Dial-Up in India: Needs, Demand and Regulation

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(Invited Presentation)

Extended Abstract

Since the mid 1980's the number of personal computers, workstations, mini and main-frame computers in use in India has been sharply growing at over 30% a year. They are being increasingly used for networking over distances in India and overseas. The applications range from on-line international data-base access, E-Mail and EDI to tele-processing. A variety of modems and PCBs for using PCs for sending /receiving FAX and telex messages are being made and sold so that a PC becomes a multi-functional terminal.

The first country-wide network, INDONET, over leased analogue phone lines was established in 1984 but its growth and economic affordability was unsatisfactory both because of the restrictive rules of the Department of Telecom (DoT, the telecom operator) and the slow-speeds (1200 to 2400 bps) realisable for error-free transmissions. The National Informatics Centre (NIC) established a VSAT based network over a 500 site, country wide network with international connections (eg. INTERNET, MCI Mail etc) but was not allowed interconnection with the domestic public-switched telephone network (PSTN). The Videsh Sanchar Nigam Limited (VSNL, India's sole international carrier) has commissioned a gateway packet switch in December 1988 to which domestic data users for international destinations could be connected through PADs, leased lines and dial-up modems.

Over the domestic telecom network, which is mainly analog, transmission speeds rarely higher than 9.6 Kbps are possible. However, in the last three years digitalization of the inter-city transmission network is going on rapidly and data circuits for 64 Kbps speeds are becoming available between several important cities.

The DoT has also built a packet switched public data network (PSPDN) called I-Net, using terrestrial facilities. It is accesible from another of DoT's VSAT based Remote Area Business Messaging Network (RABMN). Dial-up access to I-Net from the PSTN is available. A number of country-wide private closed user group VSAT based data networks with independant and shared hubs are being permitted on a case-by-case basis. The restrictive regulatory action of DoT is slated to undergo extensive and rapid change to be more permissive and pro-active and customer focussed. The process and form are under discussion.

In the meanwhile , permission or no permission, the PSTN is being used by private enterprises for a roll-out of services like E-Mail and on-line database access. Store and forward fast Fax is likely to emerge in the next few months. The Internet usage is growing. The prices charged to the customer vary. Licensed operators of data services having to pay large sums as license fees and revenue share see the DoT actions as restricting the growth of non-voice, data usage of the domestic telecom network. The large off-shore software developers based in India for customers in the USA and Europe and financial and banking sectors (which are now de-monopolised) and non-state-owned enterprised are the main drivers for regulatory changes, for leap-frogging telecom data networks for bringing down prices and for liberal interconnection of networks. (Interconnections even now are in ingenious way being effected but are costly). The liberalised, competitive economy and industry with global linkages that is State Policy would promote telecom "deregulation" too.

Author

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