
The catalyst for creating a global digital society

Based on its scientific research, Evollab predicts that there are five major trends that are going to draw the course of the future development of global telecom industry for next one decade or so. These trends can be summarized as (a) dominance of advanced wireless technologies (b) broadband proliferation (c) End to End IP Convergence (d) Ubiquitous & all pervasive communications and (e) emergence of an "Information Society". These elements would prove to be catalytic for the transformation of telecom industry around the world.

This is the advent of globalization of economies. Individual professionals, corporations and economies are caught in this whirlwind of globalization. There is race to gain economic supremacy among the economies of the world order. The world is plagued by myriads of social challenges such as worsening environment, global warming, energy shortage, ageing population, terrorism, lack of social infrastructure like health care, education etc.



The governments world over have been pondering to leverage Information and Communication Technology (ICT) to enhance their economic competitiveness, improve efficiency of their governance to provide a cost effective solution to those social challenges. In this direction the governments across the continents have set one or the other

agenda with a common objective to create an Intelligent Ambient Ubiquitous Infostructure to develop an "Information Society" where every one and every thing is digitally interconnected in their personal, social and work lives.

In an Information Society the communication services will be characterized by features as (a) multi-play multimedia (b) always online (c) seamless availability (d) meets user's unique needs & wants. To deliver such broad spectrum of services features, the telecom networks will embody characteristics as (a) broadband (b) Convergent (c) ubiquitous & pervasive and (d) intelligent environment sensitive.

Convergence holds the key for evolution of a true "Information Society". Convergence it self is a quite intricate phenomenon and can be classified as Industry convergence and Technology convergence. Evollab has defined Industry convergence as Convergence of TIME (Telecom, IT & applications, Media, content & entertainment and Electronics) industries. This phenomenon of convergence has affected a shift in the telecom value e chain.

The Technology convergence is describes the convergence of telecom networks, services, and terminal devices. To this end the networks & services evolve to adopt more and more enhanced features as described above. Terminal convergence signifies growing mobility and intelligence capability as they acquire increasing computing and processing power to provide multimedia services on a common platform.

The Industry Convergence has thrown open a plethora of challenges for the traditional telcos. These challenges encompass Financial, Operational, Regulatory, and Business model implications. As a result of this convergence there are new players who are providing communications services that were supposed to be the business portfolio of traditional telecom operators, historically. So there is new competition that is devouring in to the revenues of the traditional telcos. Traditional telcos are under tremendous pressure from the growing intensity of competition, declining ARPUs and emergence of newer competing technologies. The operators are risk prone to lose their prominent position in the value chain that they have enjoyed so far. They may be coerced out of business in future, if they ignore to take appropriate measure.



In order to overcome the challenges due convergence and to continue to retain their strong position in the telecom value chain the telecom operators need to adopt Transformation. "Transformation as defined by Evollab is evolutionary processes that addresses the challenges of the convergence and provides for a innovative business model & new revenue generating streams that assure reduced costs & sustained profitability for the operators". Transformation benefits operators and end users by providing (1) Innovative business model & new revenue generating streams, services & applications, (2) maximizing the top

line and the bottom line, (3) reducing the Capex and Opex, (4) providing improved operational efficiencies and (5) simplifying the network architecture to offer highest Total Value of Ownership (TVO) and the lowest Total Cost of Ownership (TCO).

Transformation is an evolutionary process that cannot be attained over night, in a week or a month. It will take several years. Depending on the level of development of telecom in across the world, the degree of adoption of Transformation changes from region to region, country to country and even operator to operator. To adopt Transformation successfully, Telecom operators need to define and formulate a well-structured strategy depending on their capability and marketing & competition environment. The operators need to transform their existing macro level business strategy; business model, the service portfolio and the supporting network architecture.

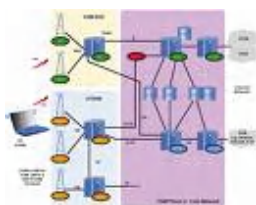
The network will transform to adopt E2E IP-FMC (End to end IP centric Fixed Mobile Convergence) architecture acquiring essential capabilities such as broadband, broadband, convergence, ubiquitous & pervasive and intelligence to environment sensitive. This forms the foundation for moving to an era of IP centric FMC. Legacy TDM network pave the way to packet switched networks. To realize "E2E IP-FMC" architecture, telecom networks are set to under-go large-scale revamp across at all layers of the network; the access, the bearer / transport layer, the Core layer and the service & application layer. Network will become independent of the service layers so that newer services can e added into the network without in change in the network.

Access layer will become heterogeneous with multiple wireless & wire line technologies coexisting since no one technology can meet the requirement in terms of speed, mobility, coverage & cost. Technologies like femtocell are popular solution to realize fixed-mobile convergence at access layer.



Bearer layer will be a carrier class IP bear network based on advanced IP (based on Giga /Tera bit Switched Router) and Next generation SDH / DWDM optical network technologies.

The core network will comprise of IP Multimedia subsystem with a unified home subscriber sub system database. The service and application will be a Service Delivery Platform (SDP) to provide multimedia, information and communication service to various user segments.



E2E IP-FMC is not mere convergence of fixed and mobile networks; its basic premise is to facilitate any time, anywhere, any service experience. Therefore the essence of E2E IP-FMC (Fixed Mobile convergence) is in building a "digital information society" where every one and every thing is digitally connected to provide a multimedia service experience. In true sense E2E IP-FMC brings ubiquitous mobility to broadband Internet.

To successfully adopt transformation service providers need to select right partners like Evollab who have strong technological competence and experience in key wireless, wire line, and IP networks and who can provide reliable services to enable them to command a leading market position.



Evollab provides Intelligent Ubiquitous Network (IUN) based End-to-End IP centric Fixed Mobile Convergence (E2E IP-FMC) network solutions and services to serve operators for creating info-structure for global digital information Society. Evollab has built strong capability to play a pivotal role in providing IUN based "E2E IP-FMC" network solutions. Our integrated and future oriented unified technology platforms support existing and emerging technologies & services for full-scale realization of "E2E IP-FMC".



Evollab offers an extensive portfolio of services (engineering professional services, network integration, business consulting and managed services) with skilled expertise & experience in network design, delivery, deployment, integration, network optimization, hosting & management meeting the growing aspirations of our customers' partners.



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