**FEMTOCELL**

**ACHARYA VINOBA BHAVE INSTITUTE OF TECHNOLOGY, PAWNAR (WARDHA)**

 **Miss. R. U. PAL Miss. A. A. KADAM**

 **(Rupalipal7@rediffmail.com) (askdm09gmail.com)**

**ABSTRACT**

**Femtocells, a technology little-known outside the wireless world, promise better indoor cellular service. In telecommunication, a Femtocell is a small cellular base station, typically designed for use in a home or small business. It connects to the service provider’s network via broadband. Current designs typically support 2 to 4 active mobile phones in a residential setting, and 8 to 16 active mobile phones in enterprise settings. A Femtocell allows service providers to extend service coverage indoors, especially where access would otherwise be limited or unavailable. For a mobile operator, the attractions of a Femtocell are improvements to both coverage and capacity, especially indoors. This can reduce both capital expenditure and operating expense.**

**A Femtocell is typically the size of a residential gateway or smaller, and connects into the end-user’s broadband line. Once plugged in, the Femtocell connects to the MNO’s mobile network, and provides extra coverage in a range of typically 30 to 50 meters for residential Femtocells.**

**The end-user must declare which mobile phone numbers are allowed to connect to his/her Femtocell, usually via a web interface provided by the MNO. When these mobile phones arrive under coverage of the Femtocell, they switch over from the Macrocell (outdoor) to the Femtocell automatically. Most MNOs provide means for the end-user to know this has happened, for example by having a different network name appear on the mobile phone. All communications will then automatically go through the Femtocell. When the end-user leaves the Femtocell coverage (whether in a call or not), his phone hands over seamlessly to the macro network.**