailed audit forms, we started the second round of scrutiny and validations. Here, the entries that came in first and within the defined deadline were given priority. We tried our best to accommodate as many entries as we could, but some had to be dropped at this stage. We then looked at each project report in more detail to see if they really fit our selection process, i.e. whether they were indeed original ideas or used technology innovatively, or whether they brought business or social benefits. In each form, we had specifically asked for information like the actual business benefits that were derived, and what really set a project apart from the rest. Many forms didn't provide this information very clearly, or didn't provide it at all. After scrutinizing all the forms for this, we brought the list of projects down to 65. Each of these was then assigned a project champion from PCQuest.

The project champions' job was then to understand each project in more detail by either visiting the IT project site, or in case that was not possible, by contacting the IT heads over the phone and email. Here again, many projects dropped out, either due to confidentiality reasons, or the head was not contactable.

For the remaining projects, the

A little bit of history

The Best IT Implementation Awards were instituted five years ago with an objective to recognize all the good work happening in the country on IT implementations. The number of implementations we have to evaluate has been growing every year. Starting from 10 valid nominations five years ago, we now receive more than 100 detailed IT project reports to evaluate every year. This obviously includes projects from just about every leading company in India. So much so that we have divided the Best IT Implementation issue into two volumes. The first volume was released in May, which contained all the 160+ IT implementations. This volume contains the 24 finalists that were presented to the jury.

entire PCQuest team sat down together to do the short-listing. By this time, all the project champions were completely familiar with the projects they were assigned.

During our meeting, we rated each project on five parameters—innovation, business impact, social impact, technical complexity, and scale of implementation. For each parameter, we gave each project a maximum score of 5. So the maximum total score possible for each project was 25.

Lots of heated debates, empty coke bottles and leftover pizza crusts later, we arrived at the final scores. All projects that received a score of more than 10 reached the final jury round. We even revisited projects with a score of 10 to see if any could be considered for the final round, and a few indeed managed to qualify there as well. Finally, we arrived at a list of 24 projects that were to be presented to the jury, to decide the winners. Details on the jury members and the deliberation process is presented on the next page.

So here we have it, the winners of the best IT implementation awards and the finalists. We would like to congratulate the winners and the project heads for putting in so much effort into deploying their IT projects. □

IT
Implementations
of the Year
2008

The Jury

Everybody's using IT today, be it for personal gain, for a social cause, or for business benefit. But there are some who use it in such a way that others can't help but to stand up and notice. That's one of the key things that our esteemed jury looked for in all the IT projects this time. "What's different about it?" were the two most common words that resounded during the jury meeting. There has to be something about a project that sets it apart from the rest.

The jury meet is the last step in deciding the winners of the Best IT Implementation Awards. Our jury comprises of eminent personalities from the IT industry. They are well known in their fields, and have sufficient experience in the IT industry to catch the pulse of any IT project. This meeting is always very interesting, because as we said, the jury members have sufficient experience to catch each project's pulse. They take half a day, during which the project champions present their cases and provide all the facts and figures they've been able to collate about the short-listed projects. Detailed audit forms for each project are also provided to all jury members for their reference. The selection criteria followed by previous years' jury members is also suggested to them, and the jury is free to decide whether to use it or follow a completely different criteria.

Another thing we ensure every time during the jury deliberations is to avoid any conflict of interest. In case a jury member is involved in any of the projects, then that person is requested to withdraw from that discussion.

The jury finally decides the winners.



Sunil Rawlani,
CIO, HDFC Standard Life
Insurance

Sunil's IT career spans 22 years across insurance, cards, telecom, banking and manufacturing - in roles including IT leadership, client relationship management, business development and offshore project management. He has a MBA and BS Comp Sc. From Kent State University, USA. Sunil also headed the project that won the Best ITImplementation Award last year for Overall Best Project.



Dr. G D Gautama,
Principal Secretary of Dept. of
Micro, Small Scale
Enterprises and Textiles,
Govt of WB

Dr. Gautama was the chairperson of this year's jury. He joined Indian Administrative Service in 1977 and has held many state and central govt. posts since then. He has 20 years experience working in Industry and Industrial Infrastructure. He's also coach in a cricket coaching center for the past 15 years.

Shyam Malhotra,
Executive Director and Editor
in Chief, Cyber Media

An engineer and business administrator by training, Shyam began his career in marketing, working for Siemens, Tata Exports and Eicher Goodearth. He's been associated with CyberMedia since 1985 in varied capacities and has over 28 years of experience in the IT industry.



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Cover Story



Akhilesh Tuteja, Executive Director, KPMG

Akhilesh is with the IT Advisory practice of KPMG in India. He has advised over 100 clients on matters relating to IT strategy, IT planning, information management lifecycle, information risk assessment, design of information security architectures, development of business continuity plans and Sarbanes Oxley Act advisory. He has also helped many clients achieve compliance to ISO27001 standard and has conducted numerous SAS70 examinations.



Prasanto K Roy, President (ICT Publishing), Cyber Media

Prasanto has been with Cyber Media for 18 years in various capacities. He's launched many new activities and projects for the group, including Computers@Home magazine, DQWeeks, and the DQ Channels. He's one of the finest technology writers who is equally at ease with technology and business. □

Vinnie Mehta, Executive Director, MAIT

Vinnie has been involved in promotion of the IT Industry in India since 1992. An Electrical Engineer from IT-BHU, an MBA from FMS, University of Delhi and a Masters in International Trade from the prestigious Indian Institute of Foreign Trade (IIFT). Vinnie is an expert on policies and procedures for the IT Industry in India. He has worked extensively with most state governments in formulating their IT Policies as well.





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**The
Overall Best
Project**

Government of Rajasthan **Online BPL Census**



Ram Lubhaya

Principal Secretary, Rural Development and Panchayati Raj Department, Govt. of Rajasthan

Q What were the challenges and business problems that led to implementing this project ?

The entire application was developed by NIC for computerization of BPL Census 2002 data and aimed at computerization of the survey data of the rural households and depending on parameters, provided the BPL list above the cut off point.

For the first time, the Hon'ble Supreme Court of India ordered that the BPL list would be dynamic and subject to change to a process of appeal. It was deemed proper to have a web based online monitoring system so as to enable the updation of the list from time to time. With the introduction of RTI, it was also necessary to pro-actively display the list to public so as to ensure that the names of ineligible persons could be deleted if the public files appeals against such an addition in the BPL list. In addition to this, with the new social security schemes being introduced, the demand for BPL list came from various quarters time and again.

In order to provide access to the BPL list by the government departments, a web based online monitoring system was considered most suitable. In order to identify a BPL family, a unique number was allotted. The project has facilitated online updation of BPL list based on the agreed process.

The unique numbering of each BPL family prevents the filling of duplicate form by the same person and he can also have computerized access to a particular job card. The same code has also been used for issue of NREGA job cards.

Q What were the key benefits gained after having deployed this project ?

Online data has provided access to the BPL list for the user department as well as for the general public and also a transparency to the entire process of BPL selection which is a very delicate subject. Online data availability of various parameters relating to BPL families and rural households has also helped in the planning process at the district, block and village panchayat level.

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Cover Story

Department of Rural Development, Govt of Rajasthan undertakes the identification of households living below poverty line at an interval of every five years. This process is known as BPL census. In 2002 Government introduced 13 socio economic indicators each ranging from 0 to 4, to grade rural families. Earlier selection of BPL census was done on the basis of exclusion due to possession of certain key assets or facilities. Earlier, the list once prepared remained applicable for next 5 years and it was hard for the Department to frequently update it. On the basis of reports of NSSO, the total number of families in the state was earlier fixed as 17.36 Lacs. Later the govt. allowed to include/ exclude a family on the basis of a suo-moto survey or appeal. Due to this the list was becoming quite dynamic in nature and Department of Rural Development faced the urgency of putting the list at a central location. Also the benefits under various rural development schemes were distributed according to this list and it was hard to trace whether the benefits were delivered to rural people or not.

To make BPL Census easily available at a central location and bring transparency into the same, Department of Rural Development started online BPL Census project with NIC. The Last survey for BPL was done in 2003 which was based on 13 parameters defined in 2002. This was the first time when the survey was conducted for all rural households, which turned out to be more than 92 Lacs for the state of Rajasthan. At the same time online BPL census project was conceptualized but due to some legal issues the project went Live in 2006 only.

Now the challenge was to capture details of over 4 crore rural citizens. For capturing details of each family using OMR/OCR technology to complete the project in minimum possible time. For this

a form was designed to capture the details of a family in one A4 duplex sheet. This was the first time when such a form was used for such a massive survey. Each form had a unique serial number to identify each family with a unique serial number. This also led to identification of each citizen with a unique number i.e. combination of family serial numbers and serial number for each member of that family. The coding pattern used is similar to what Government of India follows, except for location code for a village. Location code for village is the same as that of census 2001 location code for make coupling of data easy for planners.

Content preparation work was outsourced to various agencies by districts, as

SCENARIO

Before Deployment

- ❑ BPL census list maintained manually, no single interface available
- ❑ Inability to trace whether benefits reach to people living in rural areas
- ❑ No transparency

After Deployment

- ❑ Identification of every rural citizen of Rajasthan with a unique serial number
- ❑ Traceability of the family benefited and government schemes
- ❑ Availability of census data in Public domain
- ❑ Transparency of information

“ It was really a great challenge for us, processing of over 92 Lacs rural households’ data in a stipulated timeframe. BPL list maintenance is a continuous process, therefore workflow has been introduced through this online application. BPL lists are being used by all the stake holders in state and central schemes through Internet. Special applications and reports have been built to fulfill the needs of Rural Development Department and other stake holders. All households in rural areas of state are uniquely identified in BPL Online in the state as per the survey conducted by Zila Parishads. Update facility is used for further additions, alterations and deletions from blocks through broadband, wherever it is available and authorized by Zila Parishads using NICNET or any other network. Rajasthan became the first state to provide digitized data for BPL families for Rashtriya Swasthya Bima Yojana (RSBY).



Indu Gupta
State Informatics Officer & Senior
Technical Director
NIC Rajasthan State Unit, Jaipur

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**Maximum
Business
Impact**

ITC Wills Lifestyle **RFID**



OP Bansal, Divisional CIO

B.E. (Computer Science & Engineering), M.S. (Software Systems) from BITS Pilani, is currently CIO of Lifestyle Retailing Business Division (LRBD) of ITC in India. He has 17 years of experience in the field of 'Information Technology' in various Roles and Capacities in various organizations. His large stints have been with ITC, DCM Group, and ASIL

Q What were the challenges and business problems that led to implementing this project?

Apparel industry is characterized by short product life cycles, tremendous variety, volatile and unpredictable demand. These characteristics, a complex supply chain and wide availability of data, make the industry a suitable avenue for efficient supply-chain mgmt practices. With traditional practices, companies cannot crunch the timelines beyond a certain extent. Responsiveness to the trends of customer demand is the key driver in the lifestyle retailing business, which comes from speed of operations and velocity with which inventory moves.

Q What were the key benefits gained after having deployed this project?

With one of the first PoS app put to use for daily store operations and first in India to crack the physics of RFID at item level, ITC Lifestyle has been able to witness tremendous benefits in the areas of supply chain and customer delight. Some of these are mentioned below:

(1) Reduced time to market (2) Increased warehouse efficiency (3) Reduced material handling (4) Reduced manual errors (5) Reduced billing time leading to faster check outs at showrooms

A wireless technology is changing the face of supply chain and customer delight at stores of Wills Lifestyle. After 9 months of speculation, ITC Lifestyle cracked the physics of RFID (Radio Frequency Identification) at item level, which markedly improved inventory velocity at the supply-chain and also customer service.

To its blend of style and fashion, Wills Lifestyle has now added a technology enabler, the RFID. Deployed across 7 retail showrooms and 2 warehouses, the project is reaping benefits to internal business users as well as external customers (consumers). RFID proved its mettle in terms of speeding up of existing processes, reducing the time-to-market, efficient material handling, and accuracy of books vs. physical stock. The impact of RFID can be chalked out at the frontend (showrooms) and backend (warehouse).

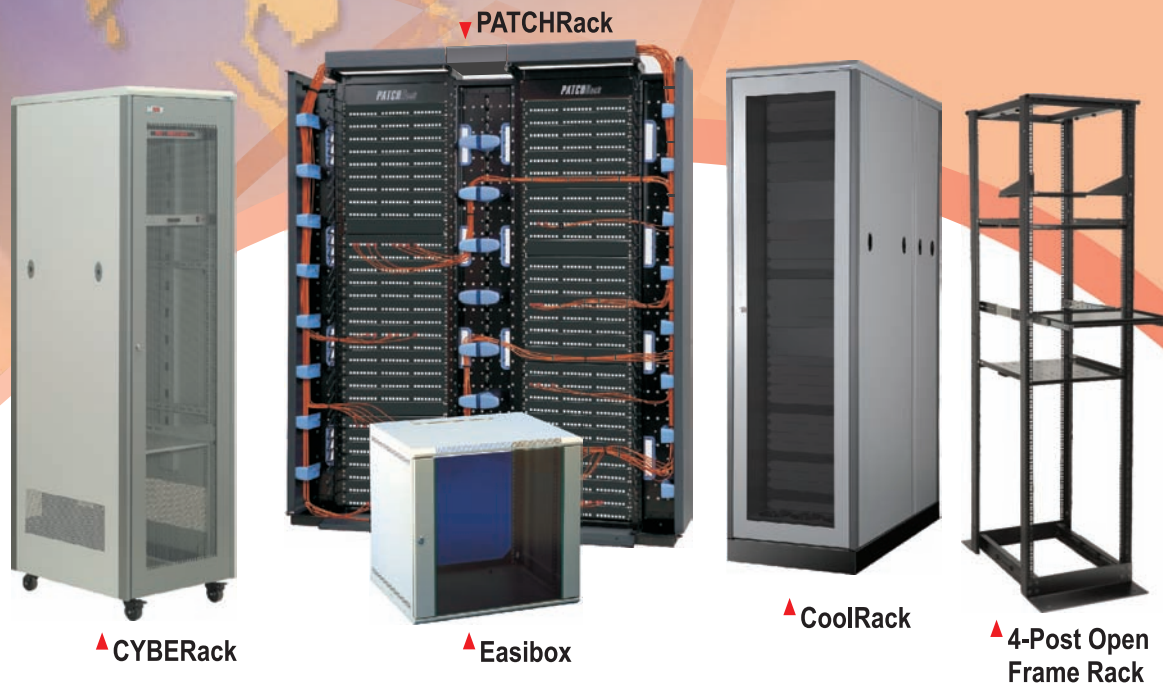
The Inception

The RFID journey began in Dec 2006 at the Mandoli warehouse of LRBD (Lifestyle Retail Business Division). During pilot, variety of RFID tags and RFID readers and antennae were tested to achieve the stated objectives of pilot. Various systems such as RFID tunnels were conceptualized and got fabricated during the pilot to arrive on the final project components. Two RFID tunnel systems were placed in each warehouse, which were geared up to be used for both receive and dispatch, as per requirement and load factor. Each tunnel enabled the reading of about 15000 pcs using three workers.

Before and Now

During the bar-code era, each piece of garment was individually scanned and lots of manpower was involved, also at the end of the day accuracy of stocks received/dispatched at the warehouse was a key concern. With RFID in place the time taken to receive 1 carton (about 30--35 garments) was reduced from about 5--8 min to about 20--30 sec. With the usage of RFID tunnels, the out-

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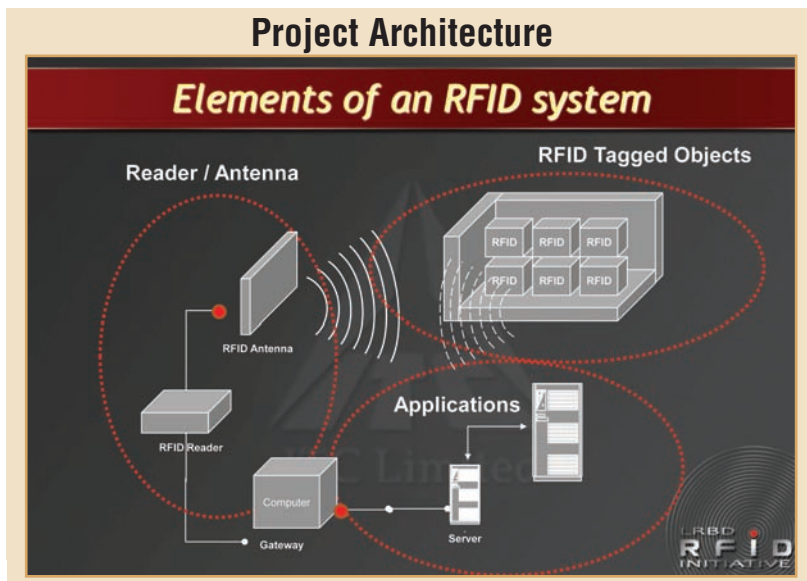
Cover Story

put per person increased from 300--400 pcs per day to about 2000--3000 pcs per day. Reduced scanning time enabled faster receiving and dispatch of merchandize, thereby reducing the time to market. Thus an extra 10--15 day window is available during the year, leading to increased contribution to the business by 1--2%.

Owing to increased inventory velocity

warehouse is reduced, the percentage of non-saleable garments have reduced considerably. With unique identity of each tag, and faster reconciliation, the magnitude of manual errors was greatly reduced. (Assuming a 0.1% error rate on overall movement of goods of 3 lacs pcs per month).

At the frontend too RFID played a significant role: the scanning time at PoS has



in the supply chain, the merchandize now sits for a lesser time in the warehouse, thereby eliminating the need for additional warehouse space over the next 3 years, than the need now. More so, about 20% of the non-saleable returns from the stores were attributed to the reason of mishandling at the warehouse. With the project in action, since the physical handling at the

been reduced from about 3--4 sec per garment, to 2 sec for any number of garments in the basket. This helped in faster billing, reduced queues at the store especially during EOSS, and greater customer satisfaction. The consumers see benefit in terms of quicker check outs and no more standing in the queues for billing.

The potential for RFID to deliver tangi-

COMPANY SCENARIO

Before Deployment

- ❑ Time taken to receive 1 carton (35 pieces): 5--8 min
- ❑ Output per person at warehouse: 300--400 pcs per day
- ❑ Scanning time at POS: 3--4 sec per garment
- ❑ About 20% of non-saleable returns from stores were due to mishandling

After Deployment

- ❑ Time taken to receive 1 carton (35 pieces) reduced to 20--30 sec
- ❑ Output per person increased to about 2000--3000 pcs per day
- ❑ Scanning time at POS reduced to 2 sec for any number of garments
- ❑ Reduced manual errors (0.1% error rate on movement of 3 lac pcs per month)
- ❑ Extra 10--15 day selling window

ble benefits in terms of improved retail productivity, reduced out-of-stock, improved inventory management, reduced shrinkage and theft, reduced supply chain errors, etc, gave ITC WillsLifestyle the magical answer.

In years to come

RFID is an innovative technology which is going to stay for years to come, as it brings in lots of benefits to traditional supply chain and customer facing apps. The very nature of the technology opens up avenues for many more apps and its widespread usage.

Implementation Partner

ITC Infotech and Bar Code India jointly provided an end-to-end solution to the division, including processes, working RFID architecture, hardware, project management and IT support.

Vivek Kamra (*project head, implementation partner*) adds:

"LRBD identified several issues in customer service including timely launch of new season stock and billing time. ITC Infotech helped mapping the business processes in stores and warehouses and funding opportunities for improvement.

The key challenges faced during RFID implementation can be broadly classified as Technical, Aesthetic & Logistics challenges.

Technical Challenges: No readymade solution; at that time 100% read rates were not achieved in commercial scale operations; distance vs proximity (supply chain requires reading at distance, whereas billing process is restricted to read range)

Aesthetic Challenges: store aesthetics in terms of placement of readers/antennas; Product presentation aesthetic in terms of Tag design, placement, etc.

Logistics Challenges: It was not feasible to tag all products sold through stores; no changes in existing process; not possible to recover all tags." ❑



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**Project
with Largest
Scale**

HDFC Standard Life Insurance Consultant Corner



Sunil Rawlani, CIO

He is an MBA (1988) and BS, Computer Science (1986) from Kent State University, USA. While his professional interests include Business Transformation, Technology Value Systems and Organisational Behaviour, he is fond of Photography and Music on the personal front. He has 22 years of total work-ex with many leading companies.

Q What were the challenges and business problems that led to implement this project? To empower our Financial Consultants – we need to provide them with up to date information with respect to their customers, proposals, leads, incentives, rewards, etc and ensure that the Senior management too has access to all relevant sales data to monitor the sales process effectively.

Q What is the USP of this Projexc?

Consultant Corner' is an Internet Based Application that empowers multiple business segments (Sales Base, Employee Base, Operations Team, Middle and Senior Management, Accounts etc) of HDFC Standard Life with timely and accurate repository of information and functionalities that helps improve efficiency and reduce costs. The application provides for centralized control over a vast geographical spread for key business units such as Inventory, Training, Licensing etc. Application drives greater productivity and cost savings as it transforms and streamlines processes that interlink various business groups within the org (B2B) as well as third party vendors (B2E).

HDFC Standard Life needed to empower their Financial Consultants by providing them with information with respect to their customers, proposals, leads, incentives, rewards, etc and ensure that the Senior management too has access to all relevant sales data to monitor the sales process effectively.

While the Core Policy Management System that hosts the organization's data assets provided senior management with access to business critical data, the confidential nature of such data made it difficult for this information to be shared with sales staff to provide them information on policy reminders, status of proposals etc.

An initiative was thus begun in early 2003 to provide field staff with an Internet based service through which they could access relevant information without accessing the core policy management system. The relevant data was pulled from the Core Policy System and displayed to users as per the role and hierarchy within the organization. With the successful implementation of the first requirement, came newer needs that were subsequently fulfilled, thus resulting in the Consultant Corner.

Consultant Corner' is an Internet-based application that empowers multiple business segments (Sales Base, Employee Base, Operations Team, Middle and Senior Management, Accounts etc) of HDFC Standard Life with timely and accurate repository of information and functionalities that helps improve efficiency and reduce costs.

Project Benefits

The application has helped HDFCSL to streamline and optimize the sales operation. It provides for centralized control over a vast geographical spread for key business units such as Inventory, Training, Licensing, etc. It drives greater productivity and cost savings as it transforms and streamlines processes that inter-



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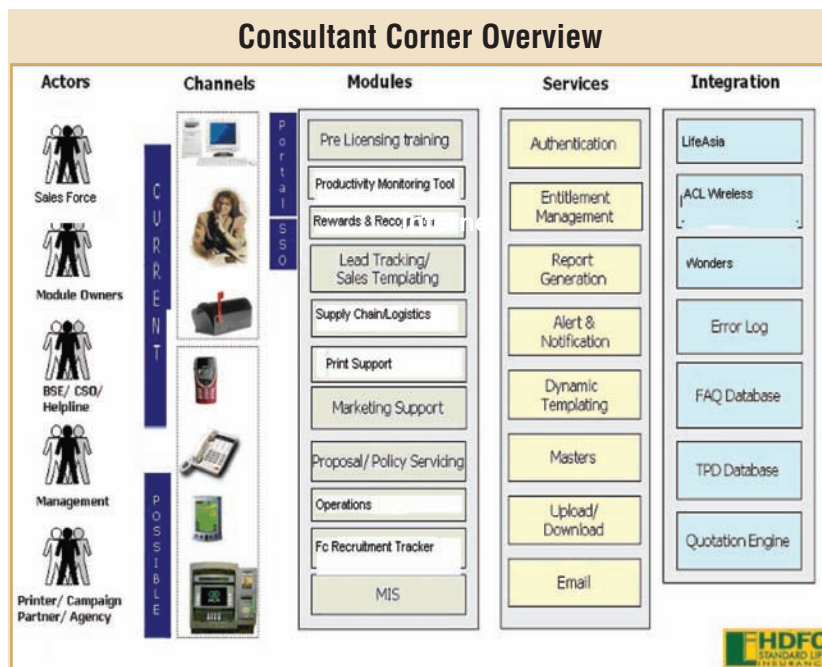


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link various business groups within the org (B2B) as well as third party vendors (B2E). The scalable architecture of the application ensures that new modules, functionalities, etc can be added onto the system as per Business needs.

Hierarchy based reporting provides end users with the facility to drill down to the lowest level of sales hierarchy in a matter of clicks. Information pools of data are thus collated and displayed to key users.

The implementation of this system has resulted in an overhaul of the associated administrative process. Field Staff have access to their RNEP information for specific periods with complete transparency, allowing them to evaluate all policies that have contributed to the RNEP for a specific period. With the deployment of this module, productivity of the members of the team members has increased by 50%, since queries and calls concerning RNEP have been drastically reduced.

Accuracy and validity of data being shared is subject to audit by the field staff who are directly impacted by the same. Field Staff are driven by the actual num-

bers they see on the system that allows them to assess their current position, position where they can go to and to plan their business accordingly. This data is also used to decide incentives that the staff is due to receive as well as appraisals.

The reporting tool allows multi-dimensional collation of data/graphs in a matter of clicks. The excel based user interface provides the user with the flexibility to then slice and dice the information as per the requirements.

A Financial consultant always carries a diary to keep track of various things. Consultant Corner is a virtual diary for them. After the deployment there has been reduction in operating cost by 15 per cent. Uniform sales monitoring is possible across the organization.

There are direct benefits in terms of EPI, Persistency and FC recruitment. It is now possible to make sales team aware of their performance through timely availability of information.

Implementation Partners

There were many implementation partners involved in the implementation of

COMPANY SCENARIO

Before Deployment

- ❑ The financial consultants did not have information available immediately. They had difficulty tracking their deals. did not get timely information, which affected the deal

After Deployment

- ❑ The organization has benefited in multiple ways. The financial consultant on-boarding process has benefitted in terms of bulk processing of lead details by project lead, stricter adherence to TAT and targets, and more consultant commitment to training and license programs. Procurement and Distribution has benefitted in effective utilization of inventory, better price negotiations through centralized order mgmt, more cost effective communication channels to broadcast information, SMS updates to vendors, etc. It also provides 24x7 availability of vital information to customers.

Consultant's Corner. Sify provided the hosting, ACL Wireless was responsible for providing the SMS services being used by the portal, CORE Security provided application penetration testing and vulnerability assessment. Synaptris provided the Intelliview reporting tool that's being used for MIS, and finally Wipro did the RAC implementation and is also currently handling the storage device maintenance.

The Future

There are many other things planned for the future of this project. These include integration with the IVR system, compatibility with PDAs and other hand held devices, smart client and offline application support, user configurable web pages, and addition of Web 2.0 technologies like Mash-ups and composite applications. ❑

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Cover Story

Reliance Industries Limited is amongst the fortune 500 companies and the largest business house in India. For two consecutive years, Reliance has been amongst the top 25 fastest growing companies in the world. Reliance currently has more than 40,000 employees spread across various businesses and at various locations. Having such a large workforce and keeping pace with the growth is no piece of cake. One of the strategies instrumental in the growth has been the harnessing of the knowledge amongst the workforce and sharing the same across the group.

Some of the projects by Reliance which show their project management abilities to the world are the famous mega projects like the Jamnagar Refinery, Reliance Infocomm, etc. The scale of the project has always been the focal point for the company. It is always a prime consideration for all of their projects, but was never run on a project management basis.

Duplicity and a lack of systematic tracking resulted in a lot of redundant applications and issues of quality. Project delays, understaffing and low employee morale are the undesired outcomes. With RIL taking large strides in business with Exploration, Retail, SEZ and several other allied businesses coming in existence, it became even more im-

portant to manage all projects in a systematic manner with real time information on progress available at any given time.

IT teams started with labor intensive manual processes and Excel sheet based practices initially. However, with the projects increasing, this became very difficult and tracking the progress of projects and associated issues itself became an issue for the company. A hunt for a tool to facilitate this effort ended with the IT team developing an IT Project Management System (ITPMS). The need to develop an in-house tool was heightened by the fact that ready-made tools either did not fit the RIL way of Project management or were extremely difficult to implement, or had a low cost to benefit ratio.

This project had been originally deployed for IT team of Reliance Group comprising of more than 2500 employees to achieve better results and have transparency with the business teams. However, several other non IT teams have started using the same system for their project tracking activities. Key amongst them are Reliance Retail, Oil Exploration project team and Reliance Life Sciences.

The project has already given the return within one year. Savings in terms of tangible benefits due to consolidation and use of

COMPANY SCENARIO

Before Deployment

- Without the availability of a project management platform, duplicity and lack of systematic tracking was there which resulted in a lot of redundant applications and issues of quality. Project delays, understaffing and low employee morale were common.

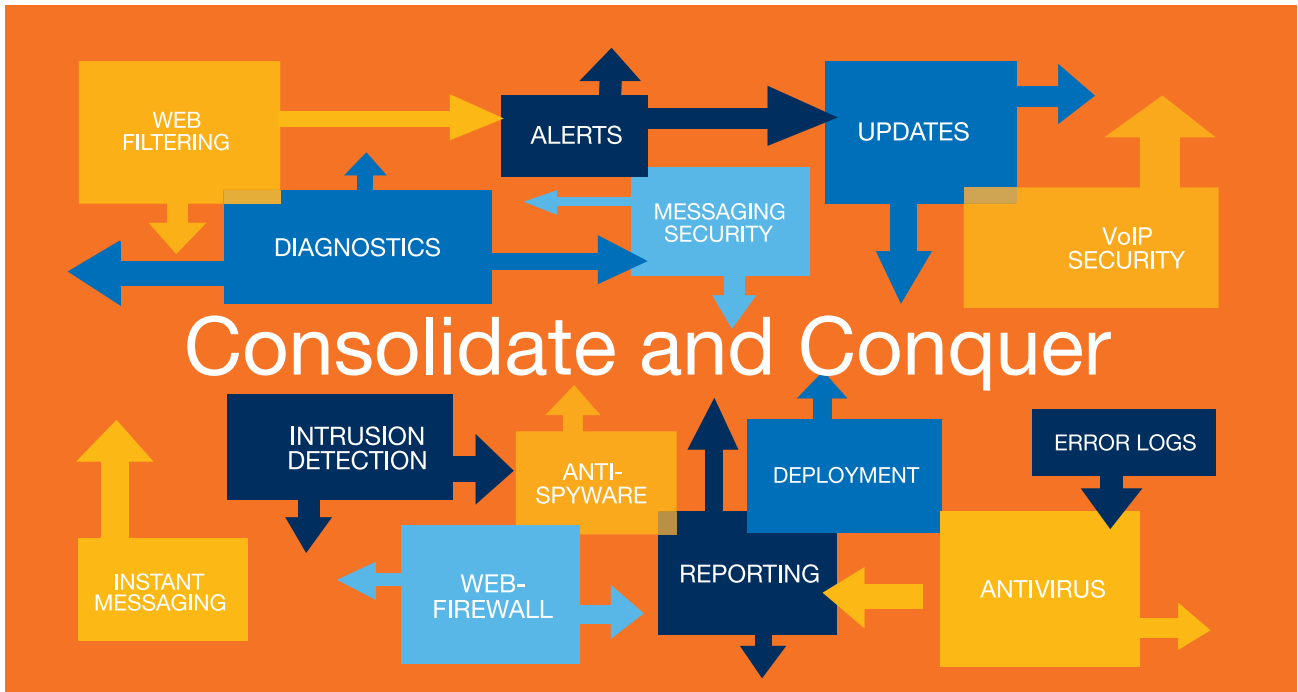
After Deployment

- Cost of IT for any business through billing of the entire IT staff allocated to various business units has been realized. This has helped business teams use IT better and demand more out of them.
- IT-PMS helped realize a single repository of all IT project knowledge in one system. This has helped enhance the company's structural capital initiative.
- The level of transparency and accountability brought in by this system has helped achieve project success much better. Although there is no data to compare the previous scenario with the latest, user satisfaction with the delivery of IT projects has improved several times. This in turn has helped the business to achieve their project schedules much better.

Benefits to various users

	Project Mgmt	Timesheet Mgmt	Requirement Mgmt	Resource Mgmt	Application Portfolio	Reports
Role 1: Administrator	✓	✓	✓	✓	✓	✓
Role 2: PMO (RIL/RR)	✓	✓	✓	✓	✓	✓
Role 3: BIO	✓	✓	✓	✓	✓	✓
Role 4: Project Mngr	✓	✓	x	x	x	✓
Role 5: Normal User	✓	✓	x	x	x	✓

available knowledge has resulted in savings of thousands of man days and operating efficiency at par with industry best. Immense benefits in terms of improvement in the organizational culture and employee participation is of paramount importance. Access to various portals through a single sign on have already resulted in a decrease in the number of calls received by the help-desk team by upto 50%. The project was one of the central application services during the ISO certification audit and was instrumental in getting us the certification. In the last one year the system handled more than 3000 projects and currently around 1300 projects are live.



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through its vocational training centers, educational institutes, special schools for the mentally challenged, pharmacy stores, medical dispensaries, and health-camps. The Trust also manages a temple, which attracts over 3,000 devotees per day.

This number can surge to more than 100,000 per day during festive seasons and other special occasions. The Trust has a network of nine branches spread across different parts of the country, involved in promoting various social welfare programs.

The Trust finances its philanthropic initiatives through the donations it receives, sale of publications and souvenirs and subsidized on-campus lodging and boarding services. It receives donation from various sources including international remittances.

Over the last few years, the day-to-day

operations of the Trust had become quite complex. Additionally, the Trust had to handle approximately 20,000 transactions per day pertaining to various activities. It also had to manually update records of transactions with over 1,000 suppliers and contractors.

The managing committee of the Trust recognized that manual practices for managing sales, purchase and accounting operations resulted in lower productivity and affected the service response time despite the high-caliber administrative expertise of its staff.

This called for a solution that would simplify processes, enhance operational efficiency, minimize the cycle-time involved in transaction processing and ease the work pressure on its staff. An ERP system was the need of the hour to significantly raise the bar of transparency and accountability.

After evaluating various options, SAP ERP 6.0 was zeroed in on. Patni Computers Systems was selected as the implementation partner in the process. Patni conducted a detailed study of business processes pertaining to management of finance, accounting, inventory, sales and distribution.

The implementation process itself was divided into five phases covering the entire project lifecycle comprising preparation, blueprint, realization, final preparation and go-live.

Moving away from functional silos and creating effective cross-functional processes that are truly integrated via an SAP ERP system was not an easy task.



The ERP Deployment team (starting from left): S D Phuse, P V Bokad, T P Marode, D P Tarale, K B More, P R Joshi, and P I Chaur. The team was headed by Shrikant D. Patil. To expand its scope of charitable services, the Sant Gajanan Maharaj religious trust took aid of technology in the form of an ERP solution deployment

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Cover Story

Campus Wide Local Area Network and Wireless LAN



Most of the Trust's functions were unique. Hence, there was a need to enhance certain standard functionalities of the SAP ERP to meet those requirements.

The use of SAP ERP was spread across various lines of business including the hostel, the medical centers and temple. This made it necessary to acquire the buy-

in of the multiple stakeholders who were involved in the process of managing the activities of the Trust.

The biggest challenge to change came from the end users of the solution. Most of the staff members were not conversant with English language and happened to be the first time computer users. This issue was

COMPANY SCENARIO

Before Deployment

- Being a non-profit organization, the ROI needs to be viewed. Earlier, the mgmt committee of the Trust did not have access to performance reports of different functions, since everything was manual and lacked transparency

After Deployment

- The deployment has enabled the mgmt to take timely decisions. It also enhanced the quality of service giving great transparency in the functioning of the trust. Automation has improved the staff's ability to handle volumes of transactions. Simplification of the whole process has reduced stress levels.

addressed by rolling out a change management program. The management committee of the Trust discussed the benefits of the new system with all the members of staff and assured that its implementation would not affect the employment of the staff. It also imparted end-user training to the entry level staff and assigned the elder members of the staff with the roles in managing operations.

The manual practices were not discontinued for six months even after "go-live" stage. to ensure that its staff achieved a certain level of comfort with the new system.

After the deployment, automated information exchange between departments about the material and cash flow has simplified most of the processes and boosted the efficiency.

A significant improvement has been witnessed in the process of receiving donations and distributing it for various welfare activities.

The number of donation counters has been reduced to one resulting in an 80% gain in manpower utilization. The Trust is able to provide complete transparency into the collection and utilization of donations. □



Sri Sant Gajanan Maharaj Sansthan (Shegaon) is one of the first temple trusts in India to implement an ERP system with the help of Patni Computer Systems, one of the leading global IT service providers

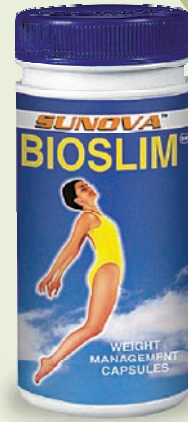
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**Maximum
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Government of West Bengal **CoRD**



B. C. Ghosh Dastidar, IGR

Q What were the challenges and business problems that led to this project's implementation?

The registration process is very time consuming if done manually. We were facing various problems like harassment to the public due to delay in service delivery and repeated visits to the office. Delay in search of the doc details, market value assessment, issuing certified copies, etc.; lack of transparency, accountability & objectivity; maintenance problems in storing large volume of docs in the physical form; poor ambience of the office, insufficient seating arrangement; wastage of time for citizens. Computerization addresses these issues very effectively and reduces the time taken substantially. It brings a sea change in the working of registration office. Public can expect to get their work done within a day, or even an hour. A help desk system for informing the market value of a property shall bring much needed transparency; both account maintenance and index building are automatic. Searching for detailed transaction of a particular plot or of transaction made by a particular person is computer driven ensuring speedy retrieval. Integration of CoRD with doc mgmt sw will facilitate quick archival, speedy retrieval of the doc for its consultation and issuance of certified copies.

Q What were the key benefits gained after having deployed this project?

Keeping in view of the vast scope for improving the quality and scope of services and achieving speed in service delivery, the following benefits are being observed instantly by the registrant public:

- Stamp Duty and other fees payable is made known to the intended beneficiary promptly and transparently.
- Easy Searching, inspection, copy of computerized registered-documents,
- Allows more time to the registration functionary to pay greater attention to the backoffice activities.

Department of Stamps Registration is a critical part of the Finance Department of the WB State Government, which collects stamp duty and registration fees. This department is also responsible for maintaining records of registered documents.

Earlier the entire process of registration was done manually. The process was time consuming as

it included tasks like maintenance of fee book register, determination of market value, writing endorsement details, etc. Also the department had to maintain these documents forever which required large quantities of paper as well as secure space. The department found this to be expensive and had a hard time in having complete control over these documents. The citizens were experiencing long delays when they needed to search an old document and they had to make repeated visits to the registration office. Since a registered document forms the legal basis for land property transfer, providing a copy of the document as demanded by the citizen is necessary for the office. Moreover it took months for the entire registration process to complete and citizens had to make multiple trips to the registration office.

To cope with all these demands and reduce the time required in registering the documents, the Department of Registration started the CoRD (Computerization of Registration of Document) project. The solution was created by NIC and implemented by CMS computers across 89 Sub-Registrar / District offices of West Bengal. The aim of the project was to complete the registration process within a day, if not within an hour. A Helpdesk system to provide advance information about market value, Registration fees, stamp duty and other fees payable for the registration of the property was created to bring transparency into the system. All information required to determine the market value and other fees related to the property sold was accumulated into the solution such as maps and road details of the area etc. This also reduced the inspectors visit to property land being sold to determine its market value.

The project has also automated functional areas such as Generation of Query Number for determining the chargeability of Stamp Duty

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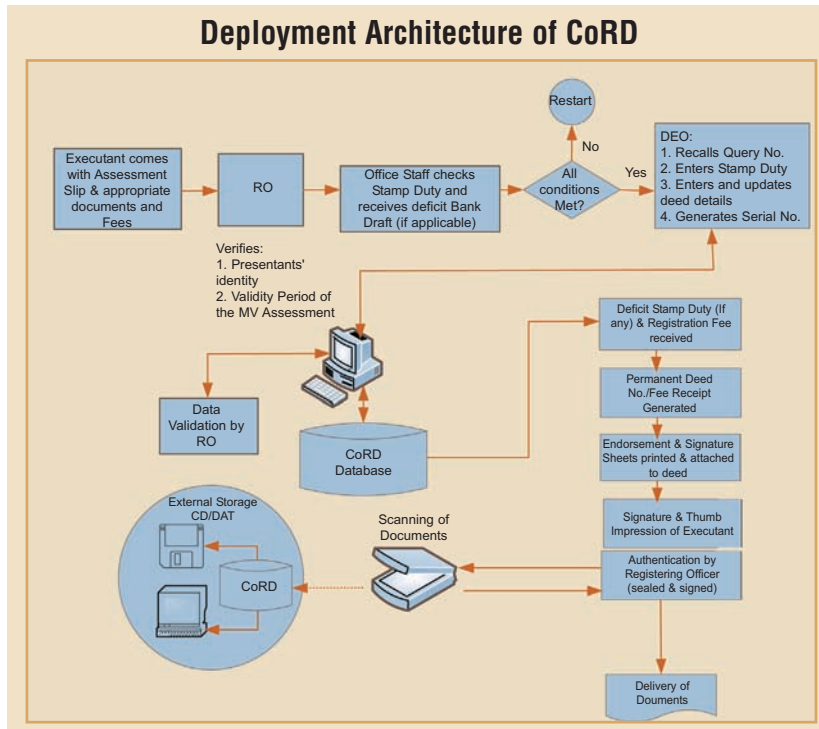
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Cover Story



and Registration Fees of a deed before its construction by submitting the deed's information in a prescribed form. Generation of serial numbers and deed numbers to the document on first-cum-first-serve basis. Automatic generation of receipts in the prescribed forms after the fees has been received. Automatic generation of Endorsement pages, Signature Sheets for thumb impression and signature. For acquiring correct thumb expressions of the citizens, biometric fingerprint readers are deployed at the registration offices. The solution also does automatic generation of 'Certificate of Completion of Registration of

Document' vis-à-vis back page of the document.

Data generated at each registration office across the state is pooled up in a central data centre for better mgmt, and adequately strong security and availability. Ideally, each office is supposed to transmit the day's data through West Bengal State Wide Area Network (WB-SWAN). However currently WBSWN is only available at district level. Network's extension to block level is under implementation and is targeted to be completed by mid 2009. Till then each ADSR office sends text data on CD to the concerned DR periodically for its onward

COMPANY SCENARIO

Before Deployment

- ❑ Entire registration process was manual
- ❑ It used to take months, at time even years for registration process to complete
- ❑ Revenue leakage, Lack of Transparency, Accountability & Objectivity

After Deployment

- ❑ Final registration documents delivered to the citizens on the same day
- ❑ Revenue increase by 30%
- ❑ Entire registration data available at a central place which gives better planning and decision making to government and information provided to citizens instantly

transmission to the central server.

Pilot for this project began on 5th September, 2003, with support from the Department of Information Technology (DIT), Government of India with Hooghly as the Pilot District. Later on the project was rolled out through a BOOT model. The project has been implemented in more than 160 registration offices of WB.

After project implementation there has been a significant improvement in the Service delivery, now citizens are able to receive final registered documents back on the same day which earlier used to take months. There has been considerable improvement in the increase of revenue as there is less scope for malpractices and this year the department expects its revenue to increase by 30%. ❑

Implementation Partner

As a Private Partner CMS computers Limited was also responsible for Site Preparation, Civil and Electrical work at site, deploying and maintaining all hardware and network infrastructure of site and bear all operational as well as running and maintenance costs.

While implementing this project, one of the major challenges was user resistance. In remote areas where ICT penetration is low, employees opposed the new changes brought by the system, while others feared loss of Job. Another major challenge was availability of resources in remote areas. To deal with this

challenge and problems faced, CMS Computers provided training to all employee of the registration office. They have also setup a helpdesk at every office which provides technical support to all the employees.

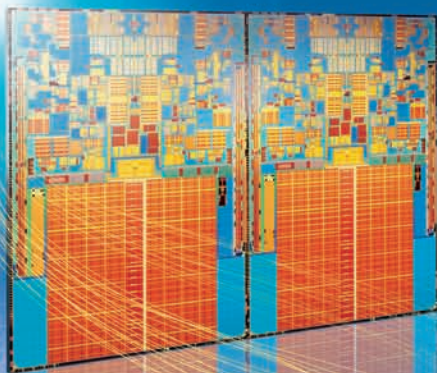


Ramesh D. Grover
CMD, CMS

Shovan Giri
Head e-Governance-
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*Intel measured results as of Aug 22, 07. Performance comparisons made using internal virtualization workload on Xeon 5300 against Xeon 7300. Intel VT requires computer system with a processor, chipset, BIOS, virtual machine monitor (VMM) and applications enabled for virtualization technology. Performance, functionality or other virtualization technology benefits will vary. ©2008 Intel Corporation. Intel, the Intel logo, Xeon, Xeon inside are trademarks of Intel Corporation in the United States and other countries.



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Intel

World Ahead Community Implementation



R Ravichandran, Director - Sales
INTEL SOUTH ASIA

Ravi is responsible for the overall consolidation of all sales activities in South Asia across channels and OEMs. Ravi manages Intel World Ahead Program across South Asia and the program is aimed at connecting the next billion with Accessibility, Connectivity, Content and Education as the main pillars.

Q What were the challenges and business problems that led to implementation of this project?

Under the Intel World Ahead Program at Baramati, our key objective has been to enhance the quality of life by integrating key pillars such as Accessibility, Connectivity, Content and Education. These pillars deliver benefits through technology-based solutions in socioeconomic growth. The issues and challenges during the course of implementation were; Creation of a robust model for ICT implementation at the community level, and building an industry ecosystem for smooth and efficient execution.

Q What were the key benefits gained after having deployed this project?

Use of technology will increase the quality of life proving affordable health care and remote diagnostics from specialized hospitals through Internet, enabling educated rural population and people empowerment.

World Ahead Implementation project is a part of Intel's CSR Initiative. This is the first implementation in India under this project which is done at Baramati, a tier 4 town in Pune. World Ahead is a community where ICT enabled solutions in the areas of Education, Healthcare, shared access etc are implemented

with the objective of providing easy access to its citizens. This is done by the industry along with local partners and govt. facilitation. In Baramati five usage Models have been Implemented. Lets take a look at them one by one.

Remote Diagnostics at Rui Hospital

A tele-diagnostic facility has been implemented at Rui Hospital in Baramati. This hospital has been connected to Narayan Hridayalaya in Bangalore and Aravind Eye Hospital. Being collaborated with Narayan Hridayalaya, Rui hospital is able to provide cardiac care to citizens of Baramati. ECGs are taken and sent for diagnosis to Narayan Hridayalaya and diagnosis results are returned by Narayan Hridayalaya within 10 minutes. Collaboration with Aravind eye hospital is to provide Ophthalmic diagnosis services where images of eyes is examined by ophthalmic surgeons at Aravind eye hospital and results are sent back with an hour. Now almost 150 -200 out patients being registered every day. On an average, 5 patients on every working day are diagnosed by Narayan Hridayalaya for Cardiac care, and almost 10 – 15 patients are diagnosed by Aravind Eye hospital for eye care.

Mobile PC Labs

With the aim to provide computer education to children living in Baramati and its nearby rural areas, Mobile PC Van initiative was taken up. These vans are basically buses equipped with PCs along with 2 trainers for each bus. A total of 5 Vans were deployed which cover 49 rural schools in and around Baramati. So far 7936 students have been reached under this project. With this project

If there's a book you really want to read,
but it hasn't been written yet,
then you must write it
—Toni Morrison

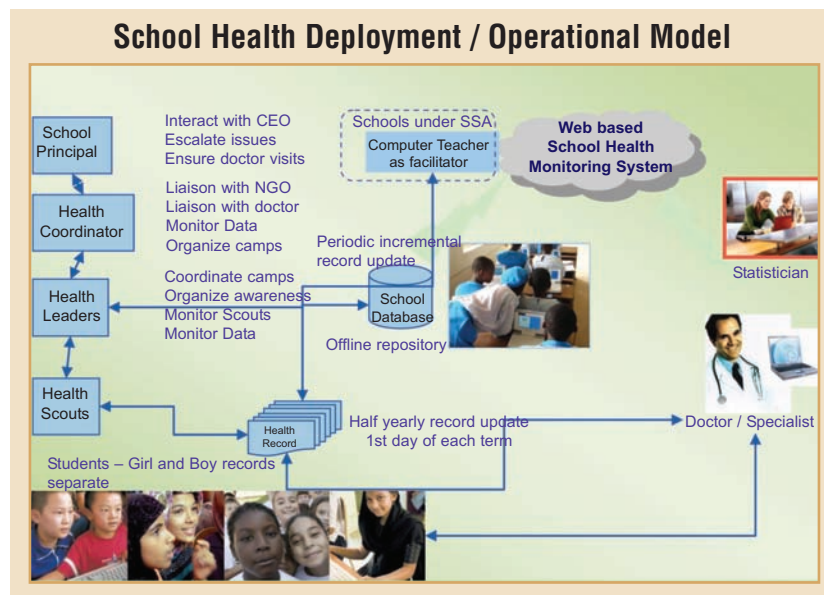


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Cover Story



COMPANY SCENARIO	
Before Deployment	
<input type="checkbox"/>	Few Services and experts available at local PHC
<input type="checkbox"/>	Many schools around Baramati did not have PC lab infrastructure
After Deployment	
<input type="checkbox"/>	ECG results sent back to PHC after remote diagnosis within 10 minutes
<input type="checkbox"/>	IT literacy provided to 7936 students, 500 Teachers trained in Baramati

students have become more aware of IT opportunities and schools are experiencing reduction in school drop out rates. Moreover students are doing projects using computers and educating their parents (largely farmers) on using technology to improve their knowledge on farm productivity.

School Health Monitoring System

This usage model addresses the issue of malnutrition among children in India by identifying undernourished children and providing them and their parents correct dietary directions. School Health Monitoring System is a Web-based solution which provides children faculty ben-

efits such as digitized health records and health camps with participatory, action-based health learning etc. The solution helps to keep track of basic health parameters of students according to WHO provided age metrics. A central online database is created for all students and a 'health card' is provided to every student.

A health scout is assigned for every 30 students which in turn is assisted by teachers. They are trained to check the height, weight, common signs and symptoms of nutritional deficiencies and data entry.

The observations are noted down on the health card of every student and uploaded to the central server.

ICT training by Self Help Groups

VIIT manages 200 computer training centers in more than 110 Taluks in Maharashtra. These centers are run by women entrepreneurs from Local Self Help Groups. Each center usually has 3-5 PCs which are used to provide computer literacy to women from the surrounding community for an affordable fee of Rs 165/-. Approximately 10,000 women have been trained so far.

Intel Teach Program

Under this program Intel trains teachers to be more effective educators by training them on how to integrate technology into their lessons, promoting problem solving, and critical thinking and collaboration skills among their students. So far 500 teachers have been trained through this program across 15 schools in Baramati benefiting thousands of students.

Implementation Partner

The main implementation partner for Baramati is Vidyaprathistan Institute of Information Technology (VIIT). The tele-diagnostic facility is driven by VIIT, Intel, SN Informatics working along with Schiller Healthcare.

Under Self Help Group usage model, Intel and VIIT are working together in training women of the Self Help Groups, who can impart training to women across the rural areas in the state of Maharashtra. VIIT is also responsible for maintaining all computer training centers of Self help groups. One of the major challenges in this project was to provide training manual and

certificates in local language i.e marathi. For school health monitoring usage model, the application was developed by TCS. While TCS has helped the volunteers with the software and data entry training, Intel and VIIT provided the computer and Internet facilities to the students.

The self-sustainable programme has been implemented with the help of students and teachers.



Amol Goje, Director VIIT

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**Most
Complex**

Infosys Technologies Productivity Enhancement Platform



Ramesh G, Group Project Manager

A Masters degree holder from NIT, Trichy, Ramesh drives the process and quality related initiatives at IS. He has been behind introducing various processes and the implementation of the Capability maturity model (CMMi). His initiatives to improve developer productivity have resulted in the creation of tools to automate activities in the software development life cycle.

Q What sets this project apart from any other in this class, in short what's the USP?

PEP provides tools for templating, prototyping, code generation, validation and verification. It's easy to use wizard driven interfaces ensure that the user has to spend minimal time in learning how to use these tools. Moreover, PEP tools have been developed using the latest Microsoft technologies such as GAT&E, Text-to-Text Transformation templates and have high extensibility.

Q What were the key challenges faced during this deployment?

Displaying the template layout to the developer when he browses through the templates to find one which suits the current requirements came across as a challenge. Another was to integrate the templating engine with the Code Generator output. The source code to CIL (Common Intermediate Mapping) was at times not direct and required development of robust algorithms.

Q What else do you plan for this project in future?

We plan automatic generation of the unit test code, integration of Templating Engine with Visual Studio IDE, provide features to generate Business Entity classes from Class Design as XMI in addition to current capabilities. We also plan to have code snippets in C# for mailing, data access, exceptions, etc.

For a company of such a large scale and magnitude, there are bound to be thousands of apps running or under development at a given point in time. And all these are fairly complex, with codes running into thousands of lines with multiple iterations, eating away from developer's productive time. The Information Systems

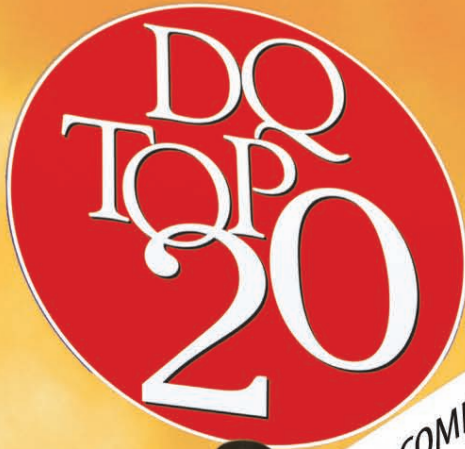
division of Infosys runs a 24x7, globally accessed digital business engine for the entire group through a number of custom built applications on multiple technology platforms. The requirements have been exponentially increasing and there is constant challenge for scaling up the existing apps and building new apps, with rapid time to market. The project, 'PEP' (Productivity Enhancing Platform) was conceptualized to manage higher demands with quicker turnaround time; without compromising on the quality of products. The tools developed under the PEP initiative augment different stages of the SDLC. The following tools were envisaged for the different stages:

1. Prototyping and Build phase: Templating Engine

The Templating engine helps developers to automatically generate web pages for rapid prototyping, as per User Interface guidelines and standards. It includes a set of reusable library of templates for the presentation layer, which the development team can utilize to build their user interface layer pages for .NET 2.0 applications. The tool also provides the capability to define new templates and add them to the library. Displaying the template layout to the developer when he browses through the templates to find one which suits the current requirements came across as a challenge. Another challenge was to integrate the Templating engine with the Code Generator generated output.

2. Build phase: Static Code Analyzer

It's a code analysis tool which checks .NET managed code assem-



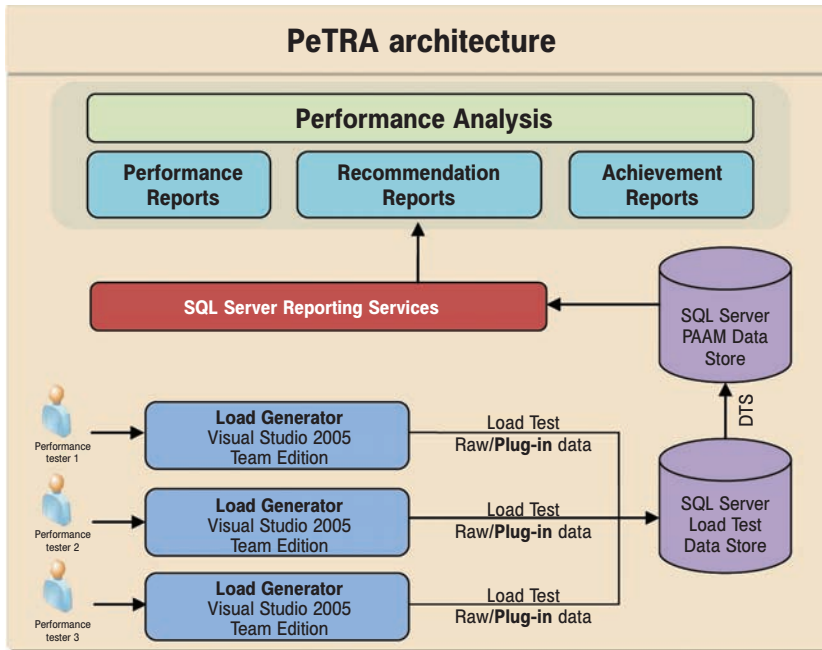
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blies for conformance to the IS department's Coding standards and Coding Best Practices. The tool also helps in increasing awareness on secure and performance oriented coding. It also enforces best practices on exception handling, data access etc. It provides information on code quality as defined in Infosys Product Quality Metric standards for .NET projects.

Code Gen

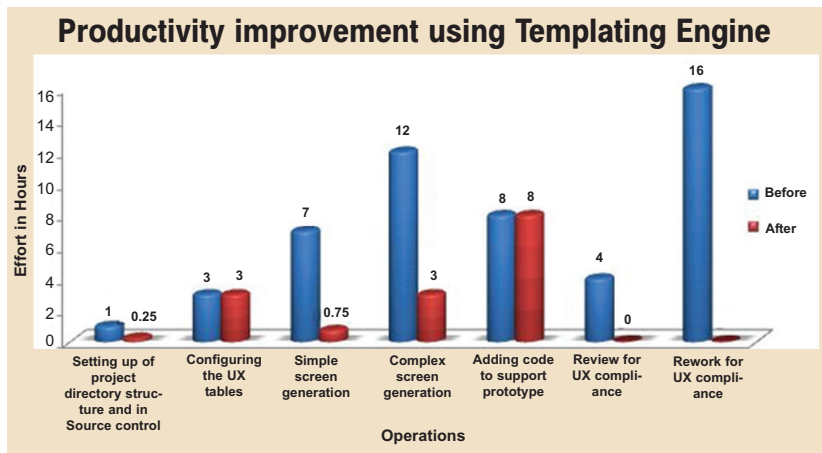
A custom built tool to generate .NET 2.0 based C# and VB.NET code for Web Applications as per IS EAA guidelines. It was envisaged to achieve the following:

- Reduce development effort during cod-

ing cycles.

- Provide step-by-step guidance and enable standard adherence.
- Generate code based on Database and Class designs
- Automatic installation and inclusion of IS Infrastructure and Utility components

The tool has been implemented as an Add-in to the Visual Studio IDE. It provides guidance (also called as recipes) for database, business and presentation layers. Its custom Installation package ensures that the developer workstations are patched with the latest versions of the IS Infrastructure and Utility components and the Static Code Analyzer rules.



COMPANY SCENARIO

Before Deployment

- ❑ Exponential increase in the demand to scale up existing apps and build new ones, with rapid time to market.
- ❑ Productivity per developer did not match the rising demand for apps.
- ❑ Need to bring in innovation in operations and the governance of the digital business engine to support organization growth.

After Deployment

- ❑ Reduction of 73% in standards related defects from 44.66 defects/1000 Function Points to 11.85.
- ❑ 19% of the code is automatically generated, saving developer's time.
- ❑ Build productivity has improved by 134% through usage of CodeGen.
- ❑ Performance testing time has reduced by nearly 10 times.

3. Performance testing phase PeTRA (Performance Test Result Analyzer)

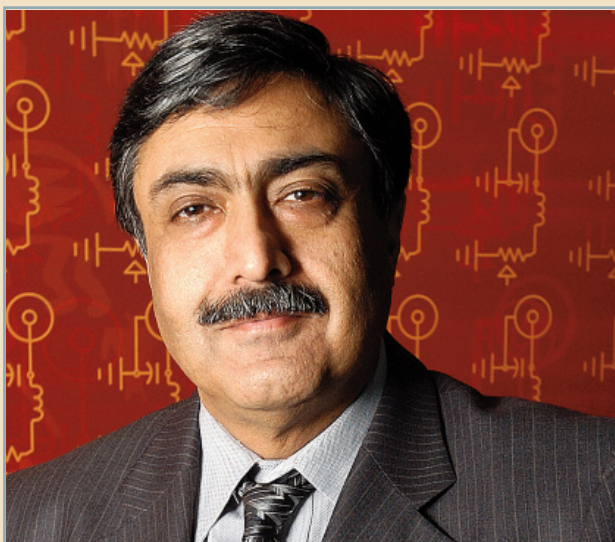
PeTRA is a web-enabled, custom-built solution which integrates with VSTS (Visual Studio Team System) to create a unique performance testing platform. The solution automates the task of collecting application level performance metrics needed from the outputs of the testing tool (VSTS) and Performance Monitor (PerfMon). It generates customized, on-demand, rapid reports to analyze the performance and diagnose bottlenecks. Also provided are potential fix recommendations to the application teams for different types of issues. The configuration details of the VSTS performance testing tool are present on the client side of the Tool. A plug-in had to be developed to transform the configuration details, which contains Tester's name, DB Server name, Web server name, Number of virtual users to be tested. Since Perfmon counters are required to be collected for every test being done, they had to standardize different counter parameters that need to be collected. ❑



ICICI Bank

**Most
Complex
Project**

Enterprise Server Virtualization



Pravir Vohra, Group CTO

Pravir Vohra is the Group CTO at ICICI Bank. In this role, he is responsible for the IT strategy & innovation, enterprise architecture, process automation and leveraging technology synergies across ICICI Bank and its group companies

Inputs from Muralidhar Ayyagari, Project Head

Q What were the problems that ICICI faced before the deployment?

- Servers sprawl
- Too many racks holding windows servers
- Maintenance of the numerable servers
- Increased power consumption
- Increased operating expenditure

Q What benefits were incurred after the deployment?

- Reduction in number of windows servers
- Quick provisioning of servers
- Savings in real estate
- Savings in power
- Lower TCO
- Reduction of the annual maintenance costs
- Single pane of glass for maintenance and monitoring of the servers
- High availability
- Impetus to go-green initiative

Enterprise Server Virtualization project was a move by ICICI bank to save cost in terms of real estate, power consumption, and hardware by doing datacenter consolidation with using virtualization. The number of servers were growing so rapidly within the four walls of the datacenter that it became

highly imperative to have a strategy to reduce the number of servers which in turn would result in saving on power and space. Consolidation of servers in a virtualized environment looked to be the right strategy to address this. The biggest challenge in front of the organization was to still maintain the reliability and availability of the services which are being served to 20 million customers of ICICI bank.

The Implementation

The consolidation and virtualization strategy is to reduce the old and low configuration servers from the datacenter and replace them with high-end latest technology servers (viz. dual core, quad core etc) at the same time to provide a real time infrastructure to various applications hosted in this environment.

The bank has essentially installed VMWare for the Database servers running SQL instances, for Application servers like Web-sphere, Pramati and Oracle application servers and for Web servers. Around 54 VMWare ESX servers (Base server) have been installed till date: 43 ESX servers implemented at Primary and 11 ESX servers at DR site, hosting around 550 virtual servers which include production, standby, UAT, and development servers.

The old servers had 2 CPU dual core, 4 CPU dual core, and 8 CPU dual core servers. As a strategy, the current implementation has been done only on 8 CPU dual core servers with 64 GB RAM so that the features of over commitment of memory and CPU resources of VMWare can be utilized and the setup is able to scale up instead of scale out taking full advantage of the li-

Cover Story

censes deployed.

An average of 25 to 30 servers has been consolidated on one 8 CPU dual core with 64 GB RAM which are production systems. However to de-risk the failure of the server, VMotion and manual movement of the VMs are carried out.

One of the X4600 servers is holding 51 VMs comprising of web, application, and database servers, which by itself is a benchmark of vitalizing such a huge number of machines in one single physical box. The server holds production and UAT slices.

Further to decrease the usage of multiple network cards, as a strategy the servers are moved to the same subnet of the NAS storage so that same network card can be virtualized and deployed and also the connectivity to the storage through iSCSI is persistent and there are not too many hops to reach the storage.

The Primary servers hosting the VMWare base ESX servers are Sun Microsystems's X4600 server with 16 Core CPUs 64 GB RAM and four 1 Gbps NIC cards (can grow upto 12 NIC cards), HBA cards (for SAN Connectivity), and Super-Micro servers with 16 cores and 64 GB RAM with six 1 Gbps NIC cards.

The Impact

With the deployment of this project the company is not only able to save cost in terms of space and physical servers, but it's also able to save on electricity bills, thereby contributing to the 'Green IT' cause.

Additionally it has provided more scalable environments to its users with the help of over commitment functionality of VMWare. In terms of user acceptance of the project, the users now no longer ask for a server, but instead ask for a VM Slice.

COMPANY SCENARIO

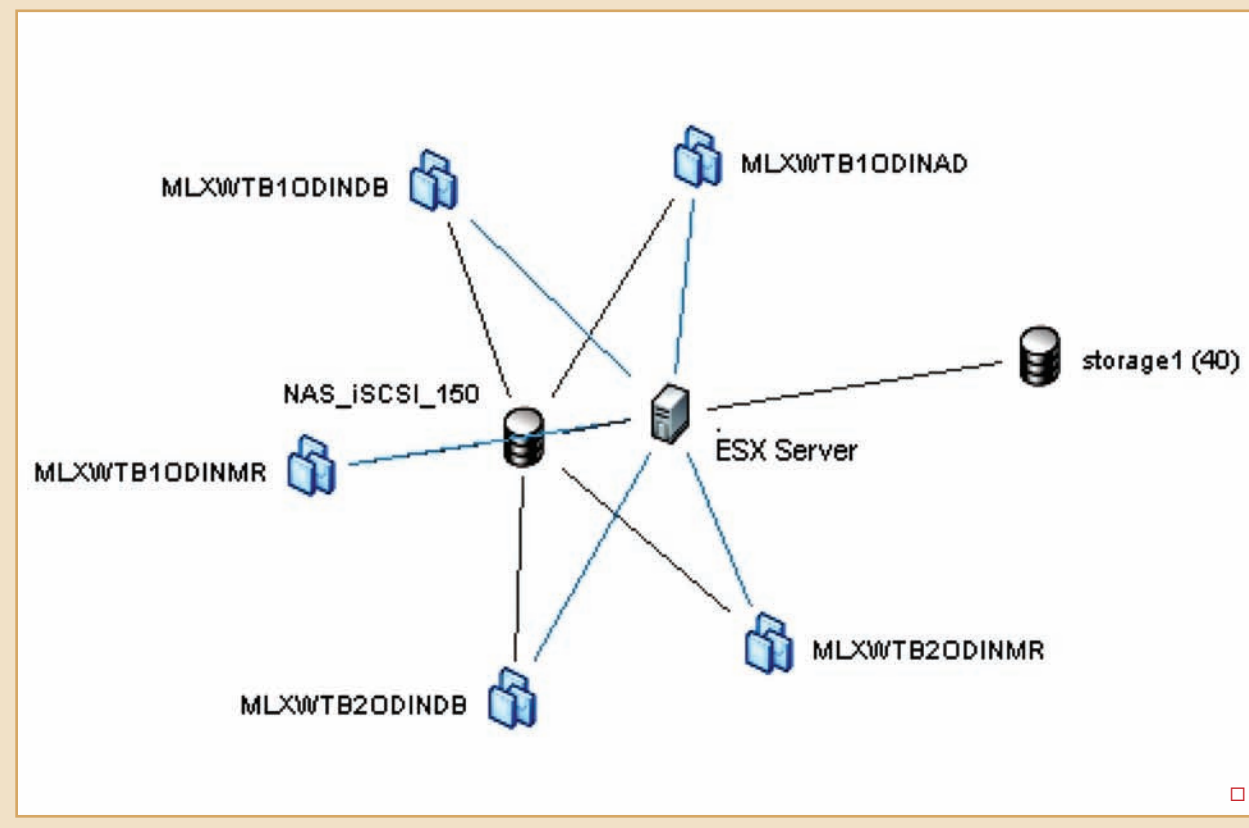
Before Deployment

- ❑ The company was facing huge problem as the numbers of servers inside the datacenter were growing exponentially due to the addition of new services in the portfolio of the bank. Getting more real state space and equipment at such a frequent speed was becoming unfeasible for the company.

After Deployment

- ❑ After the implementation of this project the company is able to condense more than 550 servers in about 43 servers using VMWare virtualization technology. Management have also become very simple as now they can monitor and manage all those 550 servers from one single console using Virtual Center Management Server.

Project Architecture for one of the servers (out of 43 that were used)





**Special
Mention**

Apollo Tyres

Transport Mgmt System



Jitendra Mahana, Divisional Head—IT

Over 22 years of experience in IT with an in-depth knowledge on various business processes and expertise in automating the business processes to improve the efficiency and productivity. He has good domain knowledge of all SAP functional modules.

Q What were the challenges and business problems that led to implementing this project? Apollo has world-renowned ERP to manage the movement of goods, but the solution could not address to all the logistic needs, as many minute details of information, for instance the data on the performance reports of transporters and vehicles, were not captured. The challenge involved was to develop a software which allows capturing of minute details and interacts with SAP as per needs and helps to measure performance reports of transporters and vehicles.

Q What were the key benefits gained after having deployed this project? With the project in action in its plants from the last three months we could make the entire dispatch process—starting from requirement upload to indent generation to Truck Loading Slips, loading confirmation and truck exit—automated and running. With it we maintain vehicle history, transporter details, road permit utilization, tracking and control, ensuring of all transporter freight contracts. Owing to the standardization of processes, there is a significant reduction in the total transaction processing time, truck turnaround time (gate in to gate out), order processing related errors, and errors related to communication.

A logistics automation solution crafted to keep a tab on the movement of goods at different stages of the logistics chain. The project Transport Management System delivers special value in overcoming a host of real challenges faced by the manufacturing industry.

An effective transportation management involves overcoming a multitude of challenges. Apollo is in the manufacturing of automotive tyres and its accessories (tubes, flaps) and ships them to more than 150 locations, OEMs on a hired fleet of trucks. Since these vehicles are not dedicated it was very important for Apollo to manage, control, and measure the performance of the transporters across all sectors where the vehicles are plying.

The implemented project, Transport Management System, is a Web-based application with a controlled set of users having different authorizations. The automation of its logistics operations through a tighter coupling with the already-deployed SAP ERP backbone and added facilities such as sending SM-Ses to transporters to send trucks, including transporter freight contract management and road permit management indents, has made the handling of more than 300 trucks a day and controlling of whereabouts a facile task.

The project has been in action for the last three months in plants, and has been delivering profound results. Total transaction processing time reduced from 30 min to 8 min per truck load, errors related to communication eliminated because of standardization of processes, order processing related errors eliminated (from 4 in a week to 0 in a week), truck turn around time (gate in to gate out) reduced from 12 hr to 7.5 hr.

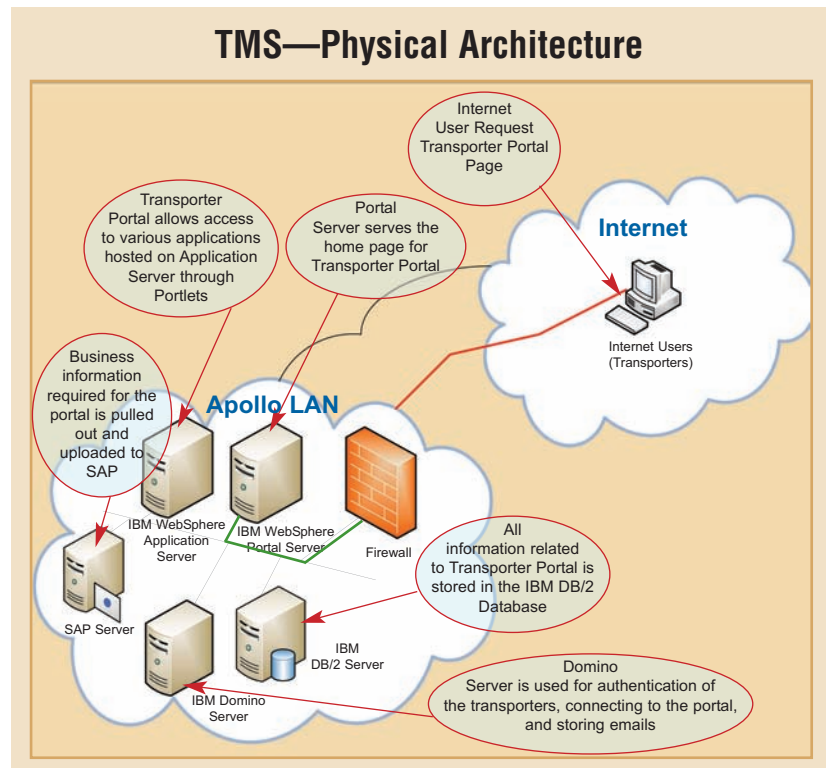
The project delivers special value in the management of contracts for transporters, finished goods, road permits, upload of SKU plan for dispatches from all the plants through Excel and SAP system into the transport Management System, indenting of trucks based on dispatch plan—indents once generated also

Cover Story

send an SMS to transporter for dispatch of trucks thereby reducing coordination effort from Apollo's side—truck reporting and truck entry at plant against the indent, preparation of Truck Loading Slip and auto creation of sales or-

permit usage.

The solution integrates complex packages such as SAP, APO, DOMINO, and SMS gateways. An important benefit has been the immaculate control over the truck ordering process and in minimizing



der/stock transfer order in SAP, truck breakdown management, key analysis reports, auto download of road permit consumed and Delivery Challans (DC) Notes from SAP truck-wise, exit of trucks from plant, and reminder facilities on road

the hold time of the vehicle inside the factory.

In a way the entire dispatch process—starting from requirement upload to indent generation to Truck Loading Slips, loading confirmation, and truck exit—

COMPANY SCENARIO

Before Deployment

- ❑ Total transaction processing time was 30 min per truck load
- ❑ Order processing related errors (approx. 4 in a week)
- ❑ Truck turn-around time (gate in to gate out): 12 hrs
- ❑ Errors related to communication because processes were not standardized

After Deployment

- ❑ Total transaction processing time reduced to 8 min per truck load
- ❑ Order processing related errors eliminated (0 in a week)
- ❑ Truck turn-around time (gate in to gate out) reduced to 7.5 hrs
- ❑ Errors related to communication eliminated because of standardization of processes

was automated and running. With it the vehicle history, transporter details, road permit utilization, tracking and control, ensuring of all transporter freight contracts were maintained.

Transport Management System addressed to many minute details of information, for instance the data on the performance reports of transporters and vehicles, which were not captured in SAP. This helped produce controlling and management reports.

Implementation Partner

Q What were the challenges faced while implementing this project?

Successfully integrating the app with SAP and IBM Domino seamlessly was one challenge. Another set of challenges faced during implementation was to measure the deviations from the processes since they were studied and do the changes quickly and implement the same so that the momentum is not lost.

Q Any other solution considered for the problem?

While discussing solutions, there were two possible options. The most obvious was SAP but it was not feasible as predicting when SAP changes shall be done and related cost was not possible. Custom development was the only choice left as availability of

COTS packages meeting these requirements was also very remote.

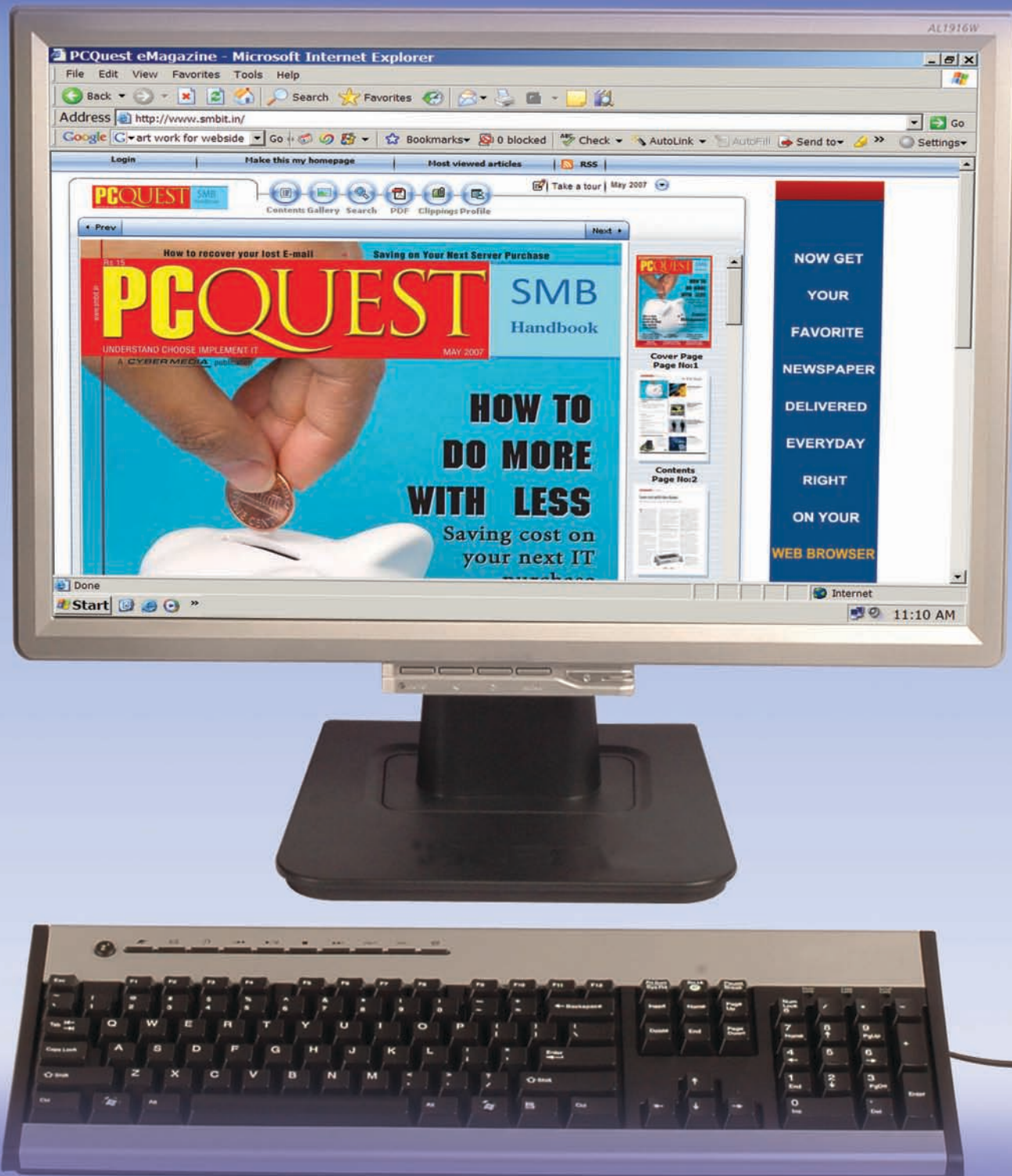
Q Resolving the key problems faced by the end customer.

The initial requirement put forward to us was generating performance reports for transporters. This is a key requirement since the hired fleet of transporters is one of the factors for Apollo's success. Users at Limda plant were met and interviewed for 3 days. All the findings were documented and blueprint for the process established. ❑



Dinesh Rampal
GM, Systems LifeCycle

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**Special
Mention**

FICCL

QMail and Exchange Co-Existence



Kailash Kandalkar,
Manager - IT Infrastructure

Q What were the challenges and business problems that led to implement this project?

Fullerton was using MS-Exchange as their messaging platform for 12,000+ users. The organization was going in for a major expansion and planning to increase the number of users to 40,000 within a period of 2 years. So, a messaging solution which was scalable, feature-rich and earning the best ROI was desired.

Q What according to you is the USP of the project?

It is only one of its kind hybrid enterprise class messaging solution which provides the following benefits:

- 1) Cost effective solution
- 2) Hybrid messaging environment
- 3) High performance and stable system
- 4) Tightly integrated with existing setup
- 5) Easy User migration between two different mailing platforms.

An innovative way of cutting down the Exchange licensing cost by providing an OpenSource alternative to the users who don't need Exchange Features. Fullerton was using MS-Exchange as their messaging platform for 12,000+ users. The organization was going in for a major expansion and

was working to increase the number of users to 40,000. A messaging solution which was scalable and feature-rich was the need of the hour. Deploying exchange for 40,000 users was becoming a huge investment and, it was also found by the FIC team through an internal survey that 80% of the users were using limited features of Exchange. So the concept of a hybrid solution was conceived which would keep the user experience same by providing exchange features to only those who are going to use it while redirecting others to a simple open source mail server.

The challenges that the team anticipated in building an effective heterogeneous messaging platform were: Unchanged user experience seamlessly integrated between exchange and Q-mail and scalable with minimal latency.

In order to cater to this requirement, Fullerton invited all major messaging solution vendors. During the POC phase, they found that Logix solution (Linux Based Mail Server) was the best for their requirements.

The Implementation

The setup had essentially been designed by tweaking the MTA settings of both mail servers. The Linux MTA was tweaked to look up to the Active Directory and handle mail deliveries accordingly. Similarly, Exchange was also configured to deliver mails for users to be relayed to Linux Mail server (Please see the architecture diagram for more details).

The major components which were deployed in this project were Windows 2003 and Red Hat Enterprise 5 as Operating systems, Windows Active directory as authentication mechanism

Cover Story

and MS-Exchange and Q-mail for mailing. For centralized authentication with Windows Active Directory via Q-mail application they extended Windows AD schemas for maintaining additional attributes.

For mass migration of live users from MS-Exchange to Q-mail with their existing mail boxes, Logix designed user migration scripts that used the IMAP protocol. Within two days FIC and Logix team have migrated 9,000+ users on the Q-mail system without any down time on working system using help of Windows AD Logon script facility. All migrated users client configuration got changed on the next working day at first logon.

Using simple Web based management console FIC team were able to manage individual user customized restrictions. For centralized address book they also modified Global address list query for Exchange users and for Linux users they provided LDAP address book.

To maintain e-mail security process outside the network they deployed the Spam filter at Logix's datacenter and not at FIC premises.

For the disaster recovery plan, Logix deployed backup servers in a HA cluster environment with scheduled backup activities. For redundant availability of users data for both cluster servers Fullerton provided a backend SAN storage.

The setup had been essentially designed by tweaking the MTA of the mail servers. The Linux MTA was tweaked to look up to the Active Directory and handle mail deliveries accordingly. Similarly Exchange was also configured to deliver mails for user to be relayed to Linux Mail server.

The Impact

After deploying this project, the company is able to save huge costs in terms of licensing that too without losing upon features.

COMPANY SCENARIO

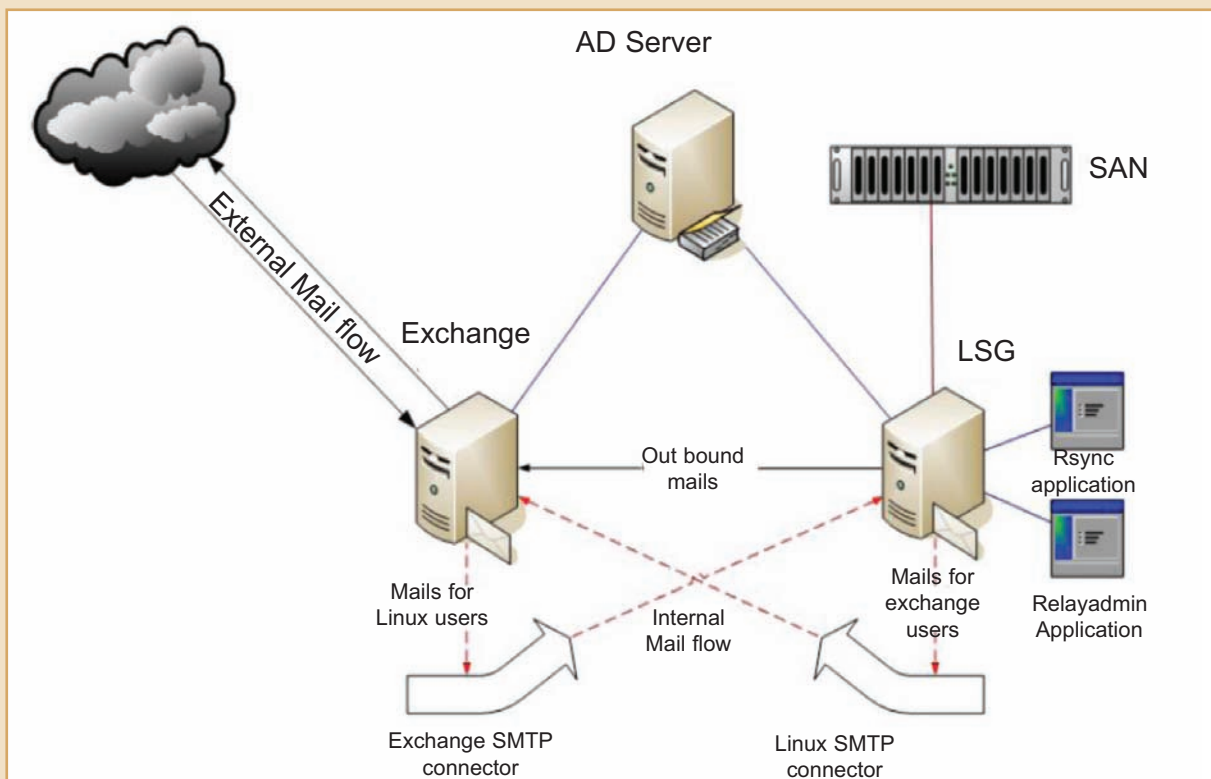
Before Deployment

- ❑ With 12,000+ users on Exchange only 20% were using the features of Exchange.
- ❑ The company is going to add up to 30,000 more users.
- ❑ Licensing cost for 40,000 Exchange users was a major investment which was not truly required

After Deployment

- ❑ The yearly valuation for this project will be 2.5 Cr. this year and 3.6 Cr next year.
- ❑ Exchange now only caters to 20% of the actual load and hence only 80% of the licensing cost is saved
- ❑ On the other hand Qmail is handling the rest 80% of the load.

Architecture diagram of QMail and Exchange Integration





**Special
Mention**

Reliance General Insurance **Policy Kit System**



Prashant Pandey, Sr Mgr - IT

As part of Reliance General Insurance he handles business process management, the enterprise portal, enterprise service bus besides handling the software development team for handling initiatives on Operations, Underwriting, Human resource, Multi Channel Sales and Marketing and Claims Management Systems

Q What was the business problem that led you to implement this project?

The time taken for issuing a new policy to a customer used to take very long. This led to frequent customer complaints and queries, and also loss of business to competition. So, we decided to have a system in place, whereby the policy could be given over-the-counter to the customer.

Q What were the challenges faced during this implementation?

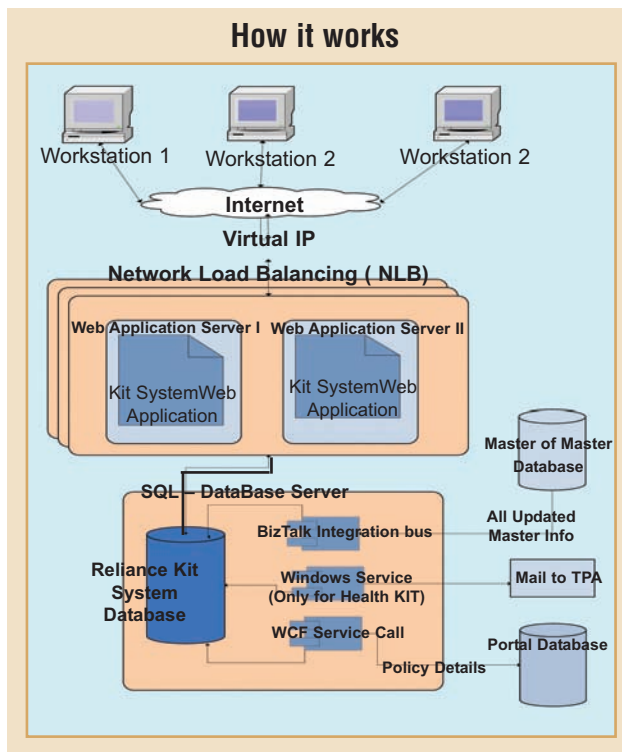
Over the Counter Policy Issuance was a totally new Concept in terms of implementation in insurance sector. There was a marked emphasis to reach to customers and intermediaries through innovative and unique ways for insurance policy sales with negligible operational TAT. A major challenge was to implement the process within IRDA Guidelines within a stipulated deadline of 20 days (including testing). We started with health kit (Reliance Health wise medi-claim policy with TPA Card) distribution and sale. The intention was to sell the policy by handing over the policy kit immediately anywhere anytime as soon as the payment is received from the customer. After this stage was successful, the company included more modules for products such as Home Protect and Farmer's Package policy. The system has been developed to handle kit distribution to all points of sale with complete end to end tracking and reconciliation along with policy issuance and premium calculation logic.

Do you still remember the old account opening procedure in banks! One spent a whole day filling in the lengthy form and got verifications done from different officials. If that wasn't enough, you were called after a few days to collect the passbook and just in case you wanted a cheque book to go with it, yet another

round of applications would begin. That has all changed with the entry of private banks, as first the passbook was done away with and replaced with monthly or quarterly statements and second, the cheque book has been neatly packaged with a set of introductory documents to form a nice and handy kit, to be carried along by the customer as soon as the application form is accepted. The same analogy applies to insurance companies where the old procedure was more or less similar and in some cases even worse. Customers had to follow-up at regular intervals before the policy papers were finally dispatched to their addresses. The Policy Kit system is an initiative aimed to reduce the TAT of the insurance policy issuance process by introducing an OTC product.

The original idea for the system came from intense debates on how to simplify the policy issuance procedure for Health policies which typically took 7-10 days followed by another 10-15 days for processing a Health Card issued by a TPA. The IT team came up with the idea of creating a product that is similar to the account opening kit in banking. Along with the Product development team they engaged in a series of business sessions to reengineer the operations and Sales processes to suit such a product and delivery mechanism. The IT team developed a front end portal based on Microsoft technologies (.NET 2.0 and SQL Server 2005) to enable issuance of such kits at the point of Sale with minimum data entry. The services that have been deployed to facilitate this system are SQL Server reporting services, SQL Server integration services, Windows Communication Services and mailing services. The system also supports multiple channels like web, telecall and other regular channels.

Cover Story



Over the Counter Policy Issuance was a totally new Concept in terms of implementation in insurance sector. There was a marked emphasis to reach to customers and intermediaries through innovative and unique ways for insurance policy sales with negligible operational TAT. A major challenge was to implement the process within IRDA Guidelines within a stipulated deadline of 20 days (including testing). They started with health kit (Reliance Health wise medi-claim policy with TPA Card) distribution and sale. The intention was to sell the policy by handing over the policy kit imme-

The system was completely integrated in fully automated mode with multiple third party administrators (TPAs). This involved several discussions required a consensus on integration signatures with various vendors. The front end portal was linked to the core backend using Biztalk. The risk with such a process is to ensure that kits are easily managed on the field and a proper reconciliation is possible at any given point of time. Do remember that the nature of the kits is such that they can be misused easily. So a robust and secure kit allocation and tracking module was developed to ensure risk

diately anywhere anytime as soon as the payment is received from the customer. After this stage was successful, the company included more modules for products such as Home Protect and Farmer's Package policy. The system has been developed to handle kit distribution to all points of sale with complete end to end tracking and reconciliation along with policy issuance and premium calculation logic.

COMPANY SCENARIO

Before Deployment

- ❑ Health policies typically took 7-10 days for issuance followed by another 10-15 days for processing a Health Card issued by a TPA. There was a clear need to reduce this delay.
- ❑ There was a need to reach to the customer and intermediary of Insurance Policy sale through innovative means and Negligible Operational TAT.

After Deployment

- ❑ Approx 3.5 lakhs policies has been sold collecting Rs.100/- crore as premium.
- ❑ The system can handle kit distribution to all points of sale with complete end to end tracking and reconciliation along with policy issuance and premium calculation logic.

minimization. The kit system brought down the operational cost of issuance by half by making redundant the logistics involved with document movement (as discussed earlier in the banking analogy). The ease of use and simplicity of application was taken care of as the system is to be used by various verticals. Also, as the system has to potential to penetrate to the remotest corners, the launch involved extensive travel and training across the length and breadth of country. Approx 3.5 lakh policies have been sold collecting Rs 100 crore as premium within nine months of launch.

Implementation Partner

1. What IT solutions did you suggest to Reliance?

To fulfill their business problem, we designed a Web based application to make system available to all users irrespective of client system platform. The user interfaces were intelligently designed to minimize training issues. There are role based user friendly reports to see the stock and policy issuance and other MIS report. The system is flexible to incorporate new products with similar type and accept changing business rules.

Proper project management, planned database structure and new technologies (MS .NET Framework 2.0, BizTalk 2006 and SQL

Server 2005) helped a lot to overcome quick solution delivery, integration challenges and concurrency problems.

2. What were the challenges that you encountered while deploying the IT solution?

The biggest challenge was the development and rollout within 20 days of time. Integration of our system with other core/legacy system in heterogeneous platform was another challenge.



Shrikant Bhosale
A G Technologies



**Special
Mentions**

DUXSoft

Project SPARX



Indivar Nair, VP - Technical Services

Has over 14 years of experience in infrastructure development and technical support. Possesses vast knowledge of web app servers and mailing systems on UNIX and MS platforms, and is experienced in planning and management of LAN/WAN, etc.

Q What challenges were you facing before the deployment?

SPARX aims to be a one stop solutions to problems one faces in a studio. Along with regular management challenges that most organizations face, studios have to deal with challenges like Pipelining, Render Farm Management and Digital Asset Management. SPARX aims to automate the complete production life cycle of Digital Content creation, right from requirement capture to final delivery and archival. It will help studios dynamically change their production practices without having to undergo a major change management process with every project.

Q What according to you is the USP of this project?

SPARX Render Management Module uses Sun Grid Engine in the background. Grid Engines are built from ground up to handle thousands of jobs (running on as many nodes) simultaneously. This makes it a very powerful tool for Render Management too. We removed the complexity of using a Grid Engine by giving it a very easy to use, intuitive File Manager type Web Interface.

In the last decade or so, the Animation, VFX (Visual Effects) and gaming arena have seen some rapid progress. Each of these technologies has moved out of the computing laboratories to become a full-fledged industry in itself. This progress has also brought with it some new challenges.

Along with the regular management challenges that most organizations face, these studios have dealt with challenges like Pipelining, Render Management and Digital Asset Management.

The production process in a studio is usually very serial and iterative in nature. Due to this, the work flow is referred to as the 'Pipeline' by the industry. The problem is that, even though Animation, VFX and Gaming have a common base in 'Computer Graphics', yet each of these industries follow different production practices. Not just that, unlike other industries, each project itself may require a different workflow. To complicate things further, due to the highly artistic nature of the work, the skill set required may also vary from task to task and not just from project to project. An improper workflow could derail the project at its crucial stages.

Rendering is the process of creating images of a movie scene and is a highly compute intensive task. These individual images are sequenced together to form a movie. One second of a movie scene is made up of 25 very high resolution frames, while one second of television scene is made of 50-60 normal resolution frames. Depending on the complexity of the scene, rendering a single frame may take up to hours.

But fortunately this is a process that can be easily parallelized. If we have enough resources, each frame can be rendered by different computers. For example, if one has 100 Computers, 4 seconds or 100 frames of the scene can be rendered in the same time that it takes to render one frame. Such an array of computers used for rendering is called a 'Render Farm'. Managing a Render Farm is a challenge, as one has to deal with multiple jobs (scenes) and multiple frames being rendered simultaneously.

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A huge number of images, scene files, movie clips etc. are generated and used during a project. Due to intellectual / artistic value attached to it, these are known as Digital Assets. Storing these assets securely as well ensuring that they can be retrieved easily when required is another challenge that most studios face.

This is the problem space that DUX Soft tries to address using SPARX, a software application that provides end to end production support for studios of all types and sizes. SPARX aims to automate the complete production life cycle of Digital Content creation, right from requirement capture to final delivery and archival. SPARX will help studios dynamically change their production practices without having to undergo a major Change Management process with every project. And to enhance the speed of the rendering at the backend of SPARX a mammoth 100 Core Render farm is sitting.

The Implementation

Right from the start, SPARX has been developed keeping in mind 'ease of use' for the end user. Therefore the whole system has been designed like a file system explorer. A

graphics artist intuitively knows what to do as soon as he / she logs in. Over and above this, a context sensitive help screen guides the user on every step. SPARX web interface has been developed on PHP 5.2.x and uses various additional plug-in to enhance its features. The web pages have been written in plain HTML, with very little JavaScripting and AJAX support. It has been tested to work with most new browsers like IE6, IE7, Firefox and Safari.

SPARX uses Sun Grid Engine 6.1 in the background for its job scheduling and management activities. The excellent features that Sun Grid Engine provides allows one to prioritize job queues, pause jobs, manage compute loads, offload an activity from one compute node to another, have detailed accounting of the jobs completed, etc. SPARX can be integrated with Microsoft ADS or any other LDAP service to provide a common authentication and single sign-on to any SPARX module. At the backend SPARX uses four Dell PowerEdge 2550 servers for ADS, Storage and SPARX Master Node. For the render farm they have used 25 Dell PowerEdge 1950 for Render Farm with two dual core processors which essentially mean

COMPANY SCENARIO

Before Deployment

- ❑ Studios and Production houses had to rely on serial processes for rendering of their animation projects. Investing in an infrastructure such as a render farm could prove to be financially unfeasible for most production houses and studios. Hence, they had no other choice but to follow their usual slow rendering processes.

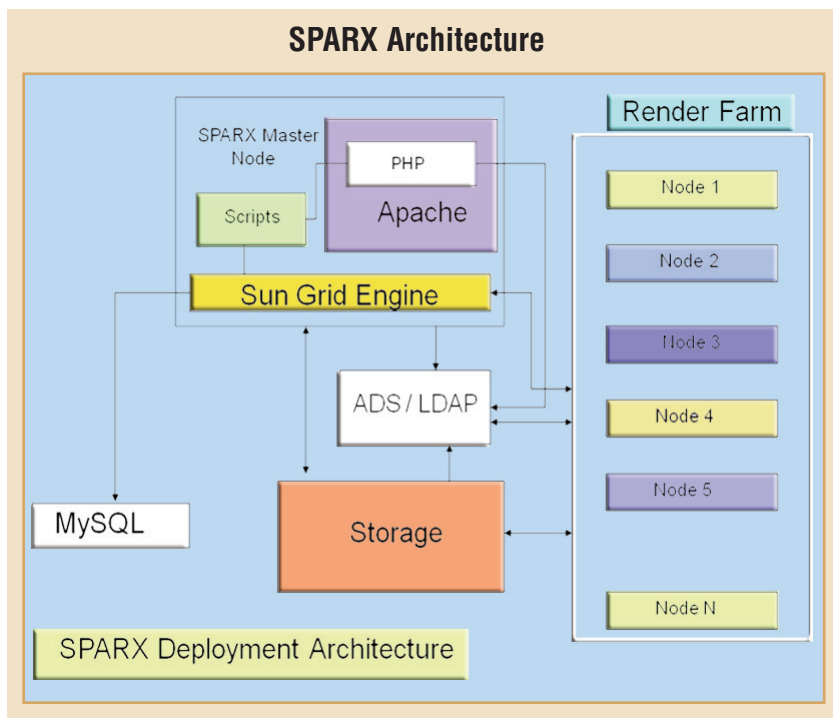
After Deployment

- ❑ Helps studios dynamically change their production practices without having to undergo a major change management process with every project.
- ❑ Significant reduction in the time taken to render frames for a movie or animation
- ❑ Intuitive user interface makes it easy for users to operate the solution

100 cores. The nodes runs OpenSuse 10.3 as the operating system which is stripped down to an extent that they have minimal OS overhead on the processors. And as this render farm is connected to the website from where the customers can initiate process at any time, they needed to keep all these servers running throughout. But to save power what they have done is that, they have created a script which turns on all the 25 nodes when any job is initiated. And once the job is finished all the nodes again goes to shutdown state automatically. This simple trick helps them to cut down power consumption in a big way.

The Impact

This kind of an outsource workflow management for rendering will essentially help the small and medium companies which are into this space. Now they can concentrate on the core job of creating the animation footage instead of wasting a huge amount of CPU and Human time in rendering the created footage without even investing a bomb on deploying their own render farm. ❑





Other Finalists

Mahindra & Mahindra Financial Services MF ESAVE BITS

Mahindra & Mahindra Financial Services Limited is a non-banking finance company established to provide financing to buyers of Mahindra tractors, utility vehicles and other vehicles of Mahindra, with a focus on rural and semi-urban sectors. Currently, MMFSL has a network of 405 branches and about

3,600 employees and outsourced employees of around 1,200 collection task force.

MMFSL was expanding rapidly across the Indian sub-continent, particularly to remote, rural villages and semi-urban towns. To facilitate this reach, the company needed to have new branches fully operational in record time. Further, both new and existing locations needed better systems and controls for internal users to enhance the level of customer service. Vehicle dealers also needed financing information

on time to compete. The company required a scalable IT infrastructure to support the growing number of branches and employees. Technological innovations such as smart cards, biometric ids, and rural kiosks that can help control costs are crucial for a safe and rapid scale up. Erratic power supply in rural areas was the main hindrance in terms of providing uninterrupted service. One of the major solutions was the newborn Solar system for electrical power.



Suresh A Shanmugam,
CIO

After the installation of solar panels, the company can focus on customers even when there's no power, because the solar panels keep the UPS charged and the IT setup running. Now, it is possible to get loan disbursement in two days, what MMFS terms as 'do din me badle din'. There is a customer on-line query availability as well. From an environment point of view, it is pollution-free and easy to handle. It saves energy as well as electricity. □

Architecture of Maintenance Management System



COMPANY SCENARIO

Before Deployment

- Due to erratic power conditions in rural areas, setting up branches with IT equipment was becoming a major concern. At the time of long power cuts the complete branches used to come to a halt or used to burn huge amounts of oil to keep running which was not environment friendly at all.

After Deployment

- After deploying this project the company is benefiting in terms of long term cost savings in terms of fuel usage, by using a safer power source. The company is also contributing to the environment by not running gensets that emit pollution. The company is able to service customers better.



Other Finalists

POWERGRID

Maintenance Mgmt System

Power Grid Corporation of India is one of the largest transmission utility companies in the world. It owns and operates 58,000 circuit kms of transmission lines of voltages ranging from 66 kV to 765 kV AC (765 kV system in operation at 400 kV) and 500 kV HVDC and 105 substations with transformation capacity of

approx. 58,000 MVA. Maintaining these huge network of transmission lines, sub-stations, and associated systems was a mammoth task for POWERGRID. Moreover the company was facing pressures from the regulators to maintain a high availability and low number of trippings. Earlier planning for maintenance, manpower, inventory, spare required great coordination among 250 maintenance offices of POWERGRID across India.

With the manual system there was no

central databank available, information was scattered which led to weak planning. Also it was difficult for POWERGRID to do an organization-wide trend analysis of equipment performance.

To solve these issues POWERGRID developed Maintenance Management System (MMS) which is a web-based decision support system that connects the entire operations and maintenance team of the company across the country. For this project POWER-

GRID has used Share Point Portal technology and the portal is populated with complete maintenance and inventory-related information which can be accessed from any location. The portal has a master and a sub-site for every region. For data entry, the portal has predesigned standardized user friendly entry forms for every location. As soon as maintenance of a equipment is done, employees are required to submit a report on this portal. All maintenance schedules for Transmission Lines and Substations are maintained on the portal as well. The portal also issues alert as soon as maintenance of an equipment is due. The portal

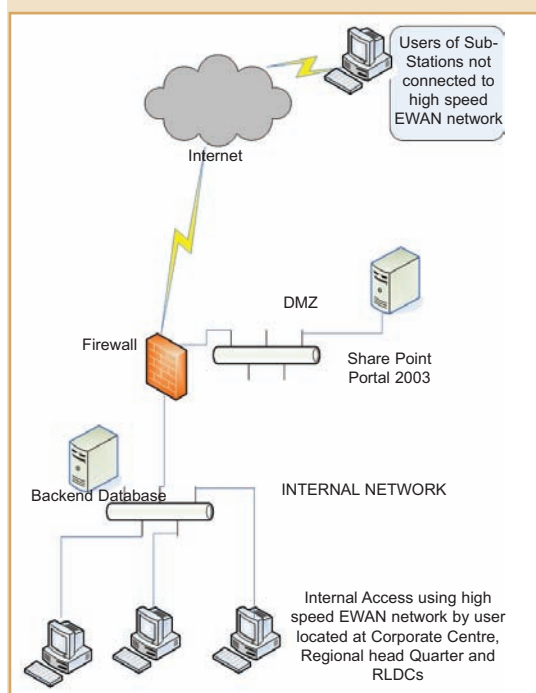


Kumud Wadhwa
Ch Manager IT

has also provided POWERGRID a collaborative platform where employee from various locations can share their experiences and help others. Moreover the portal serves as an organized knowledge base for the employees of the POWERGRID.

History of previous maintenance done and results of test performed are also made available on the portal. After implementation of this project POWERGRID is experiencing significant reduction in downtime and enhanced inventory management. Also the portal has proved to be an effective decision support system and the company is able to make efficient new purchases. □

Architecture of Maintenance Mgmt System



COMPANY SCENARIO

Before Deployment

- No Central databank
- Scattered information led to weak planning
- Lack of coordination
- Organization-wide trend analysis of equipment performance was difficult
- Experience of others was not available

After Deployment

- Central repository of data
- Comprehensive inventory of assets and spares
- Standardization of data and reports
- Security and integrity of data
- Reduction in downtime
- Decision support system for new purchases



Other Finalists

Yes Bank YCCRM

Following on the steps of leading Indian banks, Yes Bank has developed a collaborative CRM solution, called YCCRM, to further its 'customer first' policy. Targeted at sales force and help desks across various departments, it aims to create a mutually beneficial relationship with current and potential customers. It encompasses

the complete life cycle of customer values starting from leads to closure of sales to logging their grievances across all retail branches, the call center and NOCs into a centralized system. The solution incorporates a 360 degree mechanism for customer issues monitoring and redressal, wherein the final customer feedback on a particular issue is mandatory for closure.

Issues and challenges

The three main issues and challenges before this system was deployed were:

- Sales Force management which includes all activities such as Lead Management, Pipe Line Management, Opportunity Management, Communication Management and Relationship Management was hazy.
- Pipeline and cross selling opportunity across banking products was lacking.
- Customer complaint management and escalation based on total turnaround time was not efficient.

The company wanted to start with small frame work based model that scales up to accommodate the growth in business and not buy a rigid and mature CRM package. The YCCRM was planned with two logical separation models for customers—pre acquisition cycle and post acquisition service cycle with self servicing functionality in the system.

Pre acquisition cycle

The main feature of this module is to provide sales force automation on minimum cost and with easy to use features such as export and import of leads to the sales force based on their name, department and branch. The relationship can be managed based on social values like club membership etc. which gives edge for cross selling of products. Google, Yahoo and Gmail, etc are interlinked with each lead and when one clicks on the embedded Google link it searches the content of lead and display. These features are effective for creating sales opportunities. There is a common DASHBOARD linked with mail server for managing personalized activities. The leads can also be entered in free text format, which saves time in filling the forms. There are also collaborative tools like chat, messaging and discussion boards embedded within the dash board.

Post acquisition service cycle

The main feature of this module is to capture the queries/grievances and feedback from the customer and post those to a centralized system where it gets stored for future reference. The resolutions are marked against each query. All queries are logged in the central data repository and a search option is provided on the same. The customer query is divided into different busi-



Suvanjay Kr Sharma,
VP, Corporate Development & Strategy

ness segments and based on the segments the work flow is designed for response. The work flow follows 360 degree approach where feedback from the customer becomes very valuable to complete the workflow life cycle and service them better in future.

The project is based on a JAVA frame work, where modules are completely componentized. These modules can be managed separately without impacting the whole system. In future, the company plans to start a dataware housing project to manage data from different sources.

SCENARIO

Before Deployment

- ❑ There was no interlink amongst sales related activities of different teams.
- ❑ Lack of information sharing led to a loss of cross selling opportunities for the bank's various products.
- ❑ A lack of centralized repository of customer grievances caused delays.

After Deployment

- ❑ Improved customer service by 60%.
- ❑ There's a centralized repository in place for storing reports and other data analysis.
- ❑ Knowledge management and sharing amongst sales teams for sales effectiveness. ❑



Other Finalists

United Spirits Project Delta

The brewery biggie eliminated the requirement of trained SAP manpower by creating a personalized front-end, across its 50 odd billing stations, most of which are situated in remote areas. Being the country's biggest brewery firm, United Spirits had the nique challenge of consolidating the billing status reports across

its 50 odd billing stations situated all around India, some of them in remote locations. Adding to the company's problems was the fact that most of these billing stations were attached to bottling plants that were operating as franchisee companies. Having implemented enterprise wide SAP in 2003, the company needed to make life simpler for the person manning the computers at each billing station. Project Delta was undertaken to fulfill this need.

The objective of the project was to simplify the business processes in SAP.

Transaction efficiency needed to be enhanced multifold and the information had to be tabulated in real time at a central location. Using these inputs and SAP BAPI, Web services are called in to complete all the five processes in 'One Go'. Since the SAP interaction is done through an SAP connector using SAP BAPI, the solution is insulated from SAP upgrades, resulting in Delta being used extensively for Material

Creation, Customer Creation, and Backflush. Hence, every instance in SAP that



T K SUBRAMANIAN,
VP-Information Systems

COMPANY SCENARIO

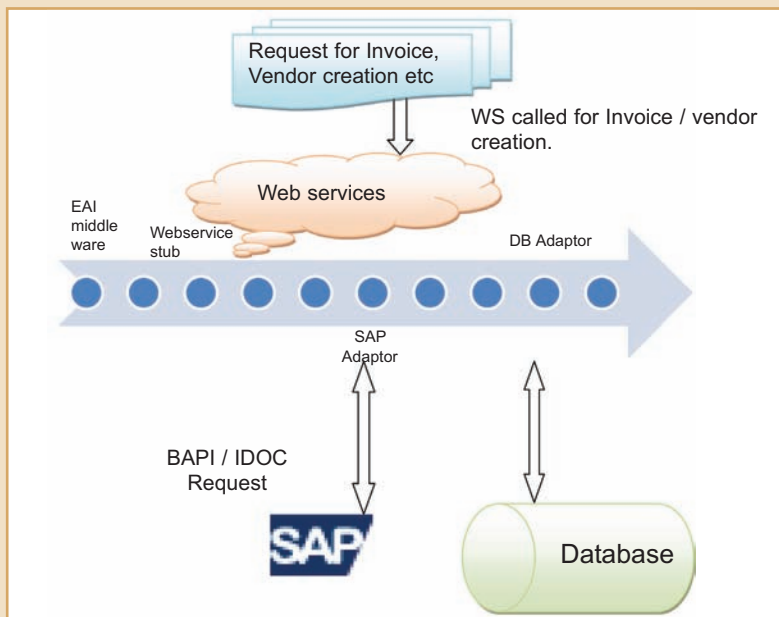
Before Deployment

- ❑ Need for SAP specialists at each billing stations, even remote stations
- ❑ Complex tax structures to be incorporated for each order
- ❑ Longer time to know billing status, especially of franchisee stations

After Deployment

- ❑ No SAP specialist at any billing station
- ❑ Single screen operation of entering billing data
- ❑ Real time updates available in HO

REQUEST FOR SAP TRANSACTION THROUGH DELTA



ideally took three stages and 8 screens, can be accomplished in a single step through a single screen through Delta.

The single screen is essentially an extended version of a typical Excel Sheet where data like No. of cases/units ordered, processed, return orders, warehouse capacity etc are updated real time as soon as an order is received, till it is processed, billed and delivered. Delta has also ensured that the excise laws, regulations etc that are unique for each state are consolidated within the billing system, thereby ensuring that the taxes, fees and other related charges are levied correctly. The company has also reduced the number of SAP trained professions manning these stations. ❑



Other Finalists

ICICI Bank Selling Framework Compliance

ICICI Bank's International Private Banking serves High Net Worth Individual clients globally through dedicated teams for Relationship management & Research and Operations. The challenge is in complying with the myriad of complex rules followed by different countries. To complicate it more, lets say the customer is living in

US and he is a citizen of India and his two nominees (lets say his kid and wife) are staying in Hong Kong and London. Then while selling a product to the customer the laws of all the countries namely US, India, Hong Kong and London will be applicable to him. This used to make the whole process very complicated for the RMs in the past.

The conflicting objectives of compliance within acceptable TATs have to be met. In the earlier process, Excel (file based) toolkits were used, which were not

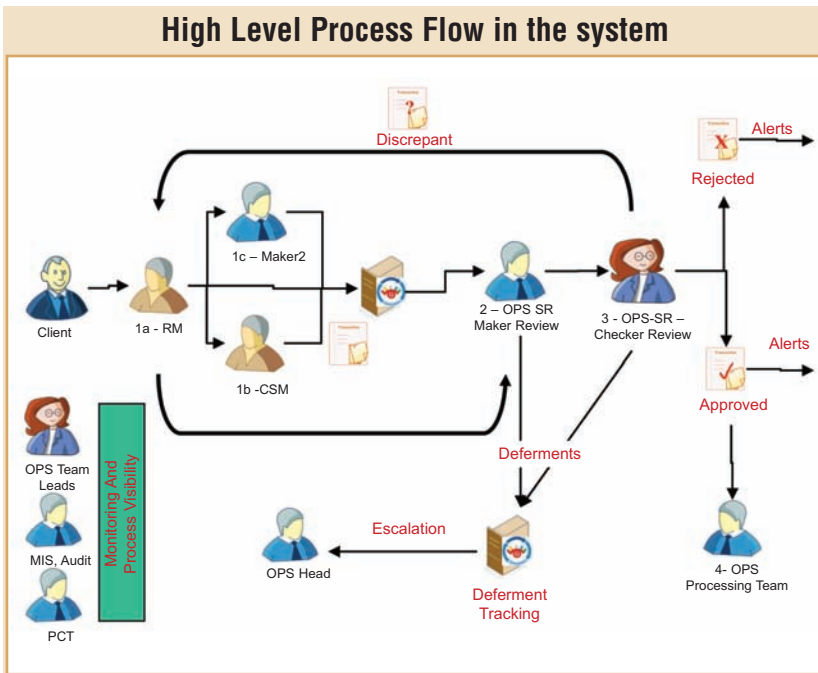
scalable for frequent changes and there was 100% reliance on human verification of all compliance requirements. Due to this Human compliance, a lot of misspellings from the end of the Relationship manager used to happen. Then it used to go to the verification team who would find those miss-sellings and inform the RMs and customers. But with so many miss-sellings at the level of the RM happening there was a constant risk of reputation loss and penalty. Hence ICICI deployed this application called IntelliRadar from Her-



Vivekanand Sharma,
Chief Manager

ald Logic to provide a very agile workflow and decision support system that can be easily updated by business users regularly without the need of any developer intervention.

This project, which has been deployed, can change compliance rules and grids on the fly by business users with ZERO involvement from IT. Plus, it has reduced the number of human touch points required for servicing clients, thereby improving TAT and improving client satisfaction with near zero risk of noncompliance consequent penalties. In the future, the bank is planning to extend the project to front -end order management processes and other front-end modules to improve its client servicing. □



COMPANY SCENARIO

Before Deployment

- Number of miss selling were large by the Relationship Managers
- It used to take a lot of time to cross check sellings using multiple Excel files

After Deployment

- The cross checking time has reduced significantly.
- Number of miss selling from RM has reduced from 600 per six months to 2 per six months.

Best IT Implementations of the Year 2008 **Other Finalists**

Wipro Technologies Collaboration Simplified

A large enterprise typically has employees with diverse skills working for client deliverables at different locations across the globe. And they often need to collaborate with each other which means they either travel from one location to the other or you have a collaboration solution in place that reduces travel

requirements. Wipro went for a collaboration solution that would allow web conferencing amongst customers, partners and internal teams across different regions and over the Internet. Instead of deploying different solutions that overlap each other's scope and to avoid interoperability issues, they deployed Microsoft solutions—Live Meeting, Live Communications Server 2005 Enterprise with Federation (to allow communication with Yahoo Messenger, MSN Hotmail, Google Talk and AOL) and SharePoint portal. This facilitates web-based meetings, desktop sharing and presentations amongst all stakeholders. It also ensures that users have up-to-date presence information on all team members and

partners for conducting meetings. For LCS 2005 implementation, Wipro used hardware load balancer for high availability. The n-tier architecture allows the flexibility to scale up with organization growth. As part of Green IT initiative, they've used blade servers for power and space optimization. This is the first large deployment for Microsoft in the APAC region, covering an enterprise of 60+ locations and affecting 85,000 users.

One of the biggest challenges while deploying the project was to roll out clients across all systems without impacting a user's work. Also, the migration of users from other web conferencing solutions required meticulous planning for a seamless transition. Yet another challenge was to in-



Jethin Chandran,
Head - IT Infrastructure Planning

crease user awareness for this service, as most of the times we find unused solutions lying on client machines in the absence of a proper buy-in from users. There were also challenges in scaling up the solution to include users across the globe. Lots of customizations had to be done to scale up to a large user base.

For future, the company plans to upgrade LCS 2005 to allow A/V chat and as part of Exchange Server 2007 they want to integrate voice messaging and gradually move towards unified communications. □

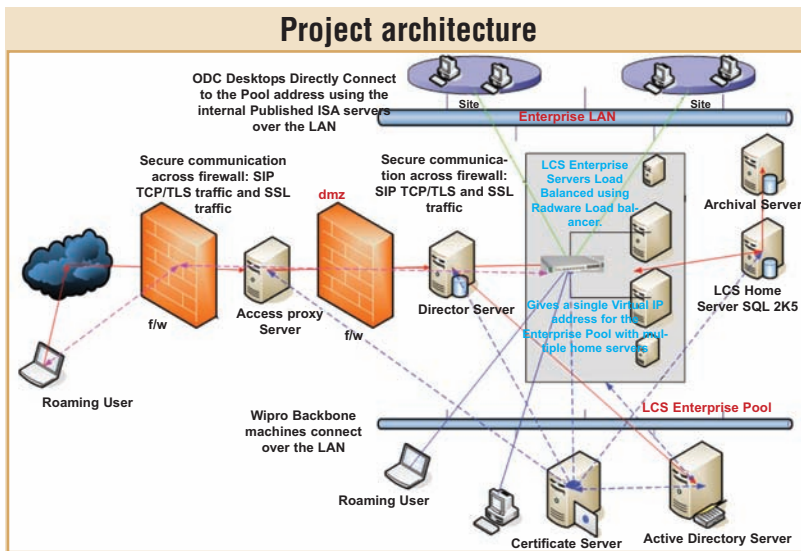
COMPANY SCENARIO

Before Deployment

- Employees with niche skills had to travel a lot to reach client locations to get problems fixed.
- There was no presence information of team members and colleagues for conducting meetings.
- Existing technological solutions didn't scale up to Wipro's growth.

After Deployment

- 1400 meetings have taken place, translating into 7,000 hrs of collaboration.
- 10% more utilization of resources.
- Employees with niche skills can quickly start working for projects from their base location, resulting in faster project delivery.



Best IT Implementations of the Year 2008
Other Finalists

FICCL

Enabling LOS process

Fullerton India Credit Company Limited (FICCL) planned for rapid rollout of branch networks to reach a large customer base. The key focus behind conceptualization of this project was that FICCL wanted to make every branch an independent profit center complemented by

centralized operations and policy governance. This, as the company could foresee, would effectively address the customer needs locally and, at the same time, would help branches abide by the centralized policy guidelines and operations.

The deployment of this project essentially automates the entire Loan Origination System (LOS), which takes care of all loan processing activities e.g. Application Data Entry, Credit Verifications, Credit Approval, booking of loan as well as post-booking application and document tracking. The company is trying to resolve challenges such as achieving profit-oriented branches, reducing turn-around-times, lowering cost of operations and improving customer

experience by the deployment of this project. As a future growth of this project, FICCL has a target of reaching 1000 (currently around 750 branches) branches by 2009 and integrating all those branches with this BPM system.

This is one-of-its kind project in India. FICCL is growing at a rapid speed and has so far opened more than 750 branches across the country in a short span of around 18 months of its roll out. FICCL also has further plans to continue opening new branches at such a pace.

The project enabled FICCL to automate and centralize its processes for efficiently managing the processes while continuing to extend the solution to newer branches.



P. Krishnamurthy
 Executive VP Technology

Bringing additional branches under the ambit of the solution, while ensuring performance of the system and that too under highly squeezed timelines is one of the major accomplishments of the project. The system is also capable of handling new business requirements, financial products and scheme launches in an agile and efficient manner.

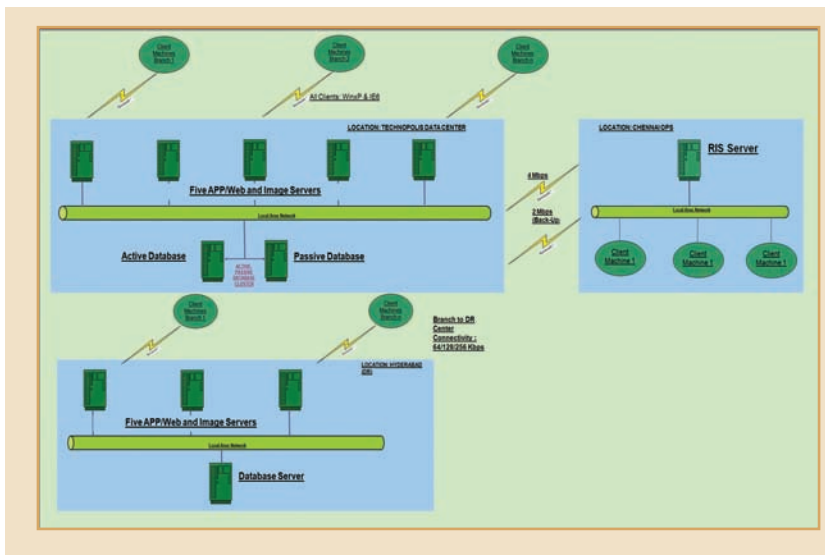
SCENARIO

Before Deployment

- ❑ Fullerton India Credit Company Limited (FICCL) planned for rapid rollout of branch network to reach a large customer base. And the key requirement was to automate the complete loan origination process.

After Deployment

- ❑ Reduction in end-to-end loan-processing time due to deviations, and parallel processing of loan application documents
- ❑ Greater customer satisfaction through quicker response and coherent customer experience
- ❑ Efficient document management and tracking of status throughout the process
- ❑ Reduced big ticket-size defaults through early warning and ability to drill down to granular details





Other Finalists

Kerala State Poultry Development Corporation

Integrated Financial Accounting System

The biggest government outfit which looks after poultry based operations in Kerala has automated its financial accounting operations, ensuring increased business efficiency, and going a step further in ensuing fund seepage

to individual workers. The Indian Council of medical research came out with a finding that the consumption of egg and poultry products in India is way below expected norms, and led KEPCO to undertake the dual task of promoting chicken rearing, and in turn empowering rural women in Kerala to take up poultry-based jobs, across KEPCO's own farms, besides ensuring transparency in business processes connected to KEPCO.

For the latter, KEPCO embarked last year on what it called an Integrated Financial Accounting Information System, a Vi-

sual Basic and .NET based application which monitors the business value emerging out of each process involved in chicken rearing, production/distribution of eggs and other poultry by products.

The aim of the home grown supply chain management tool, created in collaboration with National Informatics Center (NIC), is also towards the social cause to ensure that relevant funds reach the workers, and requirements for newer funds are justified by business.

Like any other Supply Chain Management package, the Integrated Financial Ac-

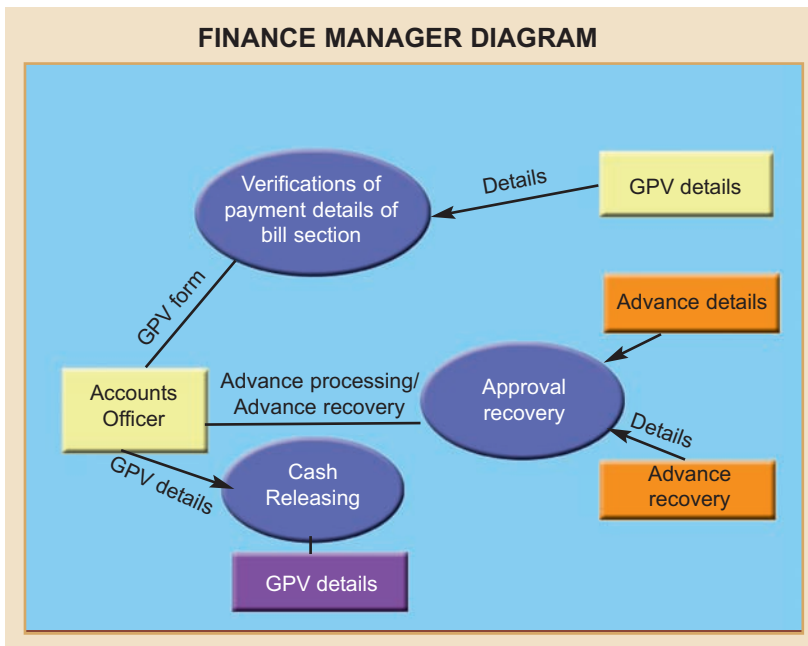


M A Padmakumar,
Technical Director, NIC

counting Information System has ensured transparency and reduction in profit leakage, and more importantly, in identifying the not-so-profit-making departments of the industry.

KEPCO, in the months to come, also plans to incorporate its internal employee processes and increase the 'technological bandwidth' towards information on allocated funds, subsidies and government profits and passing them on directly to the workers in KEPCO's own and affiliated farms spread across the state.

Interestingly, all this is currently done using only a Linux server and a couple of IBM client machines.



SCENARIO	
Before Deployment	
<input type="checkbox"/>	Physical handling of accounts.
<input type="checkbox"/>	Uneven distribution of funds
<input type="checkbox"/>	Difficult to allure people into reading and writing.
<input type="checkbox"/>	Inability to identify 'problem areas' in business
After Deployment	
<input type="checkbox"/>	Automated financial accounting operations
<input type="checkbox"/>	Ensured timely receipt of funds/allocations
<input type="checkbox"/>	Faster business response
<input type="checkbox"/>	Better tab on business operations. <input type="checkbox"/>



Other Finalists

Directorate of Mass Education, Karnataka Adult Literacy Using ICT

The objective behind the project was to reach out to rural learners through technology to improve the literacy rate in the state.

The target audience is rural youths, who have dropped from school and adult illiterates. It is extremely difficult to hold on to such kind of an audience for the entire duration. Moreover, at every stage

there was loss of information and at times the learner actually received only the books and a form that they are being enrolled for a program. To ease matters, the team decided upon an Information and Communication Technology (ICT) solution. In Karnataka, Information kiosks have reached over 1000 villages; computers have reached over 2000 schools; and so it was important to rejuvenate the Literacy mission using ICT.

Using computers as the vehicle for course delivery would not only attract illiterates, but also hold them

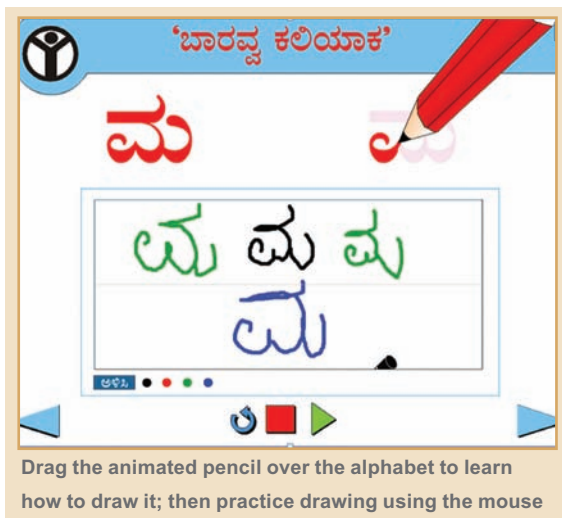
until they complete the course and in the process make them computer aware. Moreover, you can load the entire course on computers and deploy across various literacy centers in the state. The conventional

method relied on training the trainers at various levels—state, district and tehsil, who then go on to teach the adult illiterates. The ICT approach standardizes the course material being taught across each center, leading to faster knowledge dissemination and reduction in human errors during teaching.

The solution has been developed using Photoshop and Flash and is just 60 MB in size. So, it doesn't consume much resources during deployment. It allows the user to learn at his own pace and go back and forth on a lesson as many times as he wants. The learning experience is further enhanced by simple and clear audio instructions.

Literacy in Karnataka

- As per 2001 census the literacy in Karnataka is at 66.64%. It stands 21st on all India basis
- The male literacy is 76.10% while female literacy is at 56.87%.
- The urban literacy is 81.05% and the rural literacy is 59.68%.
- Total no. of illiterates in Karnataka is 59.01 lakhs as per 2001 census.



Drag the animated pencil over the alphabet to learn how to draw it; then practice drawing using the mouse



Women adult learners using the literacy software at one of the centers

In between you see cartoon characters popping up that instruct and encourage the learner along the way.

The Directorate evaluated many options before deciding to use the mouse as the interface for writing. The major reason being the prohibitive cost of using a digital pen or touch screen based devices. Such an approach also ensured that they could make do with existing hardware. In future, the same software would be deployed on touch screen kiosks across the state (depending on availability), to make the whole experience more convenient for the user.

SCENARIO

Before Deployment

- High rate of student dropout.
- Inconsistency in delivery of course material across different centers.
- Difficult to allure people into reading and writing.

After Deployment

- Learners can read or write at their own sweet pace, as they have the freedom to move back and forth.
- There is a consistency in the course being taught across all centers, thereby reducing the chances of human error by trainers.
- The total training time has actually been reduced by 1/3rd.



Other Finalists

BPCL SO2 Emission Control & Monitoring System

BPCL has 35 furnaces at their Mumbai Corporate Office. While manufacturing crude of various types, these furnaces emit SO2 (Sulphur Dioxide) in large quantities, which is hazardous to health and to the overall environment. The Refinery

has implemented an Environmental Management System to ensure that the surrounding environment is free of pollution. With the ever escalating prices of crude, processing of High Sulphur opportunity crudes has increased in Refineries all over the world. Hence it is necessary to implement systems, which would help in effectively monitoring and controlling SO2 emissions.

Earlier, the monitoring was done manually. Data from four different systems had to be compiled manually. By the time, the data used to get compiled it was of no use as the emission had already happened and could not be controlled. To eliminate and overcome the existing problems, the

team came up with an innovative idea to implement a system that would integrate with MES, Laboratory Information Management system(LIMS), Fuel monitoring system, SAP etc, and store data in a central repository.

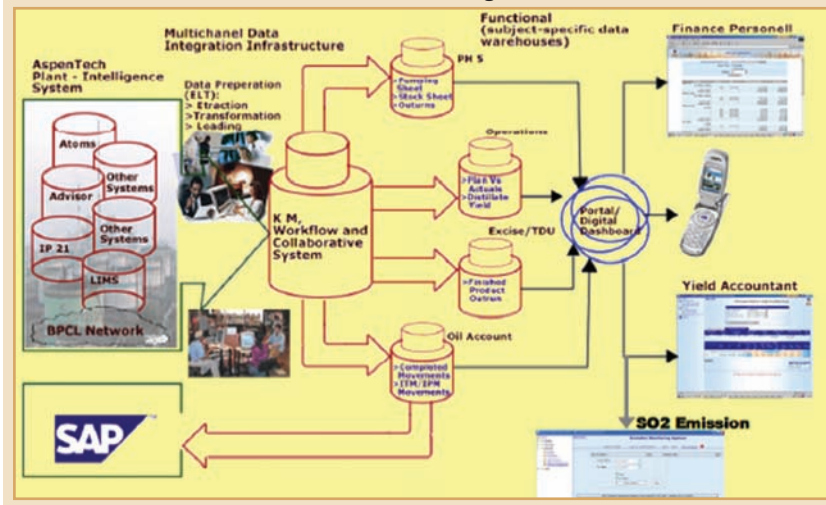
Energy & Environment section in Technology department along with the help of IT department (CSS) worked together and developed an integrated IT Solution system with role based access model, enabling to streamline the processes, improve productivity and empower users. The system is integrated with LIMS (Laboratory Information Management System) to capture latest results of fuel and with IP21 a real-time database system to capture Crude



M.D. Agrawal,
DGM (IS REF)

processed in plant units. It is integrated with the fuel monitoring system & thus fuel quantities & types of fuel are directly fed to the system. Currently, it has a database of 50 crudes (Sulphur content) which have been processed in the Refinery. For the given date, all related data are fetched automatically from other systems and shown to the user. After verification and based on the captured details SO2 emission value is calculated by the system. With the SO2 emission monitoring & control system in place, the pollution levels with respect to SO2 will be controlled through effective monitoring, thereby contributing to a better, more pollution free environment. □

Three Tier Architecture for Intelligence Information Base



COMPANY SCENARIO

Before Deployment

- To enable stringent monitoring of environmental emissions, the earlier monitoring system used to take around six to seven hours to compile data and come with an exact figure. Also, the system was manual.

After Deployment

- Presently, the data is pulled from four systems. It is a completely automated system. The data of SO2 emission is available within a second now. One can immediately call up the furnace, which is exceeding the amount and the emission could be controlled immediately.



Other Finalists

ICICI Bank iMobile

Mobile phones are fast becoming the channel of choice for conducting last-mile, end-user transactions. Keeping this in mind, banks are fast pushing across the entire gamut of retail banking services to customer's mobiles. However, the proliferation of individual business units within large banks such as ICICI

has led to multiple product offerings being pitched to the customer. However, each business group has designed mobile experience in isolation of the other, thereby seriously impacting customer-level usability.

So ICICI has launched a new application called iMobile which lets you manage nearly all of your banking needs through a Java enabled mobile phone. The application is developed in Java and hence most of the phones today can run these applications natively.

The application can be downloaded by sending an sms to the ICICIBank SMS gateway. Once you do that you will receive a reply with a URL. Going to this URL will initiate the download of the application

compatible for your phone. You can even download it using a PC and then push it to the phone.

The application essentially works on GPRS. But if GPRS is not available it can also work through SMS. And to make the transaction completely secure, it uses encrypted SMS for communicating with the server. And hence this application can run both through SMS and GPRS. With this, it really becomes possible for one to use his ICICI accounts from anywhere around the world, if a GSM network is available there.

The application lets you access your banking, credit card, loan and demat account from a single interface. You can even pay your presentment and payment bills from this application. The application is



Indranil Ghosh,
Asst General Manager

secured with a four digit PIN number which is created when you run this application for the first time. Plus while doing any transaction, the application asks random num-

COMPANY SCENARIO

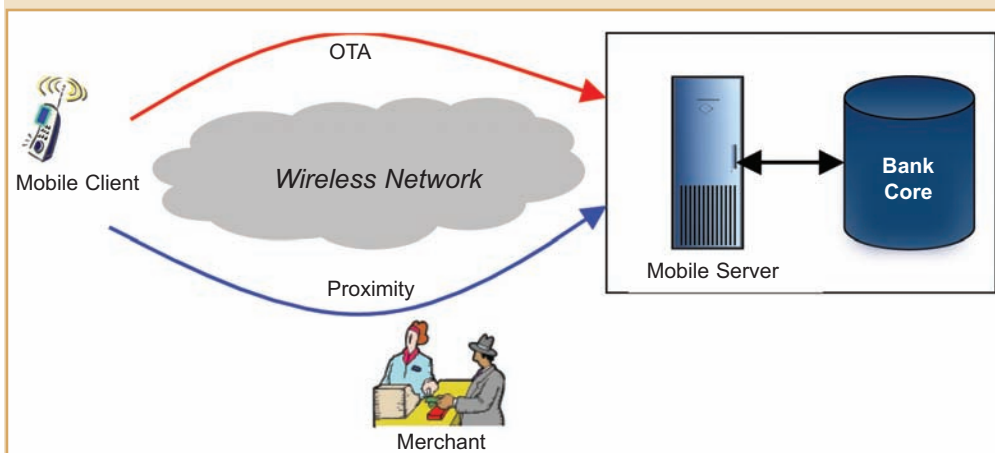
Before Deployment

- There was no single interface for banking with ICICI Bank while you are mobile and don't have a laptop or a net connection.

After Deployment

- A single Interface with which most of the banking functions can be performed through your mobile phone. And here Internet is also not required because it works on both SMS and GPRS.

iMobile network schematic



bers form the ICICI grid card provided along with the account.

The penetration of Internet and PCs are still less than mobile phones in the country and with a banking application for mobile phones, with most of the features that one can get from a PC, it's really going to reduce the queues at the ICICIBank counters. □

IT Careers



Illustration: Writyunjoy Guha

Hot Career Opportunities in IT

Want to know what IT has in store for your future and avenues that specific technologies such as Java and .NET have come up with? Here's a career guide to make you conversant of the upcoming opportunities

Rahul Sah with help from Jasmine Desai

Infrastructure, Manufacturing, Telecom or Pharma—speak of any industry and you'll get to hear of their stupendous growth. IT is the backbone behind all sectors and plays a pivotal role in the growth of the business. All these sectors require the services of skilled IT people. Starting this month, we'll feature a regular story on hot career opportunities in IT.

Today, there's a growing requirement for IT professionals in areas such as programming, engineering, database, information warehousing, Internet and E-Commerce, enterprise application deployment and management, SOA, and networking. Each area requires professionals at all levels right from the architects who'll define these solutions to managers who will implement and manage them.

We'll start off with the developer segment, because that's one

segment which spans all others. For instance, although you need professionals with business and implementation knowledge for deploying enterprise applications like ERP and CRM, you'll still need somebody who can customize the code of these applications. The same thing holds true for other areas as well, such as SOA, Internet and e-Commerce, etc. Let's start with a broad overview of the career opportunities in these areas.

Basically, there are two main platforms that most developer population works upon, Java and .NET. SOA is another buzzword—virtually every enterprise is trying to get on this bandwagon, and hence this field also has a high potential for IT professionals. Similarly, another area where a lot of activity is happening is embedded technologies and mobility and yes, not to forget the ERP domain which have had always been a top priority for any enterprise. It is not just IT companies, there are a plethora of new >

From BI to Predictive Analytics

"Business Intelligence has been traditionally used to analyze past data and present it to drive Business strategies. Predictive Analysis goes a step ahead and provides actionable decision making options, thus leading to Business Agility"



Soumendra Mohanty

Lead for Accenture Information Management Services at Accenture Delivery Center for Technology in India

Traditional Data Warehousing and BI has helped companies understand their past performance. In addition the BI approach and methodologies have been primarily focused in dealing with relevant data in a structured way, aggregate it and present it in formats such as dashboards and reports. In this context BI usage has been more or less exploratory than action-oriented with the exploration activity more likely driven by a business user than a shop floor manager needing valuable help to do a proper decision making. In contrast, Predictive analytics also focuses on distilling insight from data, but its main purpose is to explicitly direct individual decisions. Many BI suites now include some analytics, ranging from report-driven analytics that synthesize past performance data to predictive analytics used in forecasting. However, BI analytics almost always aggregates past customer data in a collective sense—for example,

how have my customers behaved so I can forecast product sales by quarter? If BI tells companies what has happened, predictive analytics tells them what to do. Both are important to making better business decisions leading to Business Agility.

Predictive analytics offers actionable predictions for each customer. It foresees each customer purchase, response or cancellation, predicting the individual behavior under certain conditions. By predicting which product features each customer will respond to, companies can target each customer accordingly. Data exchanges within the business applications if fed through predictive analytics modules will help determine precisely which customer actions to predict, and how these predictions will be used. This ensures that the results will have the greatest impact within the company's business model. Taking the ATMs as an example, banks can use these machines to an advantage, if they use predictive analytics to –

1. To display for a specific customer when they insert their card (past historical data about the customer married real time predictive analytics outputs)—what offer(s) to make a specific customer; when to make or not make an offer; and how to fulfill the offer.
2. Make the return of information to the ATM dependent on these decisions.
3. Specify the rules for these decisions so they can be automated at a basic level. Such as usage rules such as time since last customer, customer preference rules both explicit (never

call me, customer only has checking account) and implicit (customer only seems to use the ATM to get cash); rules that are location dependent such as not offering the option to enter the branch to complete a transaction unless the ATM is at a branch; and regulatory rules based on state.

4. Use analytics to improve these decisions. Such as segmenting customers based on behavior and lifetime value; predict offer interest for specific customers and specific offers; predict ATM usage and likelihood of acceptance at ATM to make sure it is worth targeting this customer at the ATM; predicting traffic at an ATM to avoid delaying transactions when likely to be busy; and predicting most successful approach to closing offer for a given customer
5. Optimization to manage trade-offs between profitability, cost of offers, cost of fulfillment, risk of annoying customers etc.

The ATM moves from a dumb machine that always asks the same questions to a personalized portal for the bank. Predictive analytics is an analyst-guided (not automatic) discipline that uses data patterns to make forward-looking predictions, or to make complex statements about customers by evaluating multiple data patterns. If BI searches for clues looking at historical data, predictive analytics delivers answers that guide you to a "what next" action.

IT Careers

ways coming up for the IT professionals to build their career in. One way is to gain expertise in one specific domain such as SOA and ERP and then climb the career ladder. And the interesting thing is that these domains are not restricted for hard core IT guys even non-IT knowledge holders can enter this arena. In this article, we'll not only discuss all the hidden opportunities that are there for IT as well as non IT professionals, but we'll also guide them about how they can choose their perfect career path.

Opportunities for Java Developers

Java is a key platform being used by software houses the world over for developing applications. There's a lot of action happening in this domain, and today, there's great demand for Java professionals. There are two possible career paths that a Java professional can follow. One is Web development and the other toward building enterprise class applications. For a developer who is freshly venturing into the Web development field will have to learn JSP, Java Servlets, and other Web 2.0 technologies besides having good knowledge of core Java programming. For Web applications that are mainly built on Java server side technologies, the scripting languages like JavaScript, JRuby etc. become a natural bundle to learn for the client side programming for developers. Same ways if the developer ventures into the enterprise class solution and application development he would have to update his knowledge toward J2EE technologies like EJBs and other variants like Spring framework, RMI and other distributed computing components knowhow.

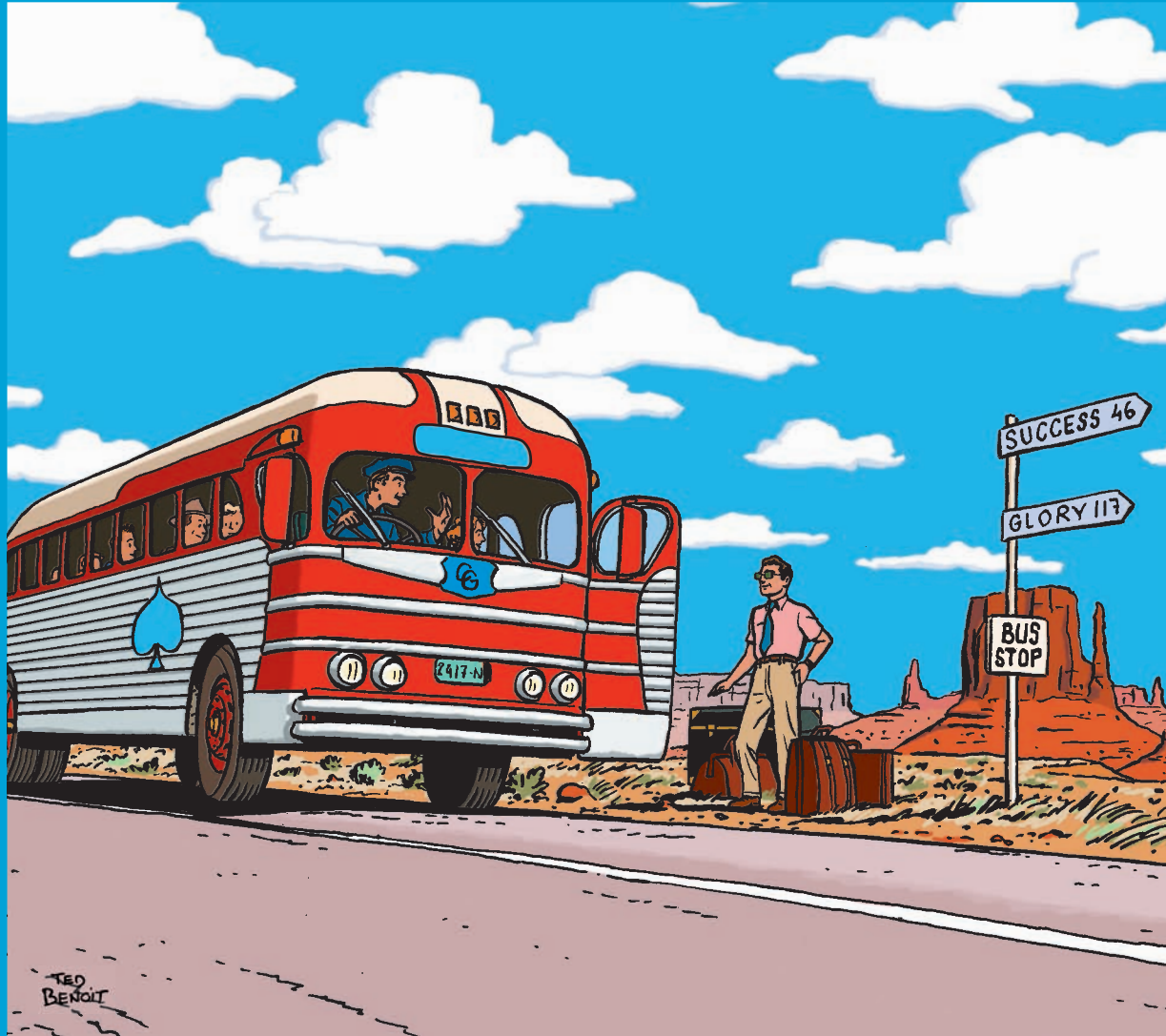
With Java being open sourced, there have been many technologies and frameworks that have spawned in recent times to bolster the avenues to career prospects. With the advent of Web 2.0 standards and RIA-based applications taking on the enterprise world, technologies like JavaFX, AJAX, Google Web Toolkit, and other frameworks have made it easier for a developer to develop and even design intuitive interfaces for the applications. A developer with a good in-depth knowledge of core

Java can easily learn and become comfortable with these new Java frameworks and technologies. A good developer is one who knows how to get things worked, rather than just using a tool or technology. Sai Satish, Staff Engineer at sun Microsystems also says that "No amount of documentation reading or knowledge of a given framework or technology can be utilized by a developer for a project, until he's well practiced with the coding part involved to it to realize where and how to implement the things."

Certifications are also beneficial along with the required academic qualifications for a certain job requirement. Certification not only adds weight and authenticity to a job seeker's profile but also cements his knowhow in that area. According to a study, it was revealed that the professionals having certifications were found to be more productive than non-certified professionals in 85% of the cases. That's why even HR managers during recruitments give additional advantage to professionals having certifications in specific area of Java technologies. Having a certification, even with lesser experience, bends favor toward the certified professional. Also the experienced Java professionals can benefit by having specialized certifications to endorse their knowledge and technology knowhow of specialized domains like Sun Mobile Application Developer or IBM's certification for WebSphere specialists. For Java and components related to that there are certification exams available from Sun Microsystems, while the likes of IBM and Oracle have certifications available for professionals using and working on their application servers and portal technologies.

For specific vertical or domain, there is a dire need of Java professionals who are experts in that domain like healthcare, telecom, etc. This demand for domain expert Java professional is because these professionals would be recognising the needs of their domain area and can put Java technologies to the best use in their domain. They can also contribute with their expertise on that domain toward the building of Java technology re-

Domain	Specialization Area	Certifications available
Java	Core	Sun Certified Java Programmer
	Web	Sun Certified Web Component Developer
	Mobile	Sun Certified Mobile Application Developer
.NET	Developers	Microsoft Certified Professional Developer
	3.5 framework components	Microsoft Certified Technology Specialist
Other	Application Servers	IBM Certified Websphere Specialist
	System Architect	Sun Certified Enterprise Architect



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IT Careers

lated solutions that can cater to their industry domain.

According to Sai Satish, Staff Engineer at Sun Microsystems, developers can look forward to new technologies like SOA, Web 2.0, RIAs and learn their framework and supporting languages to make a steady career growth. He says that the primary driver for Java enabled phones is the content--games, in mobile devices, PDAs and even set-top boxes, have a huge demand in India. Even the operators are demanding Java based applications and games that can be used by subscribers. Thus developers with Java ME skills are in demand for creating such applications. Secondly there is a huge scope for Java developers with experience in mobile operating platforms like Symbian and Windows as they can integrate the core OS features like graphics engine or audio services into their Java applications

Opportunities for .NET developers

The Microsoft .NET Framework is the other widely used devel-

opment platform across the globe and in India also, there is a mammoth developer base working on this platform. With the .NET framework, Microsoft has tried to unify the diversified functions of development and support life cycle of software development. Jimmy P. Shaw, MD at ShawMan Software Pvt. Ltd. says how this framework has helped developers to choose career path as "With .NET, a budding developer does not have to make a decision early on in his career to choose his area of expertise which he earlier was forced to do. A fresher can now spend time understanding and mastering a single unified framework from where he can gradually move into one of the more critical roles of managing systems architecture, DB design and administration, security, etc."

For a developer who has knowledge of his own programming environment like VB.NET, ASP.NET or C# etc., there is an abundance of opportunities for them. Since there is a lot happening in the Web 2.0, a developer can also build skills on technologies that enable the next generation web such as Silverlight, AJAX, Expression as well as those which enable rich user experiences such as WPF. Also with mobile and embedded technology being one of the emerging trends in the Indian software arena, the .NET developers have a good prospect here as many of these areas are based on .NET framework and developers having core .NET skills can switch easily to mobile domain. These technologies are seeing large-scale adoption in small as well as large IT compa-

nies in India and .NET developers are uniquely positioned to leverage this opportunity without having to go through a completely new learning curve.

Certifications are the best way to demonstrate one's skills and expertise on Microsoft technologies and are a catalyst to recognition and growth in a software career. There are several .NET certifications available depending on career interests a developer can choose his certification course starting from technology specialist stage to the software architects stage. Technology Specialist certifications are now available for .NET 3.5 technologies such as Windows Presentation Foundation, Windows Communication Foundation and Windows Workflow Foundation. Being certified in these technologies is an endorsement and validation of one's skills in these technologies. All the top software companies are adopting these technologies and building software applications and products based on these technologies. These specialized skills also offer better career opportunities currently and .NET developers should consider

Certifications are the best way to demonstrate one's skills and expertise and are a catalyst to recognition and growth in a software career. There are several certifications available depending on his career interests a developer can choose his certification course starting from technology specialist stage to the software architects stage.

upgrading their skills to leverage this opportunity. These technologies are being adopted at a fast pace, which opens a lot of career opportunities for software developers.

Tarun Gulati, GM Marketing at Microsoft India says that aspiring and beginner developers, should first build strong programming and computing fundamentals, which remain applicable no matter which version of technology is introduced. Once they are conversant with the fundamentals of .NET framework, they can start building a breadth of skills around desktop development, web and RIA development, mobile and embedded development as well as gaming development.

As they progress in their career, they should build their skills around software design, architecture and project management. Microsoft offers learning resources for each of these areas.

Making a career in SOA

Organizations are now vying to achieve seamless business environment, and SOA is an answer to that. This field requires developers who can develop standards based applications that can now or in future be compliant to the services based architecture. Also the SOA architects and analysts who plan the SOA path for an organization are the job prospect that is seeing an increased requirement. Now for an IT professional, there ▶



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Dataquest & HP ProCurve, in association with SonicWALL, brings together CEOs, CIOs, Technology Heads and IT decision makers of large enterprises to identify and develop solutions to the ever-growing concern of networking security, especially phishing, VPNs and those related to mobile environment.

Moderator

Prasanto Kumar Roy
Chief Editor (ICT), Cyber Media

REGISTRATION: 9:00 am **SUMMIT: 10:00 am to 1:15 pm**

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IT Careers

are various roles available in the SOA domain depending on the area of work. Some of these roles like Process Analyst and Enterprise Architect is for those who have the business knowledge of the organization. While the professionals who do not interact with the business can opt for roles of Configuration management, Information architect etc.

While the developers at junior base can concentrate on assembling the business rules and services, and making them available to the different interfaces. They would be building the enterprise components and services for the processes of the organization that will be interacting.

The professionals who want to be SOA experts, have to learn a lot about the enabling technologies like XML, SOAP, UDDI, etc. and the framework analogies like ESB, etc. along with the whole business understanding for enterprise functions. It is known that SOA has the potential to change the way systems are built today and how they can be made to function seamlessly in the future. Therefore, learning effort in this area won't go waste and will just open new avenues for professionals.

Mobile and Embedded Technology

Mobile and embedded software has become main-stream in India in recent times with the advent of increasing usage of mobiles. This is not only attributed to mobile devices but also devices like set-top boxes, DVD players and others where there's an embedded chip to program the device to function intelligently. This domain is wide open for developers of both platforms, namely Java and .NET. The other stream is for the Operating System architects for the mobile phones. The OSes for mobile devices are majorly on Symbian, Linux and Windows. Now Java based operating system called Java FX Mobile too have been launched for mobile devices. Developers of java can tone up their skill for mobile devices by learning JavaFX and Java ME for development of applications. Similarly .NET developers can opt for Windows Embedded CE technology for embedded programming. There are vast scopes of opportunities for embedded programmers with devices being programmed and also for the mobile environment.

Opportunities for Enterprise Applications Professionals

ERP, CRM and other business process based enterprise solutions have always been in demand, now the organizations are trying to gain the maximum from these for their businesses. Now with most organization implementing SOA or moving towards Enterprise Implementation, these ERP professional who have domain expertise in areas like HR, sales and distribution,

supply chain management, etc. have become highly sought after professionals. This is because they are the ones who will be having core business knowledge of a domain and they can help, define and identify the processes that need to be incorporated for the service orchestration. Above that, since organizations are looking towards solutions that provides them to extend their business opportunities and collaborate in real time between different departments and offices. People having domain expertise are being involved in building such solutions for the enterprise, as they have the proper knowledge of the functioning of different processes and can identify and specify the changes that will be needed for achieving the enterprises goals.

Thus, even a non-IT professional who has sufficient knowledge and experience in specific area of organisational work can become ERP consultants and enterprise application analysts by undergoing certification courses targeting their domains like HR, SD, SCM, etc.

Opportunities in Networking

With telecom, Internet and media communication among other areas where various network technologies like IP telephony and wireless are used; has opened many paths for a networking professional to follow and pursue his career in that. The networking professional can vie for systems analyst, network manager, infrastructure manager and network consultants as career objectives. With basic certifications like A+, CCNA for base networking knowledge to certifications that are highly specific and are meant for specialization in a particular network skill like network security are ones that a networking professional should possess to demonstrate his skill and expertise in that area. There are several certification courses available from Cisco, Microsoft, etc., but it's highly advisable for a budding professional to check for the credentials of the institutes that would be providing the training and certificate examination for these courses.

User Experience Experts

Gone are the days when applications or websites just had to be content rich, now along with content the focus has shifted towards providing rich experience to the user. For this not only designers but also developers are being sought who can create such applications using new RIA tools and technologies like AJAX, Flex, AIR, Silverlight, Expression, etc. This user experience is not just limited to websites or end-user based enterprise or desktop applications, but also to the platforms like mobiles, hand-held devices etc. Thus, a professional with creative ideas is needed who can design and make nice apps for the users. □

Microsoft's Next OS?

The prototype operating system from Microsoft, Singularity, is here to add to software dependability and make your system more secure and robust

Rahul Sah

Microsoft during its TechFest held earlier this year showcased a new operating system kernel concept called 'Singularity'. This isn't going to be a new version of Windows or DOS, rather it is released to bring forth possibilities of an operating system that is highly safe and reliable compared to contemporary OSes. The safe and dependable operating system would mean that it won't be marred with memory problems like buffer over flow; memory leaks etc. that result in system crashes. With Singularity, Microsoft has built an OS that uses .NET framework as a base of its architecture as 95% of the kernel code is written in C#. Singularity 1.1 Research Development Kit (RDK) was released earlier this year. Here we will see how Singularity is safe from hackers and how to deploy this RDK.

How Singularity is safe-OS

The Singularity project has started from ground up rather than being based on any existing kernel of an OS. The designing of contemporary operating systems—including Microsoft Windows, MacOS

X, Linux, and UNIX—trace their lineage back to an operating system called Multics that originated in the mid-1960s. The researchers at Singularity project didn't follow the decade-long tradition of designing the operating system but took a whole new approach that reflects today's computing needs and requirements.

This prototype operating system is primarily different from other operating systems because its kernel is almost entirely written in Sing# which is an extension of C#, a modern high-level programming language. This ensures a dependable computing environment as C# provides Singularity with security advantages over contemporary operating systems that have been written in lower-level languages such as C or C++. By the use of C#, the researchers have been able to prevent a class of errors known as buffer overruns, thus being able to eliminate an area of vulnerability that was generally exploited by viruses and worms.

To improve upon dependability factor of Singularity three key architectural fea-

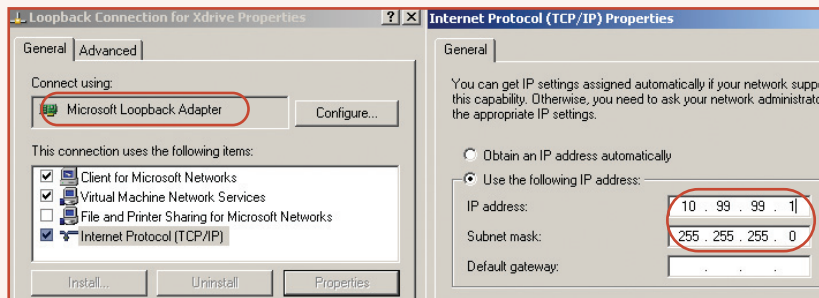
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Applies To: Developers and Researchers
USP: Use of type-safe languages to make secure OS
Primary Link: www.codeplex.com/singularity
Keywords: Singularity
On DVD: PCQ_PROFESSIONAL\Labs\Singularity

tures have been incorporated. The first is a pioneering concept of Software Isolated Processes (SIP) that helps protect programs and system services. SIPs enable programs to be broken down into components that are isolated from other software components running on the same device. Singularity runs each program, device driver, or system extension in its own SIP. SIPs are not allowed to share memory or modify their own code. This enables pieces of a system to fail without risking a total system failure.

The second architectural feature relates to the fact that a program's many SIPs need to communicate and share information as they work on shared resources or on shared objectives. As objectives are shared, there can be situations of miscommunications happening between the processes. To avoid such miscommunications that can result in errors and system crashes, the developers for Singularity project devised a mechanism for communication under which they defined how the communication should take place between two processes and through static analysis they checked the codes of the processes at compile



To configure the network connection for Loopback Adapter, change its IP properties with values shown above for IP address and Subnet Mask

Developer

time to ensure any miscommunication of the processes.

The third architectural feature is called as 'manifest-based programs'. The contemporary OSes do not analyze a program's composition or the resource that it is going to utilize, being presented with a series of bits, the OS simply executes them. While in case of Singularity, researchers have emphasized upon system dependability and because of that each program that is to be executed by Singularity is checked and analyzed for not breaching or breaking the processes of the OS.

Thus due to some of these architectural design incorporations, Singularity is safe and as it's based on .NET Framework it will also be safe from hackers and will not be having memory problems that results in crashes.

Pre-requisites for installation

With this month's PCQ_Professional DVD we are providing the Singularity RDK 1.1 which is also available for download from the Codeplex site. Within

the same Singularity folder in the DVD you'll also find the requisite tools that are needed to install and run Singularity. The Singularity RDK zip folder contains the source code and the tools required to build and boot it. The other tools required are:-

- Microsoft Debugging Tools for Windows
- Microsoft Virtual PC
- Dot NET Framework 1.1

Before starting up with building and booting of Singularity, you will have to install all these three tools. If you have a higher version of .NET Framework installed, Singularity requires CLR version 1.1, so Dot NET framework 1.1 is required. After installing Virtual PC and .NET Framework 1.1; when you install the Windows Debugging Tools, you'll have to add the path of WinDbg.exe to the system variables "path". Now we can proceed with building and booting of Singularity.

Building Singularity

Unzip the contents of the Singularity-6709.zip to your local drive. Within the

root directory is a script configure.cmd. When this script is executed from Windows command prompt it creates the shortcut to launch a shell with the configuration required to build Singularity. Also create a new environment variable called as "SINGULARITY_ROOT" and to its path add the path of the location of the root directory where singularity folder was extracted (for eg. C:\Singularity-6709).

Now double-click on the Singularity RDK 1.1 icon on the desktop. This will initiate a command line window that is ready to receive commands and prepare for building the Singularity OS. The following command will initiate the build of complete Singularity OS.

```
msb /t:Clean Distro\World.proj
```

With World.proj, the build process takes a long time to complete. On our system having Pentium-4 2.6 GHz processor and 768 MB RAM, the build process took about half an hour to complete. If you want to build quickly, use Tiny.proj in the command line instead of World.proj. Once the build process is completed successfully, you can find the build ISO file in the %SINGULARITY_ROOT%\Base.obj\Distros folder.

Now before booting this build file we'll have to configure the Loopback Network Adapter on the Host operating system.

Configuring Loopback Adapter

As we will be using Microsoft Virtual PC to boot Singularity OS, we will need Loopback adapter that will allow Virtual PC to connect to the host PC for booting via network. Through the "Add Remove Hardware" wizard the Microsoft Loopback Adapter can be installed. After the wizard is complete, a new network connection for loopback adapter gets created on the host operating system. This

```
MSDP
[>] Prototype LegacyPC [C:\SINGUL~1\base] - msb /t:build ..\Distro\World.proj

C:\singularity-6709\base\build>msb /t:build ..\Distro\World.proj
Project "C:\singularity-6709\base\Distro\World.proj" <build target>

Project "C:\singularity-6709\base\Distro\World.proj" is building
-6709\base\Kernel\Kernel.proj" <default targets>:

Project "C:\singularity-6709\base\Kernel\Kernel.proj" is building
y-6709\base\Boot\SINGLDR\SINGLDR.proj" <default targets>:

C:\SINGUL~1\base\Build\cl.exe /D_CRT_SECURE_NO_DEPRECATED /nologo
Fy /Gd /Gy /W3 /Zi /ZL /GS- /I..\include /IC:\SINGUL~1\base.obj\K
.x86.LegacyPC.Min.MarkSweep.native /FAsc /FaC:\SINGUL~1\base.obj\
x86\undump.lst /FdC:\SINGUL~1\base.obj\Boot\Prototype.x86\undump.
L~1\base.obj\Boot\Prototype.x86\undump.obj undump.cpp
undump.cpp
C:\SINGUL~1\base\Build\link.exe /machine:x86 /NOLOGO /INCREMENTA
86 /debug /debugtype:cv /out:C:\SINGUL~1\base.obj\Boot\Prototype.
C:\SINGUL~1\base.obj\Boot\Prototype.x86\undump.obj /pdb:C:\SINGUL
t\Prototype.x86\undump.pdb /map:C:\SINGUL~1\base.obj\Boot\Prototy
ap /driver /align:0x200 /base:0x60000 /fixed /entry:undump /subsy
nore:4078 /merge:.rdata=.data /merge:.bss=.data /merge:.data=.tex
LINK : warning LNK4254:
LINK : warning LNK4254:
```

For installing the complete Singularity operating system, the msb command will build the World.proj

Developer

```
MSR Prototype LegacyPC [C:\SINGUL~1\base] - bootd /dhcp /tftp
C:\singularity-6709\base\build>cd .
C:\singularity-6709\base>cd boot
C:\singularity-6709\base\boot>bootd /dhcp /tftp
4:35:48 DHCP: Boot File: pxe.com
4:35:48 DHCP: CommandLn:
4:35:49 5.203.110.170 :::: Mask: 255.0.0.0. Gate: 0.0.0.0
4:35:49 DHCP: DHCP Server: 5.203.110.170:67
.\bootd.cpp, Line 658.
WSAEINVAL (10022) Invalid argument.
4:35:49 5.203.110.170 DHCP: Server stopped.
C:\singularity-6709\base\boot>bootd /dhcp /tftp
4:36:01 DHCP: Boot File: pxe.com
4:36:01 DHCP: CommandLn:
4:36:01 5.203.110.170 :::: Mask: 255.0.0.0. Gate: 0.0.0.0
4:36:01 DHCP: DHCP Server: 5.203.110.170:67
4:36:01 TFTP: TFTP Server: 5.203.110.170:69
4:36:01 PXE : DHCP Server: 5.203.110.170:4011
4:36:01 10.99.99.1 :::: Mask: 255.255.255.0. Gate: 0.0.0.0
4:36:01 DHCP: DHCP Server: 10.99.99.1:67
```

From the boot directory, bootd command will start the DHCP server and open ports on 10.99.99.1 IP address for loading Singularity's build file

new network connection will be having an auto generated name like Local Connection 2 and having device name of Microsoft Loopback Adapter. Now open its properties dialog box, and under the General tab select the Internet Protocol (TCP/IP) and then click its properties. Now in the Internet Protocol Properties window, select the option "Use the following IP address" and enter 10.99.99.1 as value for IP address and 255.255.255.0 as value for the Subnet Mask. Leave Default Gateway and DNS server as blank and click OK to set the properties.

Booting Singularity

Now when we are having Virtual PC and debugging tools installed, and also the Loopback adapter has been configured on the host PC we can boot the Singularity OS on the Virtual PC. To boot Singularity we will first start the port from which the Singularity build file will be loaded onto the virtual machine. The following command will do that at the Singularity shell prompt;

```
cd boot
bootd /dhcp /tftp
```

Now open a new Singularity 1.1 command prompt and there enter the following commands.

```
cd boot
boottest.cmd pxe.vmc
```

The boottest command loads the ISO image file of the operating system from the network from the IP address "10.99.99.1". And just for that purpose only we started the port on the loopback adapter. The Singularity OS boots up in a

The Windows debugger shows the trace log of the boot process in the Command pane and the "break" command's code can be seen on the debugger

new Virtual PC window.

Now as Singularity does not come with any debugging tools, we had installed the Windows Debugging Tools separately for that purpose only. To see how we can start the debugger for Singularity to see how the boot process and all commands execute, we will have to run the following commands.

```
cd build
dbg.cmd /pipe
```

The dbg.cmd command in the build directory sets up the source code, symbols, and Singularity specific debugger extensions, and then invokes the WinDbg. The debugger has two parts, one part shows the debug strings which come as trace logs. The other part shows the code for the command on which you are currently working. The debugger can be used to navigate through the stack, memory and current registers etc. to view the source code.

Thus we have built and deployed Singularity OS using a Virtual PC. Now it would be interesting to see how new possibilities are explored to make this prototype OS an operating system of the future.

Shape Up Your Expressions

Expression Studio from Microsoft attempts to bridge the gap between a designer and developer by providing a unified development environment

Sandeep Koul

Expression Blend is a tool to simplify the building of graphical interfaces for web and desktop applications. It uses XAML, a new markup language that can describe the presentation surface of an application. Through this tool one can easily build interactive applications and even animate them, as most of the functionality to achieve these tasks is integrated into the tool. Expression Blend and Expression Design are the two components of Microsoft's Expression Studio. We shall use Visual Studio 2008 to show hassle free interoperability of the code. As one builds an interface using Expression Studio, an XAML code is generated. This code can be exported to Visual Studio 2008 where the devel-

oper can add logic to it. Expression Design is a vector and raster graphic design tool to help designers build appealing graphics. The graphics created using this tool can be exported (using XAML) to other tools of Expression Studio to add logic and animation.

Designing and animating images

We will start by designing a simple graphical image that will be later animated using Expression Blend. Here, we shall create a simple banner in Expression Design. As it is a design tool, creation of design depends on the creativity of designers. Once the banner's design has been created, we can export it to Ex-

DIRECT HIT!



Applies To: User interface designers and developers

USP: Smooth transformation of design into code

Primary Link:
www.microsoft.com/expression/

Keywords: Microsoft Expression Studio

pression Blend. Simply copy-paste your design or click on 'File|Export'. A window will pop up. Here, click on 'Export' at the bottom. This will export an XAML file to a desired destination. The following is part of XAML code generated for our banner:

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<Canvas
```

```
xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"
xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"
```

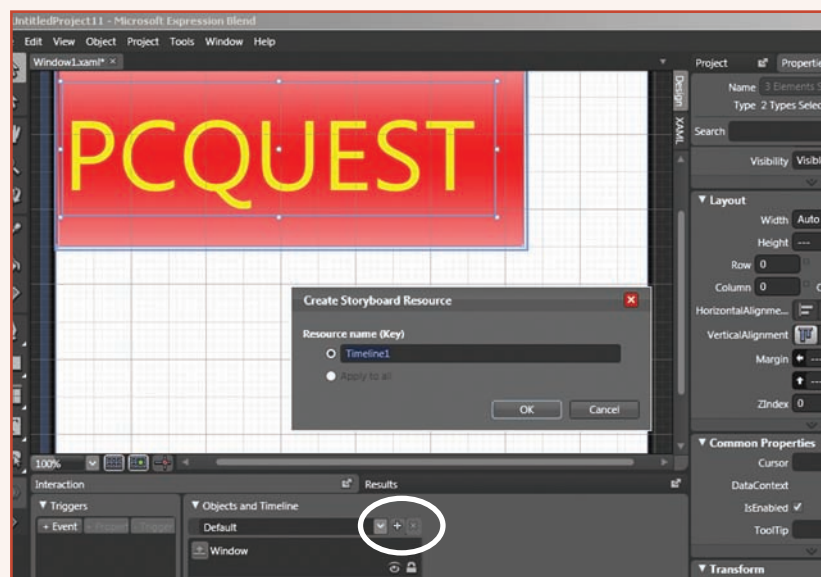
```
xmlns:c="http://schemas.openxmlformats.org/markup-compatibility/2006"
xmlns:d="http://schemas.microsoft.com/expression/blend/2006"
```

```
c:Ignorable="d" x:Name="pc_design"
Width="500" Height="200">
```

```
<Canvas x:Name="base"
d:IsLayer="True" Width="500"
Height="200" Canvas.Left="0" Canvas.Top="0">....
```

```
<TextBlock TextAlignment="Left"
Width="Auto" Height="Auto" Canvas.Left="0" Canvas.Top="0">
```

```
<TextBlock.RenderTransform
```



To create a timeline, click on '+' under Object and Design menu. This will create a timeline for animation

Developer

```
<TransformGroup>
<MatrixTransform Ma-
trix="1.33333,0,0,1.33333,7.32362,25
.947"/>
</TransformGroup>
</TextBlock.RenderTransform>
<Run FontFamily="Segoe UI" Font-
Size="79.2186" Text="PCQUEST" Fore-
ground="#FFFFFF00"/>
</TextBlock>
</Canvas>
</Canvas>
```

In Expression Blend we created a new project and simply copied our designed banner to it. We can check the XAML code of our design from the XAML option in Expression Blend. To animate this banner, select the objects to be animated from Object and Timeline menu. For animation we need a timeline. For this, click on the "+" button under Object and Timeline menu



If you want to rotate the banner, simply set the timeline to 4 and under Transform menu change the angle to 360 degrees.

and give a name to your timeline. You will find a new timeline added. Now move the highlighted bar in timeline from 0 to 4 seconds and click on Proper-

ties at the top. Go to Transform menu and click on the Angular tab on top (second from left). Now change the angle to 360 degrees and press F5 to see

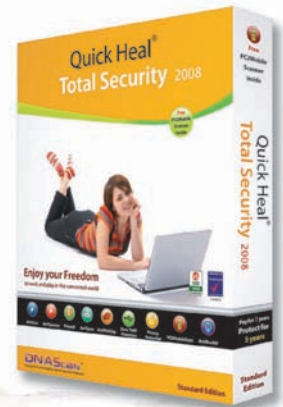
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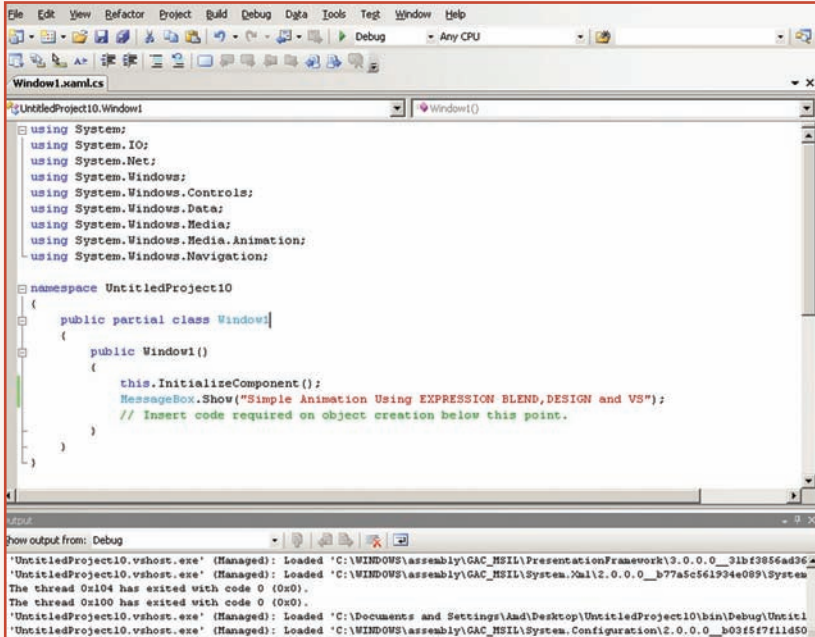
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Developer

your animation. Besides angular transformation one can also move objects in X and Y coordinate, scale, skew and flip them. The animation starts when Windows loads. To change the time it starts, create a button by double clicking on button icon in the toolbar. But before this make sure you have turned off Timeline recording. This can be done by clicking on the red button on top left of the display area. Now delete 'WindowsLoaded' event from Triggers menu and click on the Event button, This will trigger the event that you've just created. Then from the dropdown box specify when that event should trigger (in our case it is click). One can also mention the type of action i.e. pause, begin etc. Now press F5 again and click on 'Button' to start the animation.

The same project file can be opened in Visual studio, where desired code can be added. In this project we shall add a simple message box in Windows.xaml.cs file through the following code:



```

using System;
using System.IO;
using System.Net;
using System.Windows;
using System.Windows.Controls;
using System.Windows.Data;
using System.Windows.Media;
using System.Windows.Media.Animation;
using System.Windows.Navigation;

namespace UntitledProject10
{
    public partial class Window1
    {
        public Window1()
        {
            this.InitializeComponent();
            MessageBox.Show("Simple Animation Using EXPRESSION BLEND,DESIGN and VS");
            // Insert code required on object creation below this point.
        }
    }
}

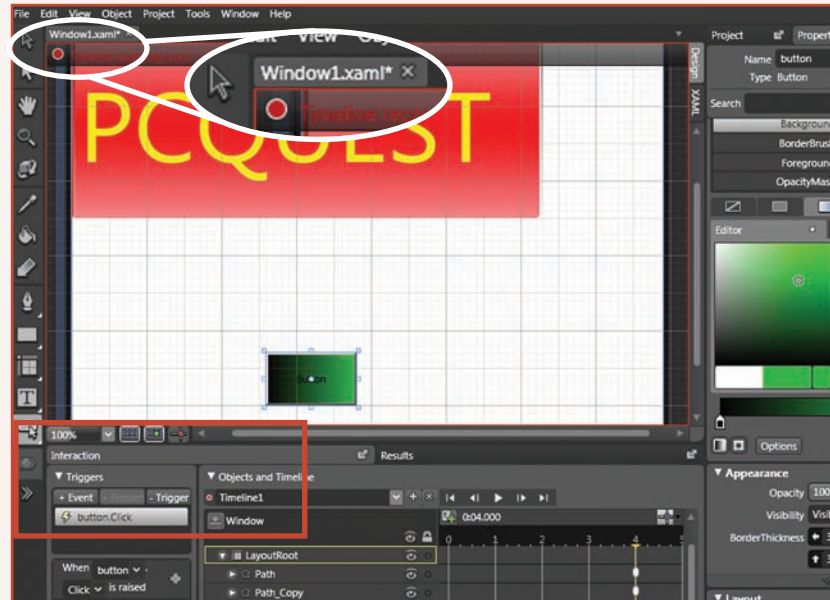
```

```

'UntitledProject10.vshost.exe' (Managed): Loaded 'C:\WINDOWS\assembly\GAC_MSIL\PresentationFramework\3.0.0.0_31bf3856ad364838_x-ww_31bf3856ad364838_31bf3856ad364838-3.0.0.0_x-ww_31bf3856ad364838'
'UntitledProject10.vshost.exe' (Managed): Loaded 'C:\WINDOWS\assembly\GAC_MSIL\System.Xaml\2.0.0.0_b77a5c561934e089\System.Xaml_2.0.0.0_b77a5c561934e089_x-ww_31bf3856ad364838-2.0.0.0_x-ww_31bf3856ad364838'
The thread 0x104 has exited with code 0 (0x0).
The thread 0x100 has exited with code 0 (0x0).
'UntitledProject10.vshost.exe' (Managed): Loaded 'C:\Documents and Settings\Amd\Desktop\UntitledProject10\bin\Debug\UntitledProject10.vshost.exe' (Managed): Loaded 'C:\WINDOWS\assembly\GAC_MSIL\System.Configuration\2.0.0.0_b03f5f7f11450'

```

Project file of design and animation built in Expression Blend can be directly opened in Visual Studio, where the required code can be added



To play animation on 'Button' click, first add the button to your project and then delete WindowsLoaded event and add 'Button Click Event'

```

using System.Windows.Media;
using System.Windows.Media.Animation;
using System.Windows.Navigation;

```

```

namespace UntitledProject10
{
    public partial class Window1
    {
        public Window1()
        { this.InitializeComponent();
        MessageBox.Show("Simple Animation Using EXPRESSION BLEND,DESIGN and VS");
        }
    }
}

```

This is how a designer and a developer can use the same project file, giving them the desired flexibility to move forward and backward in a project development cycle. To achieve the same quality of animation and design using JAVA 2D and 3D APIs, each feature needs to be properly coded, whereas here we can achieve the same results by simply dragging and dropping objects. Other designing tools such as Flash let you create innovative designs, but converting it to a successful program code is difficult. Moreover, for a developer working on .NET or other Microsoft platforms, using Expression Studio Suite is a better option. □

Make your Website More 'Live'-ly

Microsoft provides lots of interesting features in its Windows Live control, which you can integrate into your own website with the help of Web Developer 2008

Rakesh Sharma

There are two kinds of visitors to any website: those who come for the first time and those who visit regularly. So obviously, it's every website's endeavor to try and convert first time visitors into regular ones. One of the things that would enable that of course is the quality of content, because that's what most users really come to your site for. The others are features that would make life much more convenient for them on your website.

In this article, we'll talk about one way of doing the latter. We'll tell you how to integrate some of the latest features available on Microsoft's Windows Live service in your own website. Microsoft has controls available that can be added into its Web Developer 2008 software, which allow you to integrate Windows Live services into your own website in just a few clicks.

With these controls you can add video

streaming, Windows Messenger, Windows Live Contact and moreover you also have an option to authenticate a user with their Windows Live ID.

The Windows Live Tool can be obtained from 'http://dev.live.com/tools'. Download, extract, and run the setup file. Follow the onscreen instructions and your Windows Live Tool is installed. The pre-requisites for this tool are: the system should be running on MS Windows XP SP2 or Vista, must be having MS Visual Studio 2008 or MS Visual Web Developer 2008 and MS ASP.NET Ajax 1.0. After you have installed you will get Silverlight streaming media player, messenger, contacts, login status, etc.

Adding Windows Live Contact

Let's start by adding Windows Live 'Con-

DIRECT HIT!



Applies To: WD2K8 developers

USP: Learn to integrate Windows Live services to your websites

Primary Link: msdn.microsoft.com

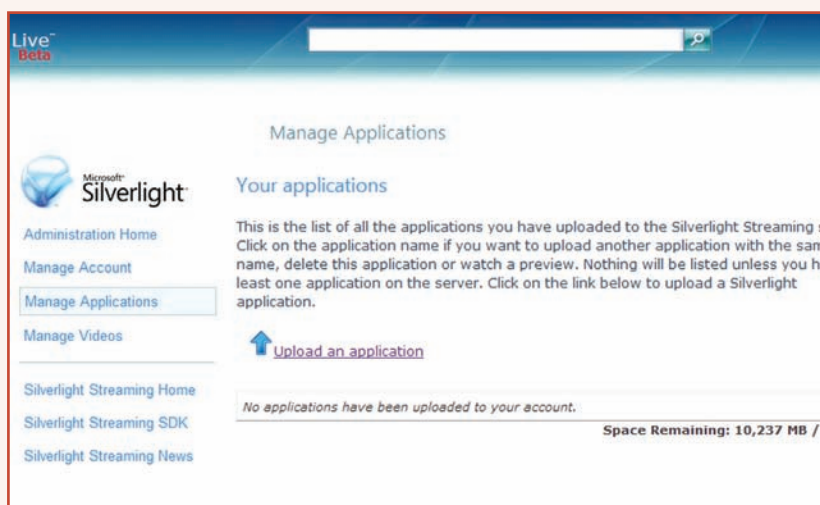
Keywords: Windows Live Tools

tact' control to your website. First fire up your WD2K8, click on File > New Web Site and select 'ASP.NET Windows Live Web Site' from the template section. Give a project name and click on 'Ok'. Switch to design view. You will see a scriptmanager already placed on the page. As these services use AJAX for their work, a scriptmanager is required for AJAX. Now open the toolbox from the development environment, navigate to the Windows Live Tool section and then, drag and drop the 'Contact' control to your website. That's all; your web page now has Windows Live contact integrated.

So now users who have Windows Live ID can access or see their contact list through your website. This tool provides your three different display styles: Tile, List, and TileList. You can also set a background and foreground color for the contact list.

Add Windows Live Messenger

Adding Live Messenger to your website is the same as adding Window Live Contact. Drag and drop the 'MessengerChat' control to your webpage from the Windows Live tools section. Then debug your ▶



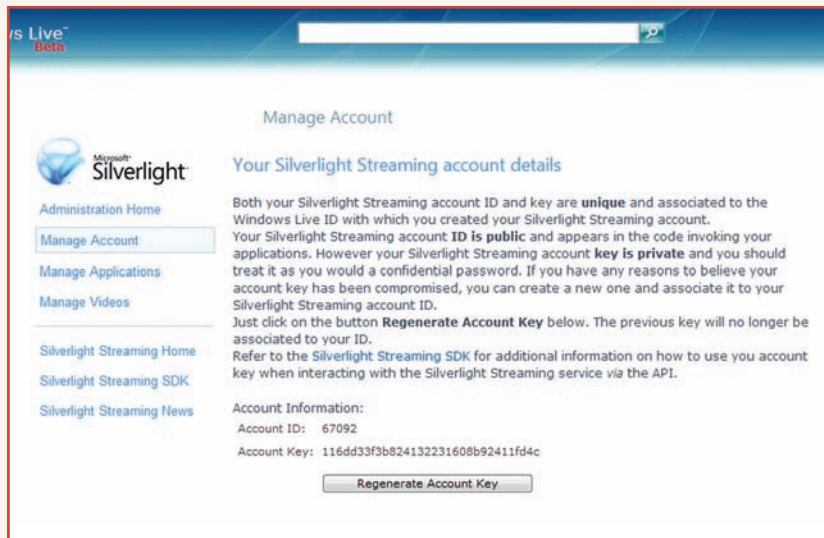
After you get logged into Windows Live account go to manage applications to upload video/audio files to Windows Live server

Developer

project, and the local ASP.NET server will start. Then in IE your web page will be displayed. Click on the sign-in link and it will open the MSN login page. Simply provide your username and password and click on Sign-in button. MSN now asks for a confirmation to send some information to your site. Accept the agreement and click on the Ok button. Finally you are logged in and you can see your online buddies and can chat with them.

Silverlight to stream AV File

For this drag and drop the 'Silverlight-StreamingMediaPlayer' control onto your website. Open the 'SilverlightStreaming-MediaPlayer Task' by clicking on the arrow found at the upper left corner of the Silverlight media player. It lets you choose between two different sources: first 'Silverlight streaming' and second is 'Other'. Silverlight streaming is for streaming videos or audios from the Windows Live server (A server where you can upload your AV files), and the second is the 'Other' which gives you the option of streaming AV files from the host machine, ie, where the website is hosted. Before we proceed further, add any AV file to



For handling security issues it offers you with the option of regenerating your account ID and key, incase any of these is disclosed.

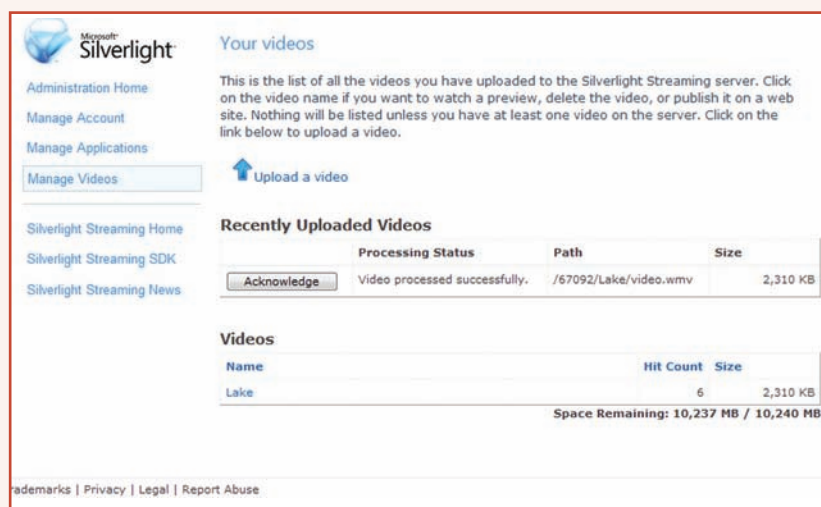
your website. For this press 'Shift + Alt + A,' browse for any WMV or MP3 file, select it and click on 'Add'. Move the AV file you just added to the root of your website. Now click on arrow, ie, the extender button found on the upper left corner of Silverlight media player, then select the 'MediaSourceProvider' as 'Other'.

In the URL field, click on the '...' button, select the AV file that you have just

added (which can be seen on the 'Contents of the folder' panel) and click on 'Ok'. And your website with streaming video player is ready. Press F5 to see the results in your default browser.

Let's now see how you can stream any AV file for the Windows Live server. For this click on the extender button, select the 'MediaSourceProvider' as 'Silverlight-Streaming' and then click on the '...' button to provide the source file. When the Window appears provide the account ID and account key, and click on the List button. Navigate to the AV file that you want to stream and click on the 'Ok' button. Everything is ready. Press the F5 key to test your website in your default browser.

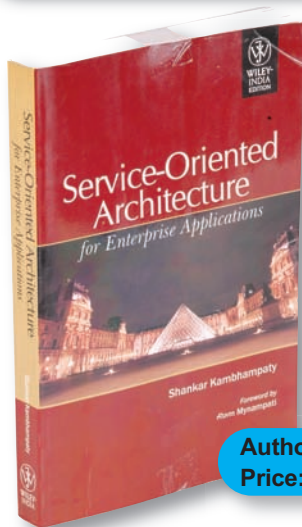
For the second option you need to create a Silverlight Streaming account. For this click on the 'Create a Silverlight Streaming Account' which you get after clicking on the extender button of Silverlight streaming media player. Follow the onscreen instructions and finally a unique account ID and account key related to your live ID will be created for the 'SilverlightStreaming' option. □



You can view your uploaded videos in the Manage Video section and also the no. of hits on any particular video

Contest

Service-Oriented Architecture



Author: Shankar Kambhampaty
Price: Rs 399, **Pages:** 245

This book caters to a very broad set of audience. It can basically be used by developers at all levels, be it beginner, intermediate or advance.

This book throws light on the architecture, design and development of enterprise applications based on SOA.

It also fulfills the needs of fresh developers who need to understand the concepts of SOA. It also includes detailed descriptions and code to enable architects, designers and developers to build SOA applications on Java and .NET

platforms.

It provides a comprehensive and structured set of techniques for custom-built service-oriented enterprise applications that can be readily applied by system integration companies and end user organizations to address customer needs.

The readers will get an insight on the use of technologies for SOA by reviewing the PoCs with source codes and reference on the bundled CD. □

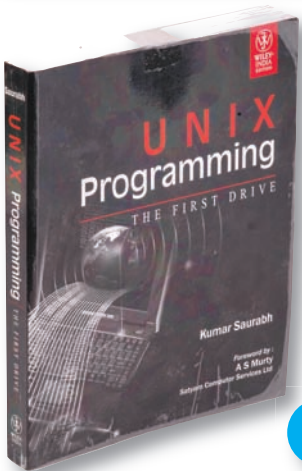
Distributor: Wiley India, Delhi

Tel: 43630029

Email: csupport@wileyindia.com

SMS Buy 130681 to 56677

UNIX Programming The First Drive



Author: A S Murty
Price: Rs 299, **Pages:** 313

From basic to advanced, this book gives you the knowledge of important sections with step by step procedures. The author of this book addresses the fundamentals of UNIX system, commands, shell scripts, internals, sockets and device drivers and focuses on the important elements of maintaining a small, medium or large network of UNIX systems. The book is structured such that the first section deals with shell commands, second section works with shell scripting and how to

use it for administration tasks. The third and fourth sections are all about Unix internals and inter-process communications, which describe how to do file and directory maintenance, processes and signals and how you can work with them in an efficient manner. The fifth section of this book provides the basic concepts of sockets, which is basically the communication API in UNIX.

Finally, the last section of this book highlights UNIX device drivers and gives trivial explanations of I/O operation from a user's perspective. □



Book Contest, June 2008

Here's your chance to win one of these books. Answer the questions below and send them to pcquest@cybermedia.co.in with the subject 'Wiley Book Contest June 2008'. Do include your full name, designation, company name, mailing address and telephone number. Results will be announced on forums.pcquest.com under the 'Current issue' thread. The last date for sending your answers is 30th June 2008.

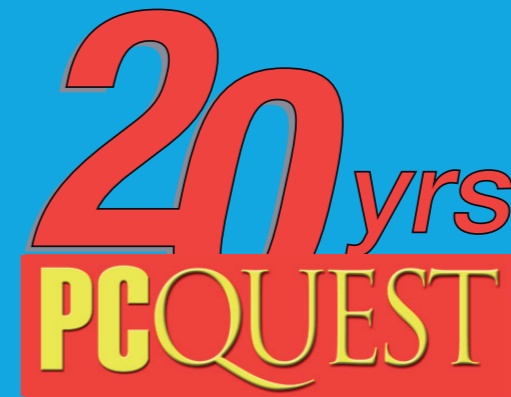
What does UDDI stand for in a SOA architecture?

- Universal Description, Discovery and Integration
- United Dedicated Data and infrastructure
- Unified Data Download Information
- Universal Data Direct Integration

In which year was UNIX originally developed?

- 1970
- 1969
- 1979
- 1960

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Profile Your Database Using SQL Server 2008

Use the new features in SQL Server 2008 Integration Services to profile the data in your database for statistics

VINOD UNNY, ENTERPRISE INFOTECH

It is quite important many a times to figure out what your database holds. It is of course easy enough to find out something like this by using normal SQL queries. However, sometimes the level of detail that SQL queries gives out is not really adequate and you might want to use better techniques to get information about your data.

This is where the upcoming version of SQL Server has something new for you. In the SQL Server Integration Services, you get a new ability to profile the data in tables that are stored in a database. This is done by a new task called the 'Data Profile Task.'

SQL Server Integration Services (SSIS) can be used for a number of things. Primarily this is a tool that lets you create data-related workflows (called Control Flow) or data warehouse Extract-Transform-Load (ETL) processes (called

Data Flow). The Data Profile Task is a new task in SSIS 2008 that lets you do data profiling of your tables.

To use this, open up the SQL Server Business Intelligence Development Studio on the machine. Create a new Integration Services Project from the File | New | Project window. Once the project is ready, you will see the SSIS Design surface. The default design surface you get is the Control Flow Designer — which also happens to exactly the one that you need.

Open up the BIDS Toolbox and look for the Data Profile Task in it. When you find it, drag and drop it into the Control Flow Designer Surface. Once the task is available on the surface, right click the bottom part of the screen inside the 'Connection Managers' section and select 'New ADO.NET Connection.' In the dialog box

DIRECT HIT!



Applies To: DBA

USP: Profile the data in your database

Primary Link: microsoft.com/sqlserver

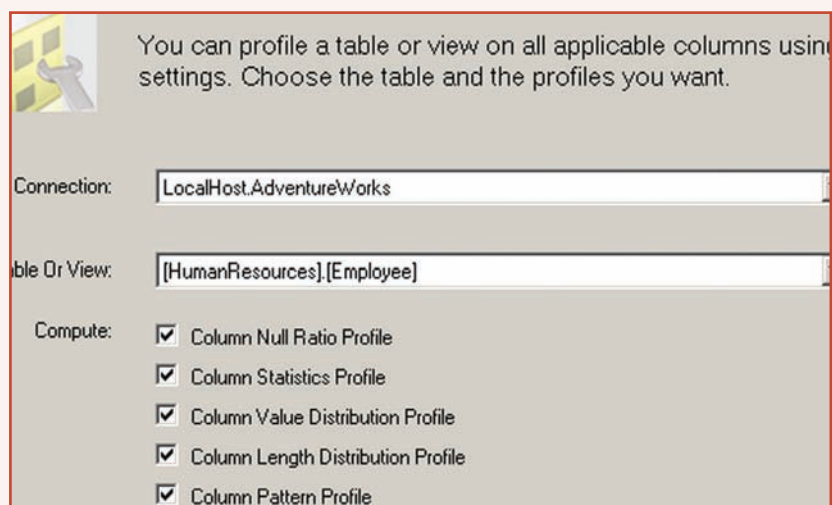
Keyword: SQL Server 2008

that opens, give the parameters that will let you connect to your database.

You can now right click the Data Profile Task and select the 'Edit' option to get into the detailed configuration screen. The first screen allows you to select how the results of the profiling tests will be stored—into a variable or into a file. Normally, you will select a file. Next, select the Destination option and create a new File connection. Select Create file and give the path and name for a new XML file, for instance: c:\Temp\DataProfile.xml. In the first screen, there is also a button that allows you to create a Quick Profile. Click it to open a simple dialog box.

Select the connection to the database and then the table you wish to profile. You can then select a number of statistics and tests that you can run on the selected table. A description of each of the test types is given further ahead in this article. You can use the Quick Profile window to add profiles for multiple tables.

Once you have added the ones you want, you can then go ahead and select the Profile Requests section in the main dialog box. This lets you configure the individual requests for profiling. Al-



The Quick Profile allows you to choose the database, table, and the profiling tests you want to run

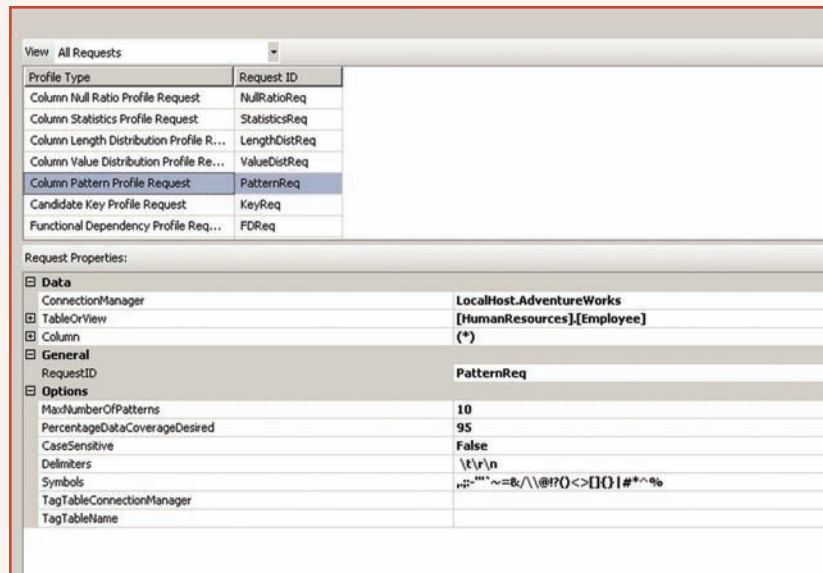
Developer

though all requests will work fine with defaults, you might want to customize them so that you get meaningful results as well as faster performance since unnecessary profile requests need not get handled. Once ready you can run the task by right-clicking the Package.dtsx in Solution Explorer. On completion you will get a new file created as specified.

To view the results (stored in the XML file), you need to use the new Data Profile Viewer tool. Go to Start | Run and type in DataProfileViewer and press Enter. This will open the DPV tool. Click the Open menu and select the new XML file that the SSIS task created. You will now be able to view the details of the profiling.

You can drill down to each table you chose and look at the different statistics and results for tests on each column that you wanted. For instance, you can check which columns qualify as key columns, you can check the regular expression pattern of each column and more. The following is a list of tests you can run:

Candidate Key Profile: Checks each column to see if it can uniquely identify each row in the table as in a primary key. If yes, then it is listed as a candidate key



After customizing the Pattern Profile we can customize the settings for Functional Dependency Profile

column.

Column Null Ration Profile: Checks the number of null values in a column and gives you a percentage of null to non-null values in that column.

Column Statistics Profile: Gives you simple stats about the values in a column, including minimum, maximum, average, and standard deviation. Works on nu-

meric and date columns.

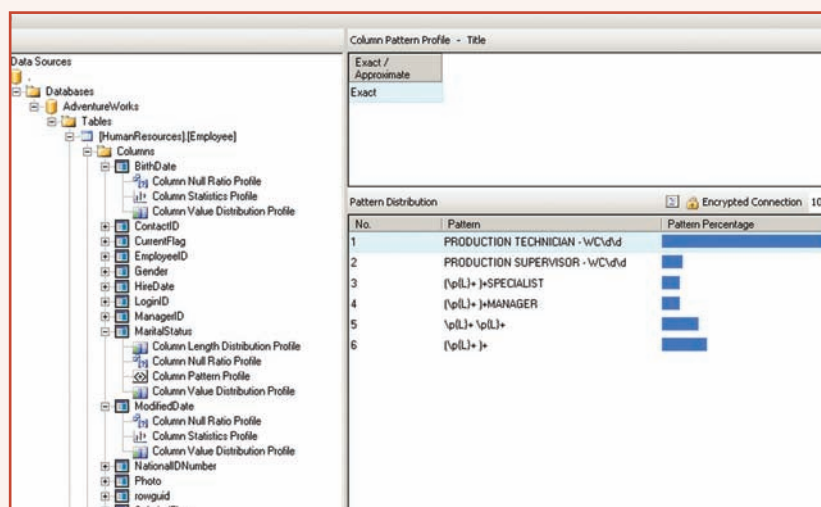
Column Length Distribution Profile: Checks the different lengths of values in a column, including and excluding leading and trailing whitespaces.

Column Value Distribution Profile: Shows a list of the different values that a column has and their number and percentages in the column.

Column Pattern Profile: Tries to detect a regular expression that defines what is the pattern to the value in a column.

Functional Dependency Profile: Checks the value of one column with any other column to detect any functional dependencies. For instance, on finding a 10 digit number in the phone column, a functional dependency can be detected for the country column to store a value for India.

Based on these statistics you can decide to clean up the data as well as write business rules or validations to ensure that the data follows the rules you set up. The Data Profile Task lets you quickly check the pattern and stats of your tables and use them effectively. □



The results of Pattern Profile test show a number of regular expressions detected and the results of the Value Distribution test are shown in the viewer

MS Office Live Workspace Beta

MS Office users can now be more productive by viewing, sharing, and editing their Word, Excel, and PowerPoint documents over the Internet using a web browser

Sandeep Kouli

A workspace that can be shared with others and is accessible from anywhere is fast becoming a necessity for individuals that are always on the move. Office Live Workspace is an online space provided by Microsoft for saving, accessing, and sharing documents and files. Using it one can access his/her documents from anywhere over an Internet connection via Web browser. This tool can be used for grouping information for work, school, and personal projects. Consider an example where a team is working on different modules of the same project and all are on the move. Now to update each other about the status and to actually show the amount of work done this workspace can be of great help. To use this workspace there is no download required. One just needs to sign

up and get a Windows live ID to start using it. The web interface of Live Workspace is very well designed, making it very easy to use. One can create office documents on their machines and directly save them in the provided Web space (using .NET passport).

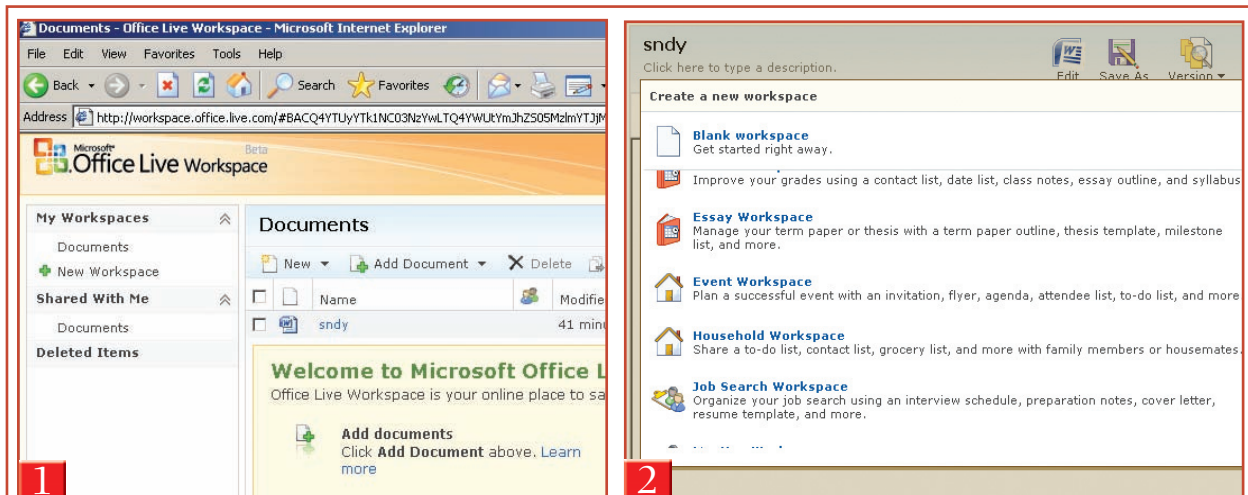
Another great feature of this workspace is proper management of different versions of the same document. This helps in better understanding of content and even enables one to roll-back to a previous version if required. You can also add comments to the documents for better communication. Sharing documents with other users for viewing or editing is another useful feature of this Workspace. Other users will also need to have MS Office installed on their machines if they want to edit the

DIRECT HIT!



Applies To: MS Office users
Price: Free
USP: Create an online workspace to share MS Office documents
Primary Link: workspace.office.live.com
Google Keyword: office live workspace

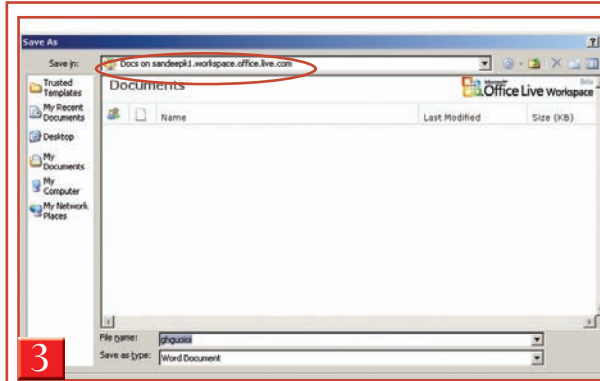
documents. Viewing documents however, doesn't require this. People with MS Office installed will also need to install a Live update on their systems. This is pretty easy to do and takes just a few minutes. Once done, you can start sharing and working on Word, Excel, and PowerPoint documents.



After sign-in, all documents that you upload to Office Live are listed in the middle. The interface is quite simple and easy to use. You can easily add/remove/share documents

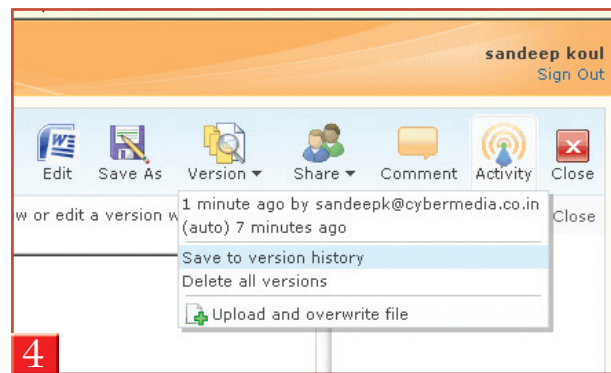
You can also create a new workspace, or choose from existing ones. The pre-built ones contain document templates for you to quickly get started

Hands on



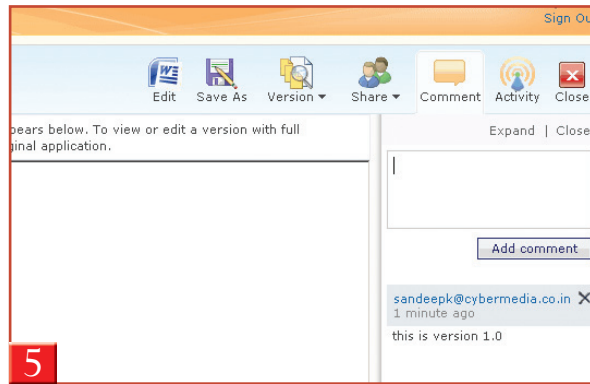
3

We created a Word document for our workspace, which can be saved directly to Office Live Workspace, as shown in the figure



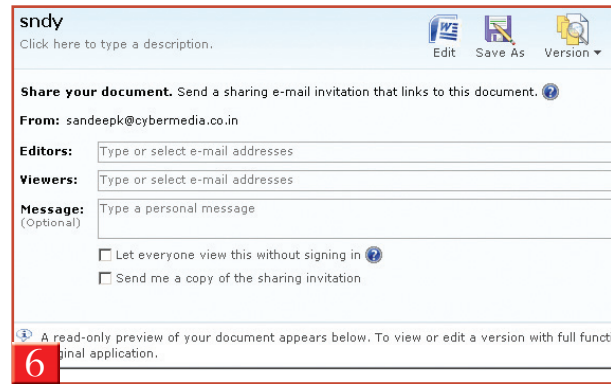
4

After creating the document, different versions of same doc can be saved. To achieve it click on 'version' and select 'Save to version history'



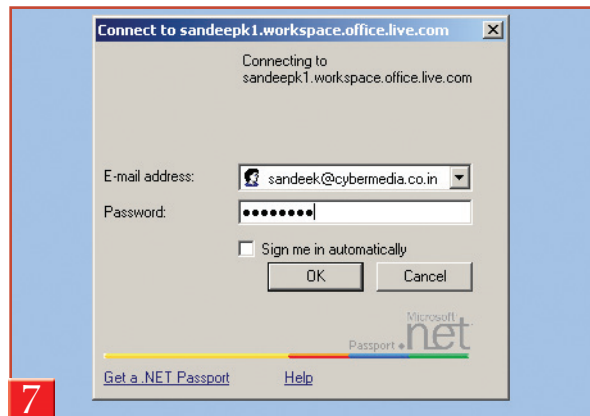
5

You can also add comments to this shared doc, which aides in communication amongst people sharing the same document



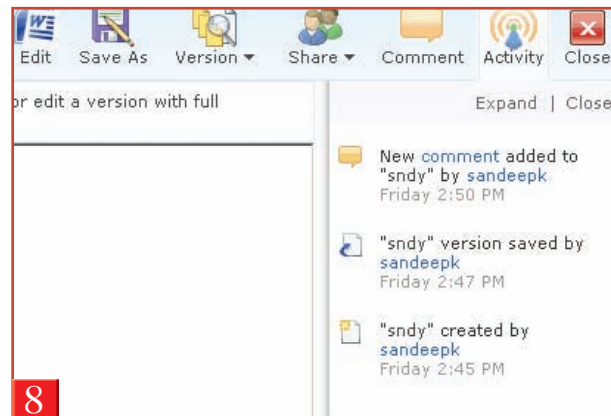
6

To share the documents you just need to type in the e-mail address of the individual you want to share the information with



7

To edit the documents, click on edit button which will open documents to be edited in corresponding office programs (Word in our case) after authentication



8

Different versions of same document and added comments are displayed on right-hand side of Window with read-only view in the middle

Host Monitoring & Network Diagnostics

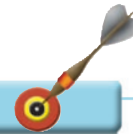
Axence NetTools 3.1 is a set of essential networking, host monitoring and security tools that help monitor responses from multiple devices and troubleshoot TCP/IP problems

Vijay Chauhan

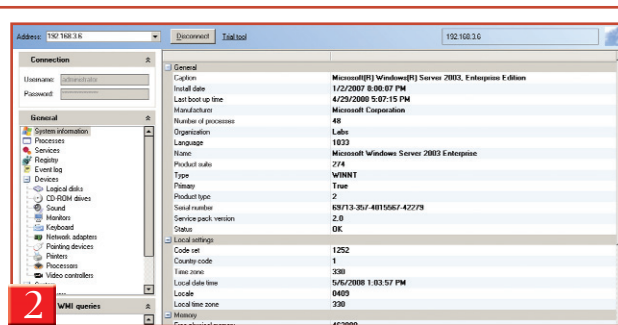
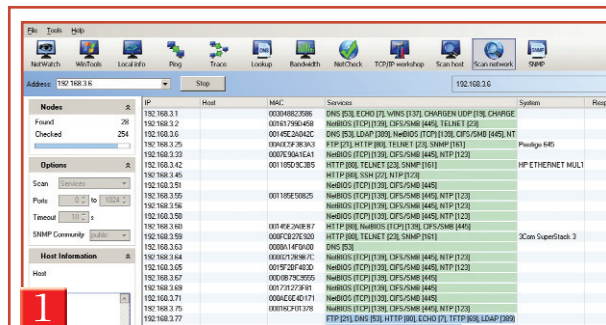
Network monitoring is a big challenge for network admins. Axence Nettools 3.1 has extra powerful features and capabilities. This tool provides a complete solution to network management, monitoring, scanning, and administration. It has features like Netwatch, NetStart, Win Tools, etc. NetWatch constantly monitors the network and provides instant alerts,

historical charts of response time and packet lost. WinTools gives the list of system information and running processes and services, such as, registry, event log, disk, memory etc. With Netstat feature you can see list of all open TCP/UDP ports, with the remote IP address & the process using the connection. Bandwidth tool can measure network performance and NetCheck can check quality of network in your LAN & WAN.

DIRECT HIT!

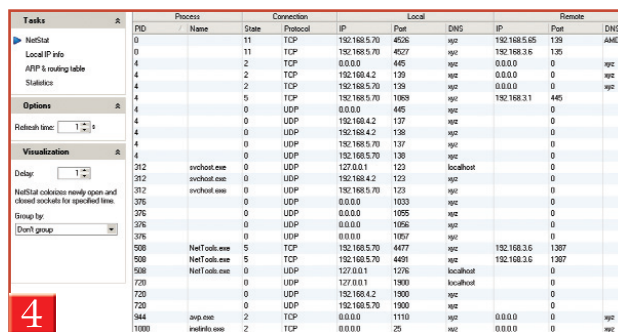
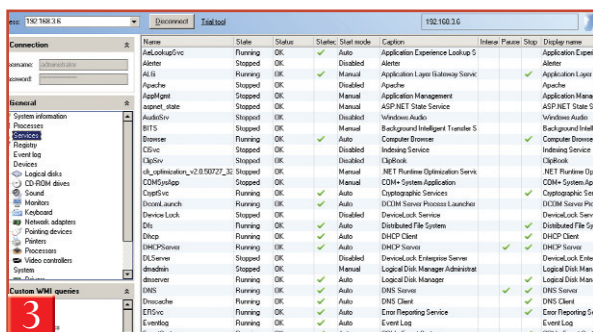


Applies To: Network Administrator
Price: Free
USP: Offers statistical graphs and ping history
Primary Link: <http://tinyurl.com/6q43bm>
Requirements: Windows 2000/XP/2003 Server



Scanning the whole network shows you IP addresses, MACs and the services running in every system. It also identifies printers, routers and switches

It shows whole configuration of the system including manufacturing dates, country code, serial numbers, product suite, memory and so on



It shows the status of services like DNS server, browser, Apache, BITS etc. It also shows other details of services including the display name

This shows the network port details. It allows you to check all open ports and running services like HTTP, POP3, MS SQL, Oracle and others

Hands on

Send Large Attachments With Ease

This is an interesting software called Pando, which uses P2P technology to send large attachments by email. You can send file sizes ranging from a few kB to 3 GB using this software. Here's how

Rakesh Sharma

We often need to send very large attachments but are restricted to do so by the company's mail server. Even web mail providers stop you beyond a limit. Pando provides a way to work around this. It has a drag and drop GUI which makes sharing easy. It comes in two versions: free and premium. The installation is wizard driven and it automatically gets integrated with MS Outlook or IE Mail. When-

ever you send an attachment that exceeds the defined size, Pando automatically takes over the task of sending it. It sends a small sized Pando file to the recipient, which contains a link to the intended file on the sender's PC. Apart from file sharing, you can also use it to publish photos and videos on a particular web site. You can also check the status of your published file, such as how many times it has been downloaded.

DIRECT HIT!



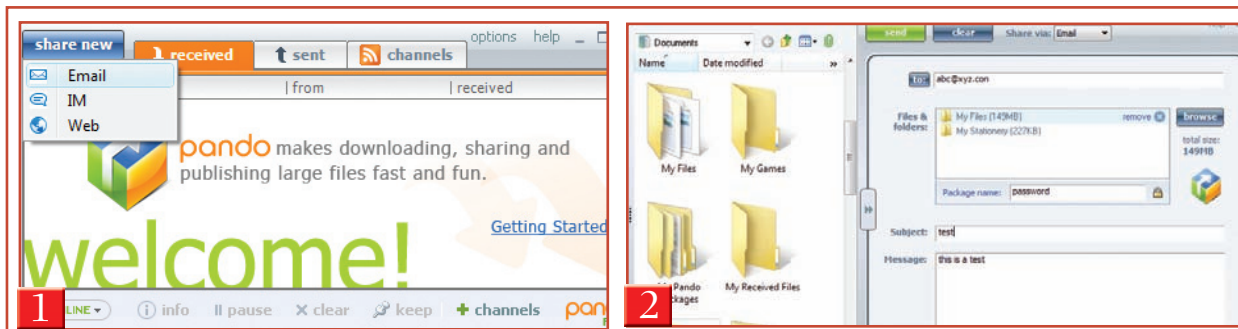
Applies To: Email users

Price: \$24.95

USP: Transfer gigabytes of data through email

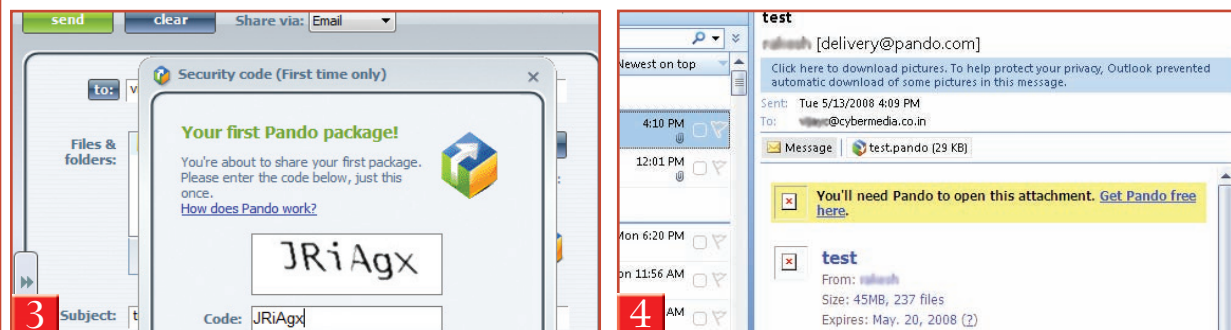
Primary Link: www.pando.com

Google Keyword: Pando



Once the installation is complete, open Pando and click on the 'Share new' button. Then click on 'Email' to start sending a large attachment

Drag and drop the file which you want to send and provide the email address of the recipient. Specify the package name and click on 'send.' You can also password protect your file



Further provide the name and email address and click on Ok. It asks you to enter the passcode to make sure there's no bot that is sending the attachment

The recipient will receive a mail and a copy of the same would be sent to you. Double click on the attachment to access the original file

Hands on

Taking Cut-outs With QuarkXPress 7

For image editing, most of us invariably open Photoshop even if the task is as simple as taking a cut-out of a simple product shot. Here we show how to do the same using QuarkXPress

Jose P M

We all know QuarkXPress is one of the most popular design and layout software. You can import scanned or digital, high-resolution color images for high quality offset printing. You can add features such as transparency, drop-shadow, web functionality, color management, etc to enhance your design.

Most of the times we have images with a color background and normally

Quark designers take their cut-outs in Photoshop or other image editing programs and placed them in Quark. But for taking the same in Quark, change the clipping path position to Quark and you are done. Please note that if you have an image with a white background, then select the image box and go to >Item >Clipping to open Modify window. Here, select the 'Clipping' and 'Runaround' menu and change to 'Non white areas'.

DIRECT HIT!



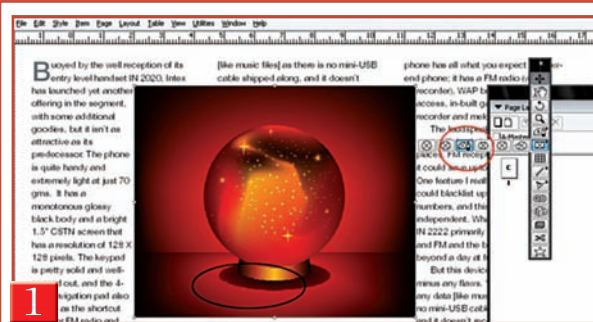
Applies To: Designers

Price: \$799.00 for Quark Xpress 7

USP: Learn how to avoid using Photoshop for simpler design tasks

Primary Link: www.quark.com

Requirements: quarkxpress



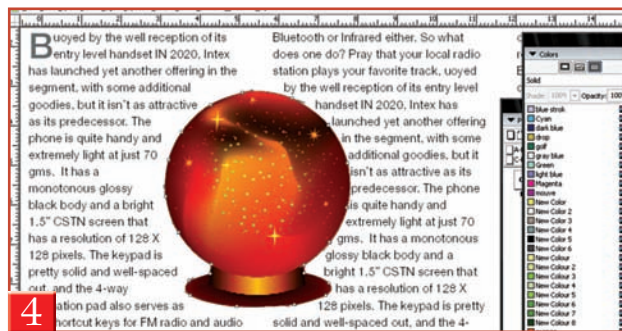
1 Import the image for which you need to take a cut-out in the picture box. Click on the Benzir picture box tool and create the path for the area you want to keep



2 After the selection is complete, click on the starting point. This will close the path with white color. Open the color tool window and set the color as none



3 Copy the first picture box image and paste it to the second picture box. Use the Content Tool to adjust the exact placement of the image



4 Delete the first picture box. Select the text box and press F5. This will bring the text on top of the image. You can see the text flowing around the image and not on the image

Hands on

Dress Your Model With DAZ

DAZ Studio offers you creative freedom with various features of animation for designing digital art with virtual animals, people, props, backgrounds, etc

Jose PM

Digital Art Zone (DAZ) Studio is a feature rich 3D and animation program for 3D artists to create eye-catching digital imagery. You can dress up your model, develop various shapes and bend the model into virtual actors. DAZ Studio comes with a collection of 3D models. You can use the tool to create and design images of mountains, rivers, forests, etc using 3D modeling and

texturing tools. The picture based interface PowerPose enables you to pose your object in several ways. You don't need to twist and turn camera angles to adjust various body parts.

You can export the entire 3D scene to the new COLLADA Interchange Technology file format which supports all the 3D programs. Here we will show you the clothing technique that all the mainstream 3D programs focus to deliver.

DIRECT HIT!



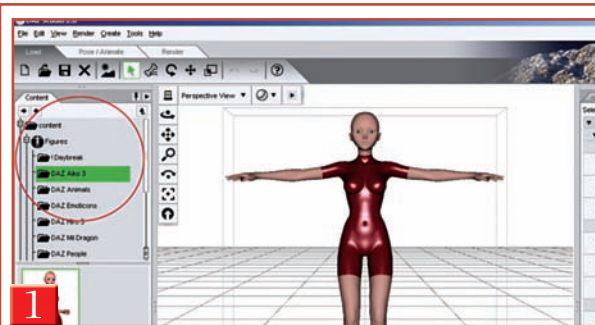
Applies To: 3D artists

Price: Free

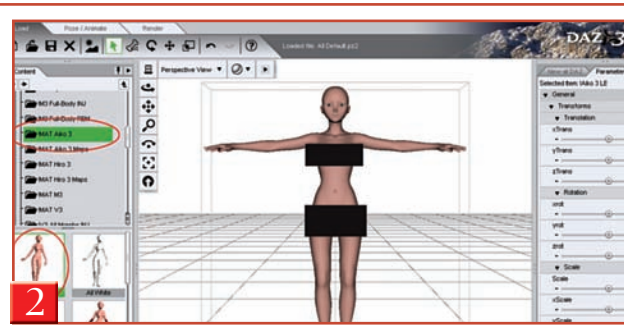
USP: Do away with manual fixing of dress or hair

Primary Link: www.daz3d.com

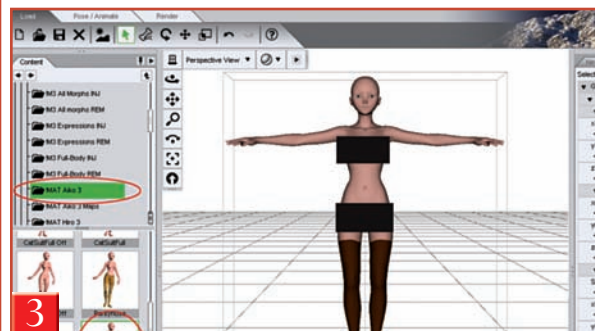
Google Keyword: daz3d



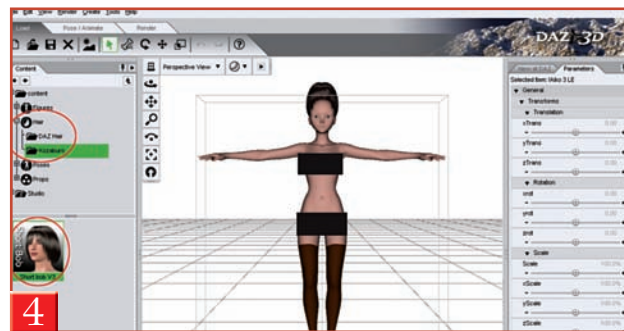
Open DAZ Studio and expand the 'Content & Figures' tab. Double click on the '!Aiko 3 LE' preview from the DAZ Aiko 3 directory. This will bring the model on the screen



Expand the 'Content and Poses' tab and click on the '!MAT Aiko 3' directory. In the preview, double click on the 'All default', to make Aiko 3 model all skin

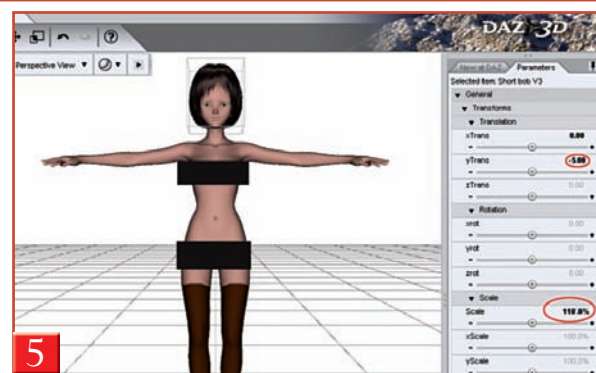


Go to >Content >Poses >'!MAT Aiko 3' directory again. Scroll down the preview and double click on the 'Stocking' preview. Now it looks like '!MAT Aiko 3' has stockings



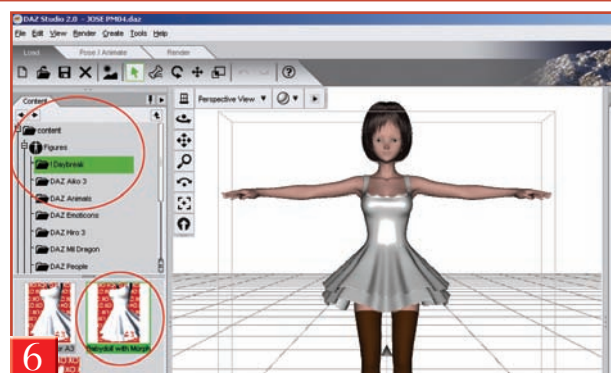
To apply hair, go to >Content >Hair >Open Kozaburo directory. It shows the 'Short bob V3' hair style. Double click on it to apply hair to the model's head

Hands on



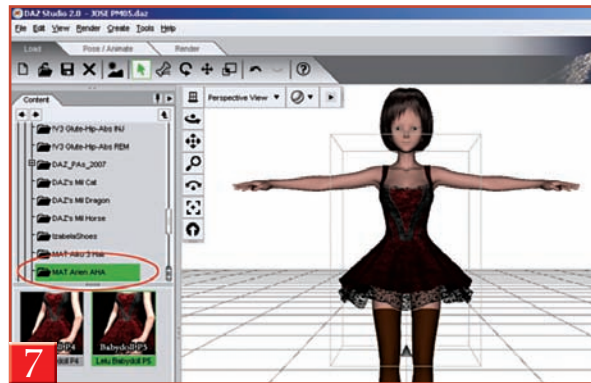
5

If the hair aren't properly fixed on the head, select the hair and go to 'Parameters' tab. Change the Scale to 110 percent and yTrans value to -5 to fix the hair on head



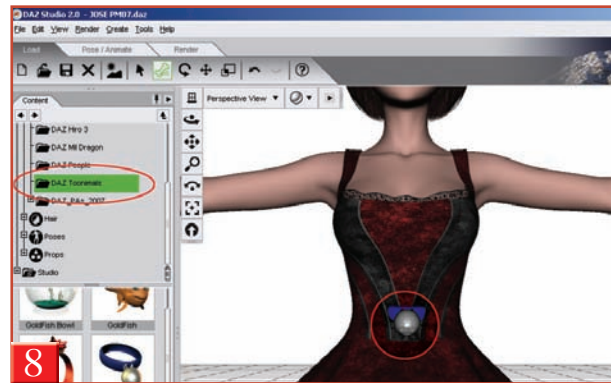
6

This is the right time to give some clothes to the model. Go to >Figures >!Daybreak and double click on 'Bobydoll with Morph' preview to cover the body



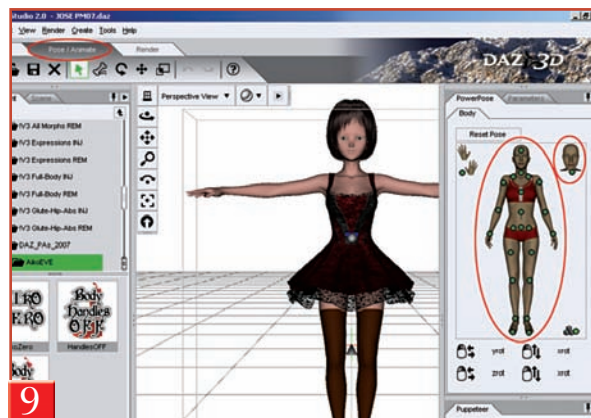
7

Open 'Poses' tab and select 'MAT Arien AHA' folder to apply textures on the frock. Double click the 'Babydoll P5' texture and on the pop up menu, select 'Babydoll with Morph'



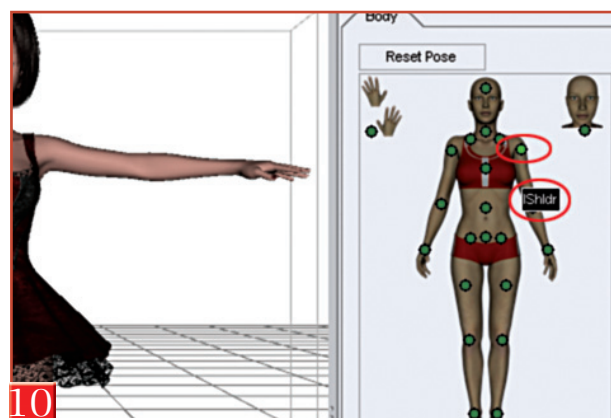
8

To make the texture attractive, select the 'Kitty Collar' from >Figures >'DAZ Toonimals'. Right click and select the 'Fit to' option. Choose 'Babydoll with Morph' from the pop up window



9

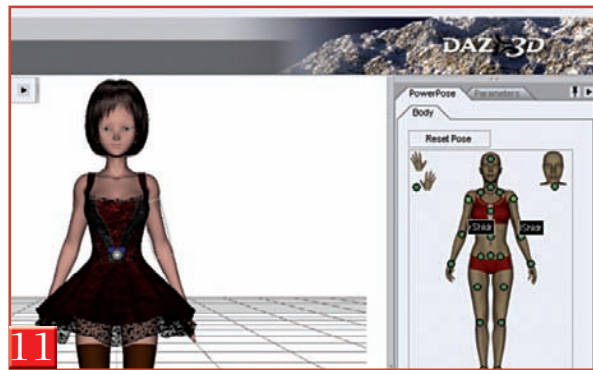
You have to change the hands position now. Activate the 'Pose/Animation' tool from the main menu. In the right side of the screen, you can see a body image with green dots



10

Come to the PowerPose body image. When you hover the mouse over the green dots, the dot will shine and the name of the body part will appear on the screen

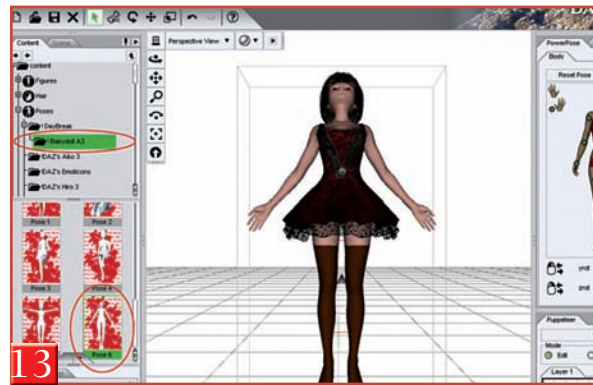
Hands on



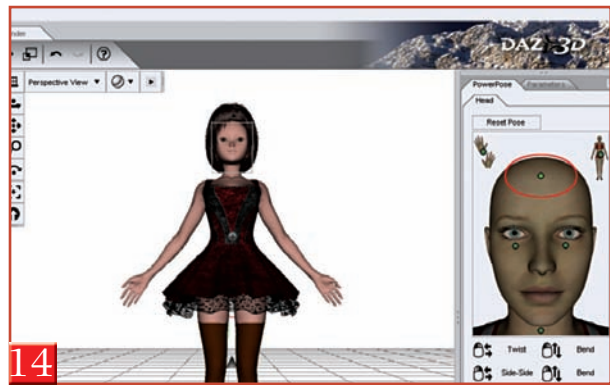
11 Dragging lshldr/rshldr dots downwards to bring both the hands at standing position. If the position is incorrect, you can continue to drag from the new position



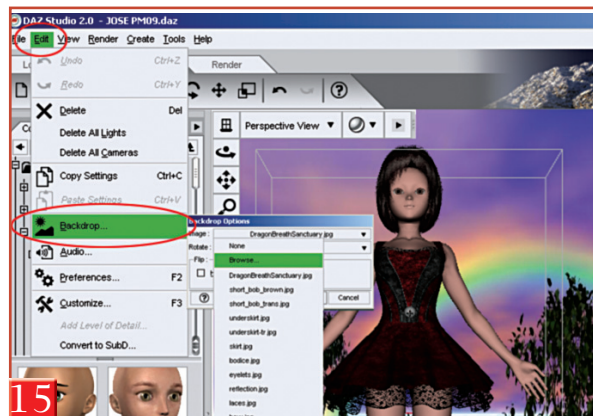
12 Check that the frock is fixed properly on the back of the model. From the 'View Selection List,' select the desired view. It will show you different angles of the model



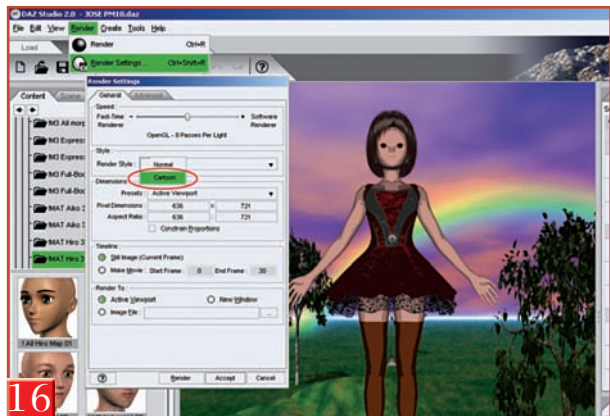
13 Apply a beautiful pose to the 'DAZ !Aiko 3 LE' model. Go to Content >Poses >!Daybreak >!Babydoll A3 to the preview. Double click on 'Pose 6'



14 After posing, you are not able to see the model's face. Go to 'PowerPose' and click on 'Head.' Click and drag down the green dot to set the face straight



15 Finally, add a background to the image. Click the 'Edit' menu and select the 'Backdrop' to open a new window. Browse through and apply desired background to the image



16 DAZ Studio is using OpenGL (Open Graphics Library) for rendering images. You can change the rendering speed, style and dimensions. Here, we applied the Cartoon render style



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What do you do?



Hands on

Taking Backups on the Fly

Drive Backup Server 2008 downsizes risks of data damage or loss, and Windows server downtime with advanced backup functionalities

Sandeep Kouli

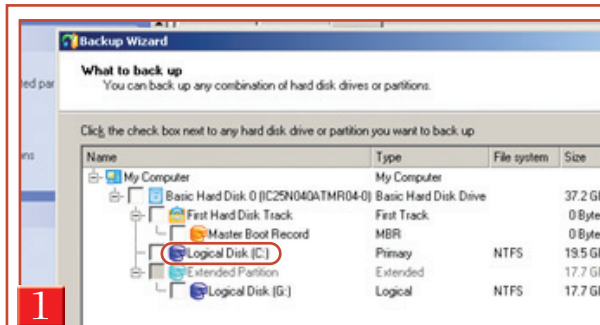
Drive Backup Server 2008 creates server disk image and protects your system against data loss. The Server provides you with the restore and recovery capabilities even from bare-metal. You can reinstate separate files or even the entire server disk contents without any application or OS. Its intuitive backup wizard ably guides you through the backup process.

You can also create recovery points through this wizard which you will need before you make any critical update to server. It also enables a rapid server recovery as it uses backup images for restoration and this is what minimizes downtime in comparison with file-based backup solutions. The software also enables you to create a bootable backup CD/DVD to restore system and data.

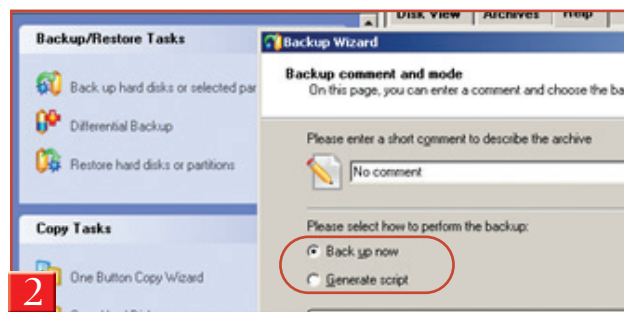
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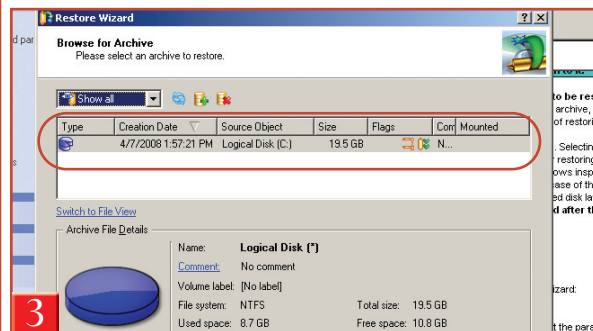
1



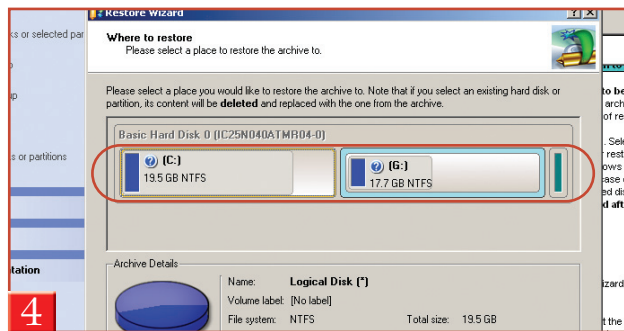
2

Click on backup hard drive or selected partition on the interface. Click on 'Next', and select the drive you want to back up as shown. It supports all commonly used file systems like NTFS, FAT, etc

Choose the 'Backup now' option that starts backing up immediately or the 'Generate script' option to schedule the job to be backed up later



3



4

To restore the backed up hard disk or partition, click on 'Restore' hard disks and partitions. This will bring up a wizard that would guide you through the process

Select the image and then define the place where you want to restore it. Here you can't restore a drive image in the same drive. For an image of 9.5 GB, data Wizard took 2.35 mins



Securing Your Enterprise WLAN

Great flexibility of WLAN makes also it prone to high security risks. We detail here various free tools that expose loopholes in your network and recommend measures to do away with such security risks

Sandeep Koul

Wireless Local Area Network (WLAN) is fast becoming popular and is being implemented in various organizations. Its flexibility and portability enable users to access their files, network resources and Internet. WLAN can be installed in places where conventional LAN cannot be implemented. Ease of scalability is another reason of its popularity. On top of all these benefits, the increased bandwidth and data transmission rate (similar to Ethernet speed) is

pushing growth and popularity of WLAN.

Most commonly used WLANs are based on IEEE 802.11 family of standards with IEEE 802.11 being the first in family developed in 1997. IEEE 802.11b was the first widely used standard that operated in 2.4-2.48 GHz band and supports 11 Mbps. Today most commonly used standards are IEEE 802.11b and 802.11g. Standard IEEE 802.11 permits devices to establish networks on fixed access points (AP) or as peer-to-peer networks. This standard defined two network topologies; the infrastructure

network and ad hoc network. The former is to extend range of wired LAN by providing access of resources (on LAN) to mobile devices while the latter is to communicate among mobile devices.

Security of 802.11 WLANs

Three basic security services defined by IEEE for WLAN are Authentication, Confidentiality and Integrity. Authentication is achieved in this standard by two ways; open system authentication and shared-key authentication. In open system authentication technique, the access point accepts the mobile device without ▶

verifying its identity, mobile device or client is authenticated if it responds with a MAC address. This type of technique is highly vulnerable to attack from unauthorized clients. Shared-key authentication is a cryptographic technique based on simple challenge-response scheme. In this technique, access point generates a random challenge and sends it to mobile device. Mobile device encrypts this challenge with the shared key and sends response back. Access point then decrypts this response and compares it with sent challenge and allows access only if both of them are same.

Privacy is achieved with encryption of actual data, for example WEP (wired equivalent privacy), uses the RC4 symmetric key stream cipher algorithm to generate data sequence.

Finally integrity is achieved with the help of simple Cyclic Redundancy Check (CRC) approach- for example a CRC-32 or frame check is computed on each data packet prior to transmission. On receivers end CRC is recomputed and compared with original message and if

they do not match message is declared modified.

Tools to identify vulnerability of WLAN

Here we will discuss various tools to show loopholes in WAN security. We start with some commonly used softwares that detect wireless signals, then we will try some softwares that can crack WEP (commonly used protection). One greatest source of these tools is back-track2 that has many preconfigured tools to monitor wireless networks or crack WEP key. This open source linux live distribution is widely used for penetration testing.

NetStumbler

NetStumbler is a free tool for Windows that can detect wireless networks (WLAN) working with 802.11a, 802.11b and 802.11g standards. It can be easily downloaded from mentioned URL and installation is simple. Only issue that one can face is compatibility of this tool with your hardware, firmware version, driver

version and operating system. There are some tried and tested configurations that one can refer to at www.stumbler.net/compat/. Note here NetStumbler works on Windows 2000, Windows XP or latter.

Interface of NetStumbler is easy to understand and by clicking on scanning button one can detect all the WLAN's that are in vicinity. It also gives valuable information like MAC address, SSID, channel, speed etc. This information can be utilized by malicious user to carry out attacks on the WLAN such as blocking of frequency using frequency jammers (as channel is known) or sniffing packets to break encryption.

Kismet

Kismet is a free tool that can be used as WLAN detector, packet sniffer and intrusion detection system. Kismet can sniff 802.11a, 802.11b, 802.11n and 802.11g traffic with any card that supports raw monitoring. This tool can be downloaded from mentioned URL or one can use

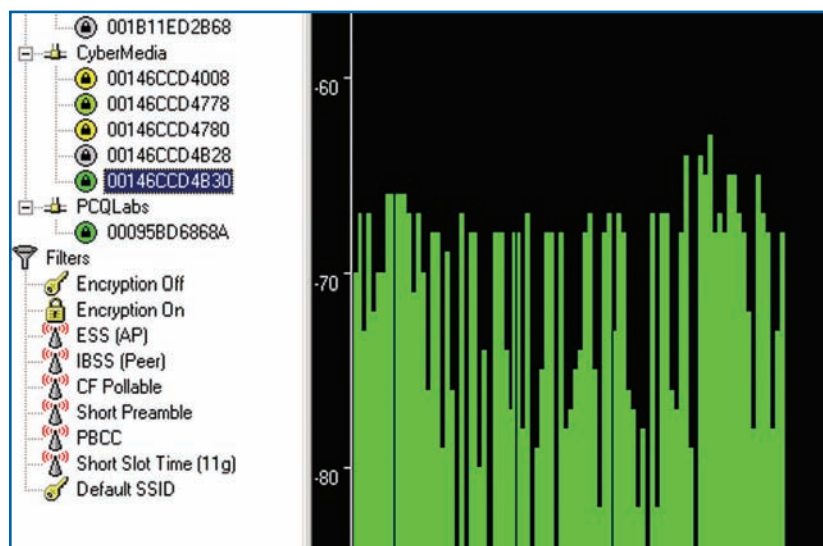
`#yum install kismet`

command on linux terminal to install it, then to configure it open 'kismet.config' from '/etc/kismet' folder. Find the statement 'source=none, none, addme' in the code and change it to 'source=orinoco, eth1, root' where first parameter defines source type, second interface card and third defines name of user. To use it just write

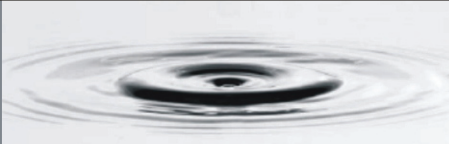
`# kismet`

on command terminal. One can get backtrack2 that is a linux operating system with kismet preconfigured in it (we used this option). Once kismet starts running it can be further customized by pressing 'H' key.

With help of this tool you can view all the AP's of the network around you and therefore it can be used as AP de- ▶



This is graphical representation of traffic on NetStumbler with time and day on x-axis and signal to noise ratio on y-axis. Left side displays SSIDs and channels with various filtering criteria at the bottom



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tor by malicious user.

AirSnort

Now we will cover tools that can even crack encryption keys. These tools pose greater threat to WLAN security as one can easily know about the information one is sending on network. AirSnort is a tool that can be used to recover encryption key. It passively monitors wireless traffic and cracks encryption key when sufficient packets are collected. This tool can be downloaded from the web site mentioned. For testing purpose we again used backtrack2 that has AirSnort preconfigured in it. AirSnort is also available for Windows and linux users can install it using following command

```
# yum install airtsnort
```

Once properly installed, one can configure the simple interface of AirSnort. Check channel radio button to monitor packets from a specific channel. 'Network device' should be chosen depending on hardware configuration and 'Drive type' is to tell AirSnort how it can place network card in monitoring mode. One more important setting on interface is about 'crack breadth' this option should be maximized as it defines num-

ber of attempts that this tool will take to crack weak packets. It takes AirSnort approximately 5-10 million packets to crack encryption key. AirSnort exploits the weaknesses of WEP security in 802.11 standards.

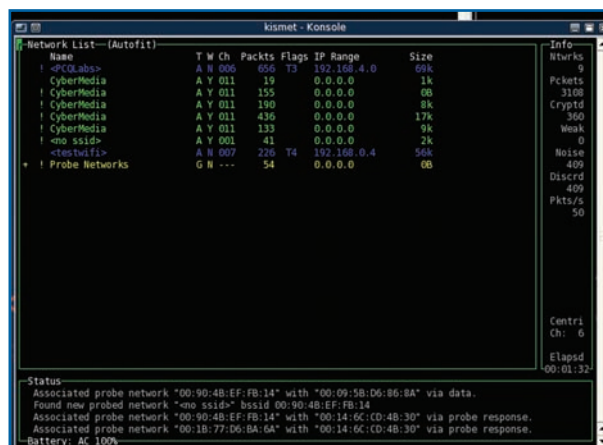
Wicrawl

Wicrawl is a simple linux based AP scanner with a plug-in based architecture that gives this tool great versatility as plugins performing different tasks can be attached to this tool. Plugins can be easily implemented using scripts or externally called program. Wicrawl can be downloaded from mentioned URL. We used backtrack2 to test this tool; interface is simple with SSID filter option on top that can be used to filter out SSID's. At this moment number of plugins are available including 'aircrack-wep-cracking' a WEP cracking feature, 'check_speed' that checks latency of connection, 'check_internet' that checks internet connection. Due to its plug-in based architecture, this tool poses greater threat to WLAN security as its penetration power is ever increasing like it can perform task of WEP cracking with different approaches using differ-

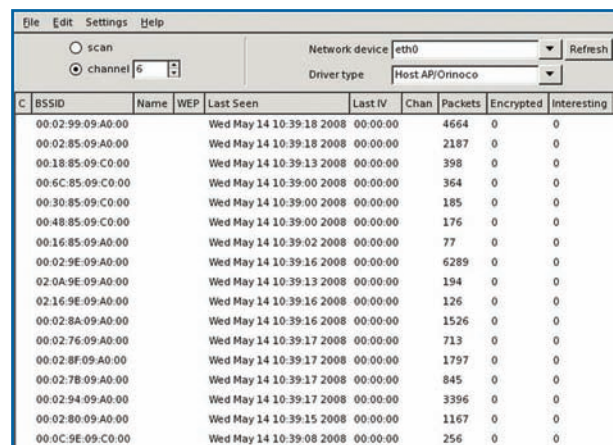
ent plugins. Plug-in (apwebcrack) is developed for cracking administrator password of AP with the help of default passwords.

Wireshark

Wireshark is a network packet analyzer. It captures packet and tries to display packets data in detail. This tool was built for ethernet packets but now wireless capture functionality is integrated. Download this tool from mentioned URL once downloaded installation is fairly simple. We tried this tool on windows XP professional and using it was easy. Once we are on interface of wireshark to start capturing packet one has to select interface by clicking on the first button on toolbar this will list all the available interfaces. For wireless capture select a wireless interface by clicking on the 'start' button in front of it. This tool also acts as network detector as it lists out the entire networks available (click on 'Details'). Types of data packets captured by wireshark include IP, TCP, UDP etc, and there is filter available to capture a particular type of data packet. Captured data packet poses great threat to integrity of information and exposes



Kismet lists out all the WLAN signals in vicinity and also gives size of data packets transferred, IP range and channel of transmission



Interface of AirSnort shows packets that are transferred and BSSID. Specific channel can be selected by 'channel', traffic of other WLANs can be scanned by selecting 'scan' ▶

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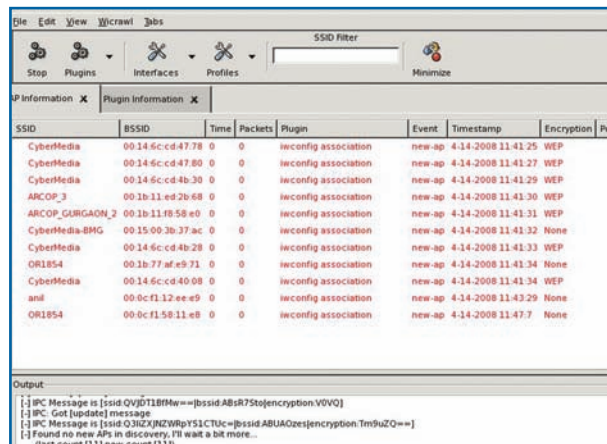
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Interface of wicrawl with plugin option in tool bar that can be used for different activities. SSID filter on top is for specific monitoring

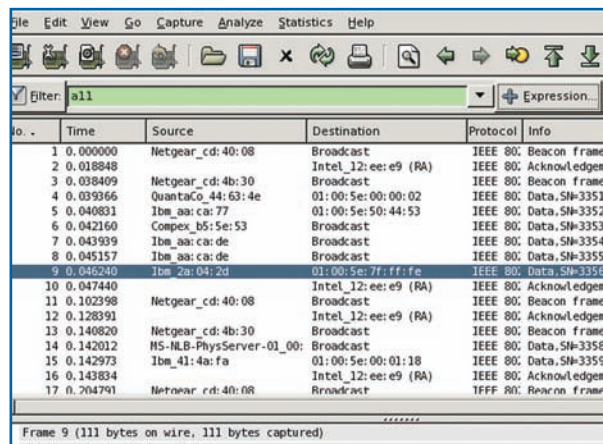
information that can be critical.

Making your WLAN more secure

Now we will focus on how to make your WLAN more secure. The first major step that organizations (using WLAN) can take is to make a security policy defining access rights, criticality of information to be sent on WLAN and security settings of WLAN equipments.

Proper configuration of access point is critical for having a secure WLAN. Start with updating the default password of AP to a stronger alphanumeric password with only administrator knowing

it. Always use the strongest encryption setting available on the product (AP) i.e. if available encryption settings are none, 64-bit shared key and 128-bit shared key use last one. One greatest security loophole is the reset function of AP because using it one can easily negate all the security settings configured on AP as it restores AP back to the factory settings. Therefore by controlling reset function of AP, WLAN can be made more secure. Change SSID and disable broadcast SSID feature on AP also change channel of AP i.e. channel 1, 6 and 11 can be used simultaneously on closely placed AP's. By changing channels one also secures



Wireshark's interface elaborately shows data packet movement from source to destination. It also tries to give details of packets

his/her WLAN from frequency jamming devices. One more step that can boost security of WLAN is using static IP addresses and if possible use of MAC ACL (Access Control Lists) where communication is regulated according to MAC address of clients.

Security measures implemented on LAN can also be used in WLAN like physical protection of AP's and mobile clients, regular monitoring of different networks available and implementation of firewalls. One can also implement IDS (intrusion detecting systems) in WLAN. IDS for WLAN can be host based or network based.

	NetStumbler	Kismet	AirSnort	Wicrawl	Wireshark
URL	www.netstumbler.com	www.kismetwireless.net/	www.airsnort.shoom.com	http://midnightresearch.com/projects/wicrawl/	www.wireshark.org/
Functionality	WLAN detector	WLAN detector	WEP cracker WLAN detector	WLAN detector WEP cracker	Packet analyzer
Platforms	Windows	Windows Linux OS X	Windows Linux	Linux	Windows Linux OS X Solaris
Download size	1.26 MB	631 KB	834 KB	2.12 MB	20.7 MB

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Here's an innovative solution that remotely manages and monitors the power supply to your datacenter. Other than this there's lot more it has on offer

Anindya Roy

What's the biggest problem you face while managing your datacenter remotely? You can easily share, control, access, and manage your IT equipments till the time they are connected to the power and are alive. But once they are down or the physical power switch is turned off you can do nothing with the device. Or let's say you want to do a cold boot (turning off the power for more than ten seconds while rebooting) of your servers remotely for some reason. In such a case traditionally you need to have a person physically present at the site to do it.

So, here is a device to solve your remote power management problems. It is called the Dominion PX and it's from Raritan. With the help of this device you can remotely turn on or off the power of any equipment connected through this device. All you have to do is to go to its web-based interface and select the port which you want to turn on or off and click using the on/off button in the web-based interface. But that's not all about this product, there's lot more to it. It is essentially a power management device which can be accessed over an IP network. The unit we received had eight outlet ports and looked pretty much like a standard 24 port network switch with 1U thickness. There are devices with more number of outlet ports available.

Other than turning on/off, for the devices connected to this unit you can even see the real time consumption of power in terms of ampere and watts at a port basis or at a device basis. This means you can see consumption of power at each port and the total consumption of power by the unit. Some other things which one can find from the web-based interface are the unit voltage and CPU temperature of the unit.

The other great feature about the product is that it can send both SNMP and eMail



Price: USD 745 for 8-ports (2 yr warranty)

Meant For: Datacenter and Network admins

Key Specs: 8-ports, Web-based management website, Console support

Pros: Intuitive management interface, E-mail, SNMP, and Log alerts

Cons: Lacks historical log reporting

Contact: Raritan India

Tel: 91-124-4107881

Email: enquiry.india@raritan.com

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alerts in case of any threshold being triggered either at a Unit, Board, or output level. This is a very useful feature with which you can figure out at a near real-time basis, the condition of the power supply for your crucial servers. The configuration and usage of the device is pretty simple. It can either be connected over an RS 232 cable or over the network. Most likely first you have to connect to it using an RS 232 cable to give it an IP address. Once you do that you can access it through the IP over a pretty intuitive web-based interface. The interface at the first screen gives you a list of all the ports with their real-time power consumption. And it also gives you the buttons for on/off/ cycle power for each port at the front page itself.

But one thing we found missing in the product was a reporting functionality which can create reports for historical data as well. So that one can figure out the pattern of power consumption at a given period of time for specific product. The device is at any case capturing the data required for this kind of report but currently don't have a system to store and report this historical data. If in future the device updates its firmware with this feature it will be a great feature for the system admins.

BOTTOMLINE: Brilliant product for remotely managing the power of your IT equipment □

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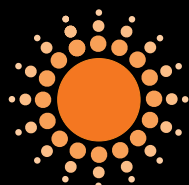
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Reviews

Apple MacBook Air

Hitesh Raj Bhagat

Apple has a way of creating an aura about their products. And no one can deny the precise attention to detail in the design. The Air is just 0.16 inches thin at the edges and increases to 0.76 inches at the centre. Numbers just don't do it justice; it has to be seen to be believed! It still houses a 13.3-inch LED backlit LCD, full-size backlit keyboard, a gigantic multi-touch touchpad and webcam + mic. The multitouch touchpad can be used to zoom in or out of images, rotate them or flip pages using a three-finger gesture. It has the latest OSX Leopard, a C2D processor (1.6 GHz), 2 GB DDR2 RAM



Price: Rs 86,000

Key Specs: 1.36 kg, 13.3 inches LED display, Bluetooth, WiFi, IR port, 1 USB, 1 micro DVI, 1 audio port, Intel Core 2 Duo 1.6 GHz, 2 GB DDR2 RAM, webcam, multi-touch track pad, mono loudspeaker, 80 GB hard disk

Contact: Apple India **Tel:** 1800 425 4646

Website: www.apple.co.in

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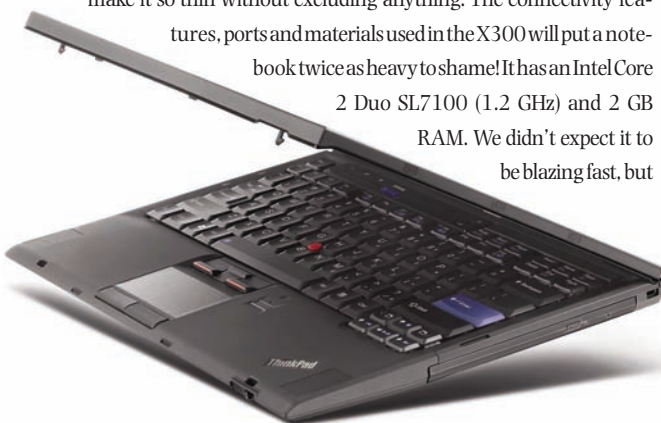
and a 1.8-inch 80 GB hard drive. Every time you use it, you'll catch admiring glances coming your way. But you'll also be reminded of the omissions. We used BootCamp and loaded Windows XP for our benchmarks. It managed 244 3D marks and the battery managed a runtime of 2 hours 45 minutes with the brightness set to max. The MacBook Air can be one of the hottest gadgets of the decade. But the omissions like optical drive, USB ports, and Ethernet have ensured that it's a machine only for a select few; die-hard Apple aficionados and those who just love to show off.

BOTTOMLINE: You'll have the thinnest notebook in the world, but be prepared to make some compromises in lieu of that. □

Lenovo X300

Hitesh Raj Bhagat

The comparisons between the Lenovo X300 and MacBook Air are inevitable. When compared to the MacBook Air, the X300 does look bland (some may call it understated). But it's a ThinkPad, and with that lineage comes the no-nonsense practicality that innumerable business users have been swearing by over the years. Probably the most exciting part about the X300 is not how thin they made it, but how they managed to make it so thin without excluding anything. The connectivity features, ports and materials used in the X300 will put a notebook twice as heavy to shame! It has an Intel Core



2 Duo SL7100 (1.2 GHz) and 2 GB RAM. We didn't expect it to be blazing fast, but

Price: Rs 1,45,000

Key Specs: Intel Core 2 Duo SL7100 (1.2 GHz), 13.3-inch (1440x900 pixels), Windows Vista Business, 2 GB DDR2 RAM, VGA webcam with mic, 64 GB SSD, DVD-R/W, Bluetooth, Wi-Fi, 3 USB, VGA out, Ethernet, fingerprint scanner, 1.36 kg

Contact: Lenovo India

Tel: 1800 425 3353

website: www.lenovo.com/in/en

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it surprised us, thanks to the fast 64 GB SSD. It also includes a DVD writer, webcam with mic, a full-sized keyboard with ThinkLight, TrackPoint and trackpad, fingerprint scanner, 3 USB ports, VGA out, audio out, line in, Ethernet, Bluetooth and Wi-Fi. It managed a score of 3709 PC marks and 442 in 3D Mark; more than acceptable for the size and intended usage. Battery life with the standard battery was about 3 hrs 15 min. Probably the only thing that we really didn't like on the X300 was the somewhat dim screen (especially when compared to the Air). Overall, a great product, but the price tag puts it out of reach of all but the elite.

BOTTOMLINE: A rock sturdy business notebook for those who like to travel really light. □

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Xerox India Ltd.	www.xerox.com	5	190605

Canon Laser imageCLASS MF4680

Sandeep Koul

This multifunctional device is packed with a fax, scanner, digital copier, and laser printer. Its flat bed design and optimally placed controls save office space and give ease of operation. MF4680 comes with auto duplex feature for smooth double side printing, integrated network and direct scan to email, USB, fax, and network folders. Besides these, it also comes with standard 250-sheet paper cassette, 35-page Automatic document feeder (ADF) for fast unattended copying and faxing, Canon all-in-one cartridge-FX9, 64 MB SDRAM (supports up to 256 pages of fax and 99 copies), power saver, and tone saver mode.



Installation was simple and quick with CD containing various useful software like Presto! PageManager for managing scanned pages and ScanSoft OminiPage an OCR (optical char-

Price: Rs 27,900 (exclusive of taxes with 1 year warranty)

Key Specs: Print speed, 250 sheet paper tray, 35-page ADF

Contact: Canon India, Gurgaon

Tel: 1800-345-33-66

email: info@canon.co.in

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acter recognition program). Print quality was good with excellent clarity. The feature that stood out in this device was speed of printing and scanning: MF4680 gave us speed of 20 pages per minute for printing text-only pages and took 30 sec (300 dpi) and 49 sec (600 dpi) for scanning a color document. Here the time taken was less when compared to that taken by Panasonic MB 772CX MFD (55 sec for 600 dpi). Printing quality of a monochrome graphic was good with distinct black and grey areas. We also tested auto duplex capability of this device and were able to print 10 pages in 100 sec.

BOTTOMLINE: Efficient device for SMBs, owing to its print speed and network integration. □

HP LaserJet M2727nf MFP

Ankush Sharma

The M2727nf is a printer, copier, fax, and scanner—all packed into one. As is the case with all the multi-functional peripherals, this one too was on the bulkier side and slightly tall. The top essentially demonstrates the ADF, which holds up to 50 sheets of paper, the flatbed scanner, and menu controls. The LCD panel helps you configure the machine and also displays other details related to the ongoing job. I particularly liked the general look and feel of the menu controls as there were different sections dedicated to copy, fax, and scan. However, while configuring the machine, I figured out that there was no 'revert' back button, which made me go back to the starting point every time. I was



pleasantly surprised to see the addition of an extra DIMM slot to the left of the device. Besides, it also has 64 MB of in-built RAM and an additional 8 MB memory for fax storage. An embedded Web Server provides access to information about device and network activities, and

Price: Rs 45,000 (1 yr warranty)

Key Specs: 64 MB of in-built RAM, 8 MB for fax storage, automatic 2-sided printing, customized fax preferences, DIMM slot, embedded web server

Contact: Hewlett Packard

Tel: 0124-2566111

website: www.hp.com/in

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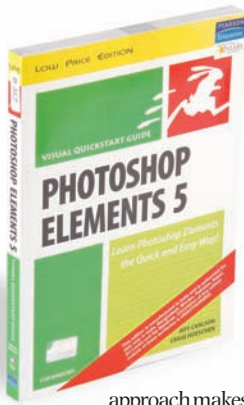
it can be viewed on a web browser. The integrated facsimile has some innovative features like receiving private faxes, forward fax, sends fax at a scheduled time, and customized fax speeds.

During our various tests it performed quite satisfactorily. It took 9 s before ejecting the first print and a little more than 5 s to make a copy. However, the recorded copy time shot up to 30 s when instructed for a double-sided copy. A full page scan job took 45 s. While sending a text doc through fax it took approx 1.15 min, while faxing an image recorded 4 min and 45 s on the stopwatch.

BOTTOMLINE: Ideal printing solution for small and medium scale businesses where space is a constraint. □

Books

Photoshop Elements 5



Adobe's Photoshop Elements is commonly used by amateur photographers and design professionals for image-editing. Photoshop elements 5 comes up with some new tools to help you make your work more productive and creative. Its author Jeff Carlson starts with the introduction of Photoshop Elements and all the key features and tools in it (both old and new). The step by step instruction and good visual approach makes this book a good reference for professionals

and amateurs. You can explore thoroughly many topics of designing in this book including fixing and retouching photos, working with Layers, filters and effect and creating and editing text. This is a good reference book for beginners to learn Photoshop Elements. □

Author: Jeff Carlson, Craig Hoeschen

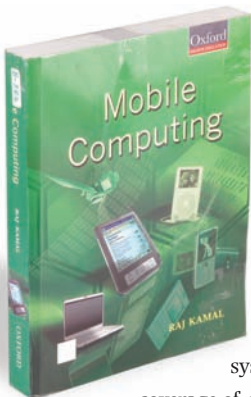
Price: Rs 399

Pages: 416

Distributor: Pearson Education, Delhi. Tel: 22146067, E-mail: babita.chauhan@pearsoned.co.in

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Mobile Computing



This book contains 14 chapters which provide comprehensive discussions on various aspects of mobile computing. The first chapter provides introduction to mobile communication and mobile computing followed by the description of various kinds of mobile devices which are available in the market. The author then talks about GSM system. The book gives an in-depth coverage of databases in mobile systems, methods of data caching, dissemination and synchronization, Bluetooth,

IrDA and ZigBee protocols, data security, etc. The author tries to cover the latest trends and developments in mobile computing. At the end of this book you will find appendix on mobile satellite communication networks and Java programs for developing mobile computing application. □

Author: Raj Kamal

Price: Rs 325

Pages: 582

Distributor: Oxford University Press India, Delhi .Tel: 43600300

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Design Patterns in Java



This is the third book of this series and it covers a wide range of topics on designing in Java. Divided into five categories as Interface, Responsibility, Construction, Operations and Extensions, the author tries to explain all design patterns. It tells you how to use Adapter to provide consistent interfaces to clients, using FAÇADE to simplify the use of reusable toolkits, etc. You will understand the use of STATE pattern to manage state more cleanly and simply, streamlining designs using the CHAIN OF RESPONSIBILITY pattern. They are discussed within the perspective of object oriented design

and Java language features. This provides plenty of implementation-level insights that helps clarify the intent of the patterns. If you're a Java programmer and want to approach the subject of designing patterns from that perspective, then this book is really worth it. □

Author: Steven John Metsker, William C. Wake

Price: Rs 399

Pages: 461

Distributor: Pearson Education, Delhi. Tel: 22146067, E-mail: babita.chauhan@pearsoned.co.in

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 ExtraEdge

DVD Xtreme

This month's Extreme DVD brings three new sporty games and Visual Studio 2008 Express Edition to perk you up

Best games of the month

Are you the kind who likes the speed? Enjoys the thrill? Loves to Race? Try out Nadeo's latest TrackMania Nations Forever game. It has completely new tracks with brand new dirt track challenges. You can also get online and challenge players from around the world on amazing tracks. We have shipped complete game with this month's PCQuest Extreme DVD. In case you are not a racing freak and would prefer to play soccer? Then try out Latest UEFA EURO 2008 and catch up with Euro 2008 fever.

TrackMania Nations Forever

This free second version features upgraded graphics, a vastly increased range of track types, and a much improved interface for online play.

UEFA EURO 2008

The game play is designed to give you total look and feel of the journey from qualification to finals, so just control the ball, dribble, pass and shoot.

Kung Fu Panda

In Kung Fu Panda, players embark on an epic, action-packed adventure as they master the specialized Kung Fu fighting styles of Po the Panda, his teacher Shifu, and the legendary Kung Fu masters.

Microsoft Visual Studio 2008 Express Edition

Rapidly create Web apps with latest technologies including AJAX, CSS, LINQ, and JavaScript IntelliSense. The MS Visual Studio 2008 Express

Editions are a free set of tools that are simple, fun, and easy to learn. Also included is SQL Server 2005 Compact Edition.

14 Project Management Tools

- Web-based project management system for service and consulting companies.
- Project scheduling application written in Java and featuring Gantt chart, resource management, calendaring, import/export (MS Project, HTML, PDF, spreadsheets).
- Software integrating project management, progress tracking, resource management and portfolio management into a single, easy-to-use tool.
- Business Process Management (BPM) and Workflow Management software designed for small and medium-sized organizations.



TrackMania Nations Forever Free Full Game 2.11.11

Professional DVD

This month's PCQuest Professional DVD has 65 free, top-rated software including 5 latest Operating systems to meet all your desktop needs

20 Multimedia Tools

To fulfill all your audio and video needs use these 20 multimedia tools that include latest audio player like VLC Media Player, music manager like Media Monkey, and other editing tools.

16 Network, Mobility & Wireless Tools

Take control of your network with four Wi-Fi tools and twelve network tools.

11 Security Tools

Keep your PC free from threats with 11 free security tools and other antivirus updates to help ensure the health of your PC. Includes:

AVG Anti-Virus Free Edition 7.5.524, Comodo Firewall Pro, McAfee SiteAdvisor for Internet Explorer and more.....

12 Office and Finance Tools

QuickBooks Simple Start 2008 free accounting software designed to help you manage your small business better.

Delta60 Accounting Software 6

BS1 Professional Time Billing 2008.1 Free time billing and accounting software for accounts payable, accounts receivable, general ledger, inventory, time billing, and sales analysis.

Office tools like Suite Office: The Fifth Element 1.1 runs on all Windows platforms and all hardware systems. With its full 32-bit architecture and stability, it can improve your productivity and document format compatibility.

EditPad Lite application is a convenient, carefully designed text editor and Notepad replacement. It has all the features a solid text editor needs without any bloat.

5 Linux Operating Systems

Freespire 2.0.8

- Is a community-driven, Ubuntu-based Linux distribution.
- Is always made available for free use, distribution and modification, now and forever.
- Is powerful enough for the most sophisticated Linux user or developer, yet easy enough for someone completely new to Linux.
- Is available with 100% free, Open Source software or with the option to

include legally licensed, 3rd party codecs, drivers and software.

gOS Space 2.9

gOS Space is the most addicting Linux operating system. Designed with 100,000,000 MySpace users in mind, Space introduces a media center dock stacked high with today's most popular Web apps for MySpace, Photos, Video, Music, TV, Movies and more.

OpenBSD

A free, multi-platform 4.BSD-based UNIX-like operating system

easys

A Slackware-based distribution

Mythbuntu

Key features in this release include:

- MythTV 0.21
- Diskless Server
- New Mythbuntu Frontend theme
- New Website theme



New Age Mobile Applications

Nokia has started a campaign to urge Indian developers to create imaginative content using its futuristic E 60 mobile platform. If the initial results are anything to go by, one can foresee a lot of PC-only apps making way into Nokia phones

Vishnu Anand

- A Flash application on your mobile phone, where your battery life indicator is represented in the form of a windmill—the faster the leaves of windmill rotate, the more is the battery charge you have. Imagine if the background scenery changes according to time of the day—6:30 pm it becomes a little dark, and by 7 pm, the sun has set completely
- A Kerala-based developer company called OneView has combined face recognition and GPS to create an interesting Symbian application whereby any photo taken on your mobile phone is automatically saved along with GPS co-ordinates of the location where the photograph was taken, and at what time. It goes a step further and does a ‘face scan’ of the person whose photo has been taken and searches your entire phone image database (high-end Nokia phones allow you to store up to 3000 images) for the image of the person and tags them together. An additional paid option will be to let you MMS the pics to that friend after pulling out his/her contact details from the address book.
- A developer has created a solution where the calendar application is voice enabled. Instead of typing in your appointment details, time and date of the event, one needs only to record his/her voice as a small capsule, which is automatically saved as an appointment. An hour or so before the appointment, the voice track is played back and you remind yourself in your own voice about the appointment.

These are few of the many ideas that Forum Nokia, the developer relations wing of the Finnish cell phone biggie, has received from the developer community worldwide, to work on its E60 mobile applications platform. Forum Nokia has recently embarked on a mission to woo Indian developers—the 20% chunk of the worldwide 2 million who develop web-based applications.

Kenny Mathers, Head, Developers and Channels, Forum Nokia Asia Pacific, was in Bangalore in the last week of May to interact with Indian developers, firstly

to get a pitch of what Indian subscribers need as applications and more importantly to educate developers on the E60 platform—an interoperable platform from Nokia where Flash, Symbian, Java and other standards can ‘talk’ to each other and work together.

According to Kenny, the uniqueness about the Indian market is the fact that application should not necessarily be only about innovation, which is Forum Nokia’s single biggest mantra. It should also ensure that the first time mobile user, and Internet user using a mobile phone, should be targeted with simple, but effective solutions. The voice-enabled Calendar application is a typical example where one need not necessarily know the moderately complex tasks of setting an appointment, and can use the power of voice of various other applications.

Forum Nokia expects Java and Flash apps to lead a new breed of innovative apps, which will embrace multiple technologies like GPS, biometrics, touch technology etc. Interestingly, Flash, until very recently has remained a PC-only domain, at least from a developer’s perspective. Nokia hopes to provide the necessary enhancements to the E60 platform whereby a Flash developer who has been developing apps primarily for a PC/laptop user, continues to essentially do the same thing, with minor differences in his/her thinking process. In other words, Nokia has got the technological transition of Flash technology from a PC platform to a mobile platform in place. It only needs Indian developers now to think out of the box and ‘realize’ their apps.

To further encourage developers, newer versions of Nokia phones come armed with a feature called ‘Try-for-free’—an application which lists out a set of new offerings from developers—big and small tools, productivity tools or just-for-fun applications and games which Nokia users can try out for free. Nokia keeps a tab on the number of ‘hits’ each application receives, in an attempt to make the developers with innovative ideas stand apart from the rest. □

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Forum 2008

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business. PCQuest takes this Forum to different cities every quarter; and this time we are coming to your city so you can **empower your business with the power of IT.**

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NASIK	27th May 08	Taj Residency	AMRITSAR	18th June 08	M.K.International
AGRA	30th May 08	ITC Mughal	RAJKOT	20th June 08	Imperial Palace
TRICHY	3rd June 08	Hotel Sangam	GUWAHATI	27th June 08	Hotel Dynasty
RAIPUR	6th June 08	Hotel Babylon International			

EVENT HIGHLIGHTS

- Seminars by industry experts on how to leverage IT to empower your business
- Meant exclusively for directors, proprietors and senior IT decision makers of emerging Indian enterprises
- Network with your peers and IT experts over cocktails and dinner
- Parallel showcase of useful IT products
- Panel discussion by industry experts
- Entry is free, but by invitation only

BENEFITS OF ATTENDING

- Feel the power of staying connected, no matter where you are, with powerful solutions on display at the SMB Forum
- Understand how to use IT for your business
- Get your toughest queries on IT answered by experts
- One-on-one mentoring by experts on how to leverage IT
- Interact with your peers over cocktails & dinner
- Enjoy the evening in a five-star or equivalent ambience
- Take home useful information on IT
- An opportunity to win exciting prizes at the event

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IT Manager of the Month

Life of an IT Manager or network administrator is no bed of roses...Endless late sittings in office, work starts after everyone else has left for the day, no break during weekends because of routine network maintenance jobs, and users who're never happy and mostly thankless.

If you're an IT Manager/Network Admin, then I'm sure you'll agree with me on most of these points. If you're not an IT Manager, then I'm sure you know one who fits the bill just right.

Either way, it's time to give this harried lot some recognition. Starting June, PCQuest is on a mission to identify these tireless IT managers.

What's more, after we identify them, they'll be featured in the magazine, and even get a surprise gift.

So go ahead and nominate an IT Manager on the link below:

<http://forums.pcquest.com/limesurvey/index.php?sid=3>

Keep in mind while nominating:

- You can nominate yourself or somebody else.
- If you get shortlisted, then somebody from PCQuest will contact you and ask you a few questions.
- If you are selected, then you'll appear in PCQuest with your photo.
- Selected IT Managers will get a surprise gift from PCQuest.
- If you nominate somebody else and he/she gets selected, then you will also receive a surprise gift from PCQuest.

IT Manager of the Month



Debabrata Pal

Location InCharge Infrastructure Support, Siemens Information Systems Ltd.

Debabrata has been working with Siemens for seven and half years, and his total work experience is 14 years.

His forte is enterprise IT infrastructure support management, and he's well versed with the ITIL standard. His most challenging assignment was to migrate an Exchange 5.5 Server to Exchange 2003.

In his free time, Deb usually plays either football or cricket or watches TV.

So Deb, congratulations on becoming the first IT manager of the month for June, and keep up the good work!

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ApnaInsurance.com is a definitive online guide for all insurance requirements, be it health, life, car, home, travel, or anything else in India. The site acts as a one-stop shop for all your insurance queries like different covers available, pitfalls to avoid, documents required, etc. All the different types of insurance are divided neatly on the web interface, making it easy for you to choose the one you're looking for. Plus, it provides an Insurance Guru section where you can directly interact with expert insurance panelists with years of experience.

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Red Hat Enterprise Linux v5.2 Released

The latest release offers support for new hardware, numerous software technologies and quality improvements. Major enhancements have been done in six areas, namely virtualization, desktop, security, clustering, networking, and hardware support.

The virtualization is supported for NUMA based architecture, and also allows CPU scaling for virtualized environments for reduced power.

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Salesforce.com and Google Introduce Salesforce for Google Apps

Salesforce.com and Google expanded their global strategic alliance to make it easy for companies of all sizes to run their business in the cloud with Salesforce for Google Apps. The combination of the Google App suite of productivity applications and the Salesforce suite of Customer Relationship Management (CRM) applications enables businesses to effectively communicate and collaborate without any hardware or software to download, install or maintain. Salesforce for Google Apps also leverages the Force.com Platform and Google's open APIs. Salesforce for Google Apps is a simple combination of essential applications for business productivity (email, calendaring, documents, spreadsheets, presentations, instant messaging) and CRM (sales, marketing, service and support, partners).

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Tadiran Telecom's Unified Communications Solution for Enterprises announced

Called uCMC, or Unified Coral Messaging Center, the solution can serve a diverse set of industries including gov, manufacturing, retail, financial services, utilities, telecom, and healthcare. It offers virtually unlimited number of mailboxes and consolidates voicemail, email, and faxes on one platform. It offers nine customer call routing menus per mailbox, one button function to add Automatic Number Identification, customizable recorded messages and greetings, and optional text messaging alerts upon receiving new mail. The uCMC integrates directly with MS Outlook and uses its address books, group lists, and contact lists. Its received messages appear as a normal received message and activates the uCMC Media Player. Text messages can be read and voice messages can be played directly from Outlook.

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Patni offers an Automated Framework for the Insurance sector

Patni Computer Systems Ltd announced its customizable solution framework for the development or modernization of insurance business applications. Initially, the framework will support Patni's application components for Life New Business. Based on SOA (Service Oriented Architecture) and built using the company's branded PatniPlus methodologies, these application components are architected to integrate with existing custom or packaged applications within an insurer's systems infrastructure.

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News & Launches

Ubuntu 8.04 LTS Desktop Edition Released

Canonical Ltd. announced the upcoming availability of Ubuntu 8.04 LTS Desktop Edition. It comes with three years of support and maintenance on the desktop. A substantial and growing ecosystem of free and commercial software built for Ubuntu provides a lot of choices for desktop users. This is the eighth desktop release of Ubuntu

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vCustomer launches end-to-end Customer Management Software

vCustomer Corporation, has announced the launch of its Customer Management Software designed specifically for retailers. The solution can be managed entirely via a comprehensive web-based interface and allows the Retailer to manage customer contact across multiple-channels including phone, IVR, SMS, email & web forms. Developed using LAMP technologies (Linux, Apache, MySQL, PHP), the solution ensures interoperability and makes the solution operating system independent. Designed to be managed using an ASP model, the customer has full access to the platform from any location globally simply by having access to the Internet. .

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Ingres creates a CAFE

Ingres has announced the creation of CAFE, short for Consolidated Application Foundation for Eclipse. This contains all the components needed by a developer to create and deploy rich Java applications built using Eclipse's development framework. CAFE bundles the Eclipse IDE, Ingres DBMS, Apache Tomcat, Hibernate, and JSF libraries into a single installable package complete with quick start documentation, integrated maintenance, and a demo program to quickly get started. You can also download it from <http://bugs.ingres.com/wiki/CAFE>.

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Corrigenda

- Refer to article 'Future Prof IT Infrastructure', Infosys Technologies, on pg 93 in the May 2008 issue. The team size published is wrong. It is 60.

- Refer to article 'Learn Java by example', Aptech Software on pg 114 in the May 2008 issue. The name of the Project Head published is wrong. It is Yatin Bhatia.

Inconvenience caused is regreted

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Industrial Grade Outdoor IP Camera with 18X ~ 40X Optical Zoom



FCS-5020/FCS-5030/FCS-5031: Day/Night IP Network Camera
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FCS-1060/WCS-2060: P/T IP Network Camera
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Closing The Gap

Between award-winning tech projects and satisfied users, there's a chasm

The media's used to flak. Whether it's a group review or shootout, or a major survey. Among our 'high flak' stories is Dataquest's annual "best e-governed states" survey, done by IDC. The flak rarely comes from top performers in the survey.

In March, the 2008 edition of the survey listed Delhi, Goa and Chattisgarh as the best e-governed states. Gujarat dropped from fourth to *nineteenth* place, flanked by Haryana and Jharkhand (#20). The latter three, and others, were upset about their position. A senior official said: "Look here--we've got these awards for our project, so your survey is nonsense." Another said: "Our budget for this *one* award-winning project is more than the complete IT budget of that state you've rated so high!"

Did they miss a point? The awards they got were for projects: technology, spend, planning, idea, may be execution. Our survey was about something else: user satisfaction. *Were citizens, and businesses, satisfied? Did they see an improvement in their government interface? Speed, transparency?*

Everything about a project's benchmark should boil down to

that: are customers, or users, satisfied?

Unfortunately, it doesn't always work that way. It may not be practical, for a start. PCQuest's "Best IT implementation awards" featured in this issue are an example. It follows an extensive, rigorous process where PCQ's editors whet several hundred nominations, visit the projects, shortlist a few dozen, and presents the shortlist to a jury panel, which then discusses, debates and selects the five or six awardees.

What this does not always factor in is actual end-user feedback, a point that was brought up in the jury this time. For instance, the overall winner: the Rajasthan government's online BPL (below poverty line) census. The project won on technology, potential impact, the fact that it works (the jury tried it out). But the question that was left unanswered was: has it changed people's lives? Do actual users find the process of BPL classification more transparent? While the PCQuest team did some follow up research, it wasn't practical to go down to the 'BPL' people and survey that, especially with the post-blasts situation in Jaipur.

Jury chairman Dr G D Gautama, IAS, noted: "This is a wonderful job of evaluating many diverse projects. But it would be good to also evaluate the actual benefits from these projects... reduction in downtime, cost, increased transparency, etc.

"It is important to evaluate the actual impact. For instance, in an e-gov project, what benefits have actually gone to the citizens? Is there feedback from the beneficiaries?"

Now, there's a flip side too. Will end users always really rate a project fairly?

Let's say a new CRM system is implemented. There are the staunch, old company loyalists who resist it, and prefer the old system. Do a survey, and you'll find out how much of a time-waster the new system is. Do they have the larger picture—that it's ultimately for improving speed of response to customers, and knowledge base... that short term pain is for long term gain?

Now, you can say that it's the job of the implementers to carry the users along—to get them on their side, aligned to a common goal—including a new project or application.

This applies to product reviews too. Would you trust an expert reviewer in a lab, or dozens of users blogging about it?

There's no simple answer. But what do you think? □

“ Rating a project is an inexact science. But may be we can do better in getting user feedback. ”

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