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## Business Reloaded

### Transforming Business with Fourth Generation Wireless Networks – 4G-LTE

Organizations in India are known to focus on innovation, speed, and cost optimization, especially in the light of intensifying competition. Continuing on this journey, both businesses and public institutions are looking at various means of increasing productivity, improving customer service, and gaining market share. In today's changing and challenging business climate, firms must seamlessly extend application access to an increasing number of corporate assets (fixed sites, nomadic users, and partners). The desire for instant access by end-users creates a need for greater bandwidth, improved responsiveness, and faster uploads and downloads speeds.

The top challenges that most enterprises face today are related to cost, agility, and management of complexities and resources.

The traditional fixed/wireline (fiber, copper, cable) access, offering such high bandwidths is constrained by right-of-way issues, weak per unit economics, and high level of market fragmentation. Wireless, therefore, is expected to contribute significantly in increasing penetration across enterprise segments both for fixed as well as nomadic usage.

Enterprises are exploring options for connecting securely with a high speed reliable network to ensure that future workforce is always connected and the network is optimized to transmit bandwidth-intensive and latency-sensitive applications. Enterprises are also evaluating technologies to connect with employees, customers, and partners in new ways and across new devices and applications. Today, a mobile phone is no longer a device that is used to check email and

browse Internet on the move. Rather, it has transformed into a handheld device that can integrate applications and services that have the potential to change the way companies do businesses. Machine-to-machine is another area that will not only increase automation of business processes but will also offer enhanced customer experience in many innovative ways for different segments. In addition, cloud has emerged as a robust and cost-effective delivery mechanism for most of the applications that an organization needs to run the business and achieve excellence. The demand for cloud-based software is rising rapidly because the approach allows companies to start using new programs faster and at lower cost than traditional products that are installed at a customer's own data center. The business cases are flying because for an incremental improvement there is a justified cost that does not involve a gigantic procurement, deployment, and enablement process.

4G-LTE's technology advances help deliver improved wireless connectivity and true mobility to its customers. Its improved speed, greater bandwidth, and lower latency help in redefining the traditional office with enhanced productivity for mobile workers by offering in-office business applications and services. 4G-LTE allows improved communication features such as real-time videoconferencing, powerful wireless applications, and direct-connect access to files and customer-specific applications. The technology also offers an excellent high speed and a cost-effective solution not only for connecting fixed sites, home users, and nomadic workforce but also for M2M applications to the enterprise network.



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The need of the hour is for service providers to recognize this need and offer solutions to enterprises to meet their needs and requirements. At Aircel, the business solution division has already taken a step in this direction. Through high speed extended access service to enterprises, we are working toward meeting the demand for high-speed Internet, rapid connectivity to fixed sites as well as home users, and an efficient network for M2M applications integrating highly efficient mobile core to IP-MPLS backbone enables a symmetric bandwidth experience to enterprise fixed sites. The packets originating from the branch office are securely encapsulated over an L2TP (Layer 2 tunneling protocol) tunnel to IP-MPLS core. Enterprises can run secure encryption (IPSec) over and above this network for an additional layer of security. Integration with IP-MPLS network ensures an end-to-end managed and secure connectivity for enterprises. Enterprises can now deploy hybrid networks intelligently with a mix of fiber/copper/4G-LTE technology and optimize their network costs by appropriately connecting via apt media.

Another innovative application of 4G-LTE is that it can be used as a back-up last mile for primary wired sites. The enterprise routers can be configured