Wise Cases in Communication Space

The term "WISE CASES" is to differentiate from the word "USE CASES" which we often use to elicit requirements. "Use Cases" are primarily needed by the designers at the design level and is often misinterpreted for the end user system behavior representation. It focuses on functionality and performances with the "What" and "How" aspects while "Wise Cases" deal with composite behavior and optimal response with the question "Why" for every requirement in techno commercial way. It integrates just not the functions but eco-systems such as sensory devices, application platform, cloud infrastructure and use of big data analytics.

We can broadly categorize progress in the communication IP's (Intellectual Property) into consumer oriented and enterprise oriented streams.

<u>Consumer oriented stream:</u>

- The foundation for communication technologies is electromagnetic signal propagation. We leveraged from its properties to transmit data and voice with modulation techniques which is subsequently followed by video standards. This is to enrich user access and experience and so display standards have evolved.

- Standards and specifications by joint working groups aimed at improving data communication and digital convergence with inter-operable

connectivity devices and protocols. Higher data rates were achieved with LTE architecture and in future with 5G giga bit data rate specification. Video standards are migrating from MPEG2 to MPEG4 and converging to all IP encapsulation or eMBMS (Multimedia Broadcast Multicast Services).

- Multimedia technology progressing to advanced codecs like H265/HEVC to satisfy 4K/ ultra HD display standards. These new specifications comes at the cost of power consumption due to intensive computations for advanced motion compensation, spatial prediction, extra bit color space etc to support higher pixel density, faster switching modes etc. This drives the Eco-system framework, SoC's architecture, hardware IP's, software algorithms and devices designs etc keeping consumer interests at the center.

Industry was oblivious to the diminishing returns for the R&D capital it invests due to confused commerce by the investor driven market.

Enterprise oriented stream:

The industry has noticed the innovation saturation in consumer stream and rightly identified the need to have autonomous, intelligent, secure and seamless transformation of information to actuate a set of responses at enterprise level to generate huge value for every step in the innovation.

Some of the fact findings are, with BYOD (Bring your own device) and with the workforce mobility growing, the managed mobility services is expected

to reach $1.1 billion in 2016. Sensors and actuators are part of embedded systems in this age and reaching $8.8 billion dollars sale in 2016. Public cloud market is reaching $200 billion.

The wise cases are everything that connects different eco-systems to autonomously and seamlessly exchange real time information and to have provision for intelligent devices to act with optimal response with acute understanding of historical, present and forecast data. and applies to all fields like Healthcare, Education, Enterprises, Environment, Governance, Groups etc.

Examples of savings with enterprise mobility and sensory device integration:

- A Poneman institute report on U.S healthcare industry stated that billions of dollars could be saved by using secure text messaging for clinical communications during critical workflows: One event could trigger several actions to accomplish an intended result. While messaging always existed, integrated solutions were not.

- Science daily press release says that enterprise e-mail system costs millions of dollars for a company and forbes,com mentions the importance of having enterprise mobility policy in place. Enterprise mobility with cloud support could be the way forward for companies to be lean.

- Greenbook.org mentions that non-relevant mails/messages takes 20% of mails and delayed information/response erodes employees time and efficiency and costs several million dollars every year to almost all companies. Customer complaints alone was costing millions of dollars. The reason is not direct issue support cost but to address client annoyance of not being able to reach vendor due to inefficient mobility infrastructure and channel strategy.

With the platforms and mobile applications, cloud support for economics of scale, evolved wireless specifications and sensory devices, the situation is conducive for wise case implementation. The challenge is still in the areas of wi-fi low power, ubiquitous connectivity, data analytics and network security.