

# Realization and Operations of Multi Play - Innovative Way to Realize and Operate High Capacity High Speed Access Network

## Summary

1. Emerging markets can neither afford the massive capital outlay nor wait to lose precious time in the realization of the access network. 2. Countries in the emerging markets need multi play infrastructure and services as quickly as possible. This would speedily pave the way for the GDP growth driving applications and services to conveniently ride over the base level multi play infrastructure and services. 3. There is a need to be innovative and cost effective to realize the standards based access network well supported by the regulatory frame work without losing time to market. 4. Such multiple access networks would be interconnected with a few rock solid, high capacity, high speed core and edge networks of a few, typically six to eight, established national telcos or CMSPs to realize a single high capacity, high speed network pipe entering into home and business premises. This is the fifth pipe in addition to four utility pipes for water, electricity, sewerage and gas.

## Analysis

**Innovation is a key to reduce time and cost in the realization of any infrastructure and access network for multi play services is no exception.**

*Last two decades or so have seen massive proliferation of HFC based cable TV homes in India. More than 100 million homes have been wired up by more than 60,000 Local Cable Operators (LCOs) with HFC network at a record speed not seen earlier. 98 % of these homes see analog TV only on this high capacity high speed pipe which requires very little upgrade to realize its full potential.*

**On an average, a LCO has 1500 to 2000 points with the HFC network. It would cost approx USD 5 to USD 6 per point to upgrade this pipe to carry two way digital signals inclusive of IP over Ethernet over Cable, a technology which is easily available. Each LCO can upgrade his own network in less than a month time.**

*Most of this HFC network runs over head on poles, tress, building roof tops etc. LCOs knowing every inch of their route verbatim maintain a very high up time. However, this state needs to further improve to ultimately realize a robust and carrier class network with 99.999 % up time.*

**Government has taken cognizance of this and is planning to facilitate the conversion of this access network into near carrier class. Some of the steps which Government can take are :-**

(a) **Phase 1.** *Inside the residential complexes ,i.e. colonies, blocks and wards, LCOs in a*

*combined way can be granted the Right Of Way (ROW) on a revenue share basis. The exact route will be approved by the Residential Welfare Association (RWA) to be completed by the LCOs within a year keeping one duct free per LCO for futuristic FTTH.*

*(b) **Phase 2.** Outside the colonies, MSOs and LCOs in a combined way should convert their cabling into underground, leaving one duct free for futuristic FTTN and FTTK exactly the same way as telcos have done for their edge networks. This should be completed in three years time in class A towns and five years time in rest of the country. The RWAs would then issue the completion certificate after technical clearance is given by local centers of IETE, IE, LMA, BECIL etc applicable to India. After the time period of conversion elapses, monthly heavy penalty should be imposed upon the defaulting MSOs/LCOs.*

**Telcos/CMSPs points like DLCs, hub cell sites or cell sites which have fiber or high capacity back haul can be the obvious points of interconnection for telcos back bone/edge networks with LCOs access networks. Locations where telcos fiber back haul is not available, telcos or MPVNOs can deploy point to multi point WiCiP high capacity license free band radio to interconnect with LCOs node locations as POIs.**

*With the above innovation, countries in emerging markets can have high capacity high speed network available to homes and businesses in quick time and thus deploy multi play infrastructure and services for their economic growth rather than lose precious time.*