

Taking the Internet to Rural Communities: Last Mile Models for the National Optical Fibre Network

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Universalizing Internet service is a foundational part of the Digital India initiative. Fewer than 20 percent Indians currently have access to the Internet, most of them on a very constrained and expensive mobile telephony mode. Government of India has initiated the ambitious National Optical Fibre Network (NOFN) project aimed at reaching fibre to every panchayat in India. ***However, there seems to be a conspicuous policy blind-spot regarding how connectivity will be carried from this NOFN back-haul to people's homes, local businesses, and local institutions like schools, hospitals and community centres.*** The current policy belief is that there is such immense demand for Internet connectivity that private players, whether state/ national level companies or local entrepreneurs, will quickly grasp the NOFN opportunity to build viable retail models. Facts on the ground however belie such hopes.

Rapid market-led spread of mobile telephony and of cable/satellite TV in rural India colours most views about the expected dynamics in relation to the Internet, especially once the NOFN back-haul is available in near vicinity. The reality both on the supply and the demand side is much more complex, and merits a closer look in terms of the need to promote the right policies, and technical and business models. ***Even in rich countries like the US it was found that in thinly populated areas private provisioning of broadband mostly fails to universalize an appropriate level of service.*** Whereas rapid roll-out of broadband funded by local governments without waiting for demand build up leads to huge all-round economic and social gains. There is a burgeoning community broadband movement in the US, which is being backed by the federal telecom regulator, and by federal legislation. If a rich country like the US, with an entrenched ideology of private sector provisioning wherever possible, had to take to community and local governments run last mile models, it is highly unlikely that a county like India can universalise broadband connectivity, or even make substantial progress in that direction in rural areas, with purely private provisioning based last mile models.

It is important to treat the issue of last mile connectivity as being rather distinct from the back-haul issue, being handled by the NOFN project. Last mile provisioning has very different kind of challenges, and requires a different kind of committed thinking, and policy, business and technical models. It may be more appropriate to anchor such thinking and action around the local authorities (panchayats), with possible consulting assistance from a state level agency, than have infrastructural agencies laying the NOFN concern themselves with the last mile issue as well. In the expected conditions of market failure in most rural contexts, some amount of public investment and other kinds of public involvement will almost certainly be required also in the last mile space (as being made by the NOFN project in the back-haul). Learning from community broadband movement in the US and other countries will be useful in this regard.

The workshop will examine the policy and institutional requirements for universalizing broadband in India, It will explore different technology options that are available. ***Various community-based models, ranging from local governments directly providing connectivity, to their partnering with local entrepreneurs, to relying on private actors licensed by local governments, will all be considered.***