White Paper on Technology Trials and Pilot projects to support domestic telecom equipment companies

As we all know, India is now an evolving hub for the Telecom infrastructure and many Indian companies are capable to not only meet the domestic telecom infrastructure requirements but can even export this equipment once it's established in Indian networks to other countries. But it also a known fact that Telecom networks now days are becoming increasingly complex and needs huge investment to come up with world class products and require market access within the country to get larger pie of the global markets. Trails and pilots are needed in case it's going to be deployed in a network for the first time. It has been observed that existing mode of NCNC (No-Cost-No-Commitment) pilots are becoming extremely difficult for companies to do without clear visibility to end deployment opportunity as any trials/pilots involve large amount of tangible and intangible resources to be allotted from the participating company, which is well beyond the means of any Indian companies.

National Digital Communication Policy Document states

a. Creating a Fund for R&D in new technologies for start-ups and entrepreneurs to enable innovation in cutting edge communications, 5G, software, content, security and related technologies and applications, and commercialization of products and services through grants, scholarships, venture capital, etc.
b. Establishing Centres of Excellence including in Spectrum Management, Telecom Security and Next Generation Access Technologies
c. Assisting start-ups and other innovators in filing copyright, patent and
d. trademarks applications
e. Providing financial incentives for the development of Standard Essential Patents (SEPs) in the field of digital communications technologies
f. Creating a framework for testing and certification of new products and services
g. Enabling creation of suitable infrastructure for testing of new products and services with due regard to safety and security concerns

No Cost No commitment is not the strategy:

We have been very much familiar with the phrase “No Cost No Commitment” when we talk about field trials or Pilot projects. This is the strategy which has been mostly adopted till date by many of the end customers. But in the current Telecom scenario with newer technologies like 4G/5G, High end Optical networks, complex switching, and routing functionalities involves huge investment in the R&D phase and the later for Trails/Pilots, which as mentioned above is difficult to meet by any companies other than companies with multi-billion-dollar R&D budgets. Till that scale is achieved by Indian companies we request the following support from the government:

1. Govt must fund pilot projects directly or as part of the pre-qualification for a larger market access tender. USOF scheme to fund pilots up to INR 10 Cr especially for the rural network connectivity must be streamlined and promoted to support domestic product development. There should be a nationally adopted list of Indian companies approved by USOF which can be accessed by any operators (TSPs, ISPs) for developing new technologies for Indian requirements. The participating companies will get access to specific amount of funds after an approval by academic expert committee for doing the Trails/Pilots.

2. Govt must come up project plans for large tenders well in advance and must be shared with the domestic Industry. Government should come up with schemes and policies to implement these projects using domestic infrastructure vendors, which may involve additional R&D and product development funding etc. For example, Bharat net Phase 3 project to provide pervasive 4G mobile broadband coverage in all villages of India must be build using domestic products only, whatever requirements and features are desired must be shared with the industry well in advance and enough time for R&D and sufficient money for the trials should be built into the project.

3. Proof of Concept (POC) must be made part of tenders and RFP to qualify the domestic products (in case an Indian vendor has not deployed the same in any network in India or abroad). Rather than insisting on huge deployment experience, POC must be introduced as a qualifying criterion for newer technologies, which are newly developed, followed by business commitment for the successful vendors.

Infrastructure must be available for the academia or other Govt bodies for Indian companies and startup to do trials and pilots:

Indian academia and other Govt bodies must be made well equipped with all passive infrastructure, test and measurement tools etc. where any of the Indian R&D companies can use this infrastructure at a reasonable cost and get their equipment tested in campus networks and even can get certifications. Following are the typical infrastructure support needed at these institutes:

1. Availability of spectrum to test various wireless devices, Countries such as Japan and Hong Kong have taken a novel approach to spectrum pricing to promote investment in mobile technologies by assigning spectrum at no cost to operators to promote trials. The Indian government should consider assigning all spectrum (which are yet to be auctioned) with no fees to Indian academic institutes where Indian OEM can get their equipment tested.

2. Availability of towers, power with DG backup and other passive infrastructure along with pre-approved permissions to radiate within the campus. The maximum radiated power can be notified so that there is no misuse of this networks.

3. These academia and institutes must have different modes of connectivity. National Knowledge Network (NKN) must further be extended to provide pervasive coverage within the institutes with a capability for students to develop new applications over the top of this networks. This new applications and ventures can be seeded initially as well through research parks in this campus.