



ENABLING BROADBAND GROWTH

BROADBAND POLICY 2004

- APPRECIATES THE ROLE OF BROADBAND IN ECONOMIC GROWTH
- TARGETS SET AS:

YR ENDING	BB SUBS.	INTERNET SUBS.
2005	3 mn	6 mn
2007	9 mn	18 mn
2010	20 mn	40 mn

BROADBAND POLICY 2004 (contd.)

- SEVERAL POSSIBLE ACCESS TECHNOLOGIES WERE IDENTIFIED
- CONSEQUENTLY LAST MILE COPPER LOOP WAS NOT CONSIDERED TO BE A BOTTLENECK FACILITY

BROADBAND POLICY 2004 (contd.)

- ACTUAL ACHIEVEMENT BY END 2007 WAS 3.13 mn (ABOUT 1/3rd OF TARGET)
- END MARCH 2008 ACHIEVEMENT 3.87 mn AND JUNE DATA SHOWS 4.5 mn CONNECTIONS
- TRAI IDENTIFIES OVER 65 MILLION MOBILE SUBSCRIBERS AS POTENTIAL BB USERS. NONE TAPPED SO FAR AS POLICY DOESN'T SUGGEST SPECIFIC STEPS

BROADBAND POLICY 2004 (contd.)

- BROADBAND TO INTERNET RATIO WAS 1:20 AT THE LAUNCH OF THE POLICY
- IF WIRELESS INTERNET USERS ARE INCLUDED, THE RATIO CONTINUES TO BE 1:20
- EVEN IF COPPER LOOPS CAPABLE OF HANDLING BROADBAND ARE FULLY UTILIZED , EVEN THE TARGET SET FOR 2007 CAN NOT BE MET

WHAT IS HOLDING BACK BB GROWTH?

ELEMENTS NEEDED FOR HEALTHY
GROWTH OF BROADBAND ARE:

- LAST MILE ACCESS
- CONTENT
- ILLITERACY
- AVAILABILITY OF RIGHT CUSTOMER END
DEVICE

ACCESS

WIRELINTECHNOLOGIES:

COPPER LOOPS –

- ESTIMATED 7-8 mn COPPER LOOPS CAN BE USED FOR PROVIDING BROADBAND CONNECTIONS. ALMOST ALL WITH BSNL AND MTNL WHO HAVE NOT BEEN ABLE TO ROLL OUT FAST ENOUGH TO KEEP PACE WITH DEMAND

ACCESS (contd.)

COPPER LOOP (contd.)

- PRIVATE ISPs HAVE BEEN HANDICAPPED IN NOT HAVING ACCESS TO COPPER LOOPS IN THE ABSENCE OF LOCAL LOOP UNBUNDLING. THUS FULL ADVANTAGE OF MULTIPLE PLAYERS TO PROVIDE BB CONNECTIONS NOT EXPLOITED

ACCESS (contd.)

COPPER LOOP (contd.)

- EXISTING OWNERS HAVE NOT UTILIZED MODERN TECHNOLOGIES SUCH AS OFC BASED MASN_s TO INCREASE THE NUMBER OF COPPER LOOPS WHICH COULD BE UTILIZED FOR BROADBAND CONNECTIONS

ACCESS (contd.)

WIRELINTECHNOLOGIES (contd.)

Coaxial Cable

- THOUGH THERE IS EXTENSIVE UTILIZATION OF Coaxial Cable FOR CABLE TV, THE QUALITY OF NETWORK IS VERY POOR AND THE EXTENT TO WHICH IT CAN BE USED FOR RELIABLE ACCESS IS THEREFORE LIMITED
- ADDITIONAL INVESTMENTS ARE NOT COMING FORTH FOR NETWORK QUALITY IMPROVEMENT AS BUSINESS CASE IS NOT STRONG WITHOUT VOICE REVENUE. VOICE TELEPHONY LICENSE ENTRY FEE IS TOO HIGH FOR THE FRAGMENTED NATURE OF OWNERSHIP OF Coaxial Cable INFRASTRUCTURE

ACCESS (contd.)

WIRELESS TECHNOLOGIES:

- THERE ARE ANY NUMBER OF WIRELESS TECHNOLOGIES (SOME MATURE AND SOME MATURING) WHICH ARE AVAILABLE TODAY FOR BROADBAND ACCESS. A NUMBER OF THEM HAVE BEEN LISTED IN THE BROADBAND POLICY DOCUMENT ALSO
- BROAD CATEGORISATION WOULD BE BWA AND 3G THOUGH ITU HAS NOW GIVEN THE SINGLE NOMENCLATURE IMT

ACCESS (contd.)

WIRELESS TECHNOLOGIES (contd.)

- WHILE VARIOUS TECHNOLOGIES ARE AVAILABLE OR BECOMING AVAILABLE, THE KEY ISSUE IS SPECTRUM - IDENTIFICATION, ITS AVAILABILITY AND ACTUAL ALLOTMENT

CONTENT

- DIRECT RELEVANCE AND INTEREST TO USERS
- APPLICATION PLATFORM FOR E-COMMERCE AND M-COMMERCE
- ENTERTAINMENT
- INTERACTION WITH GOVERNMENT AND LOCAL BODY ADMINISTRATION

FINANCIAL CONSIDERATIONS

- FINANCIAL CONSIDERATIONS COVER THE COST OF THE OFFERING BUT MORE IMPORTANTLY, COST-BENEFIT OF BROADBAND THROUGH THE COST-BENEFIT OF USEFUL CONTENT

ILLITERACY

- ILLITERATE FRIENDLY ICT PROGRAMMES NEEDED FOR SPREAD OF BROADBAND IN TO THE RURAL AREAS AND THE HINTERLAND

CUSTOMER END EQUIPMENT

- AVAILABILITY OF RIGHT CUSTOMER END EQUIPMENT AND AT THE RIGHT COST
- PCs MAY NOT BE THE ULTIMATE SOLUTION
- MOBILE HANDSET COULD BE AN ATTRACTIVE PREPOSITION

WHAT NEEDS TO BE DONE?

- ACCESS NEEDS TO BE MADE EASIER AND THEREFORE:
 - COPPER LOOP ACCESS TO PRIVATE OPERATORS THROUGH LLU
 - CLEAR 3G (INCLUDING BWA) POLICY TO BE ANNOUNCED WITHOUT ANY FURTHER DELAY AND AUCTIONS CARRIED OUT FOR SPECTRUM
 - VISIONARY APPROACH TO MAKE MORE SPECTRUM AVAILABLE FOR EXPLOITATION OF ANY OF THE LARGE NUMBER OF WIRELESS BASED BROADBAND ACCESS TECHNOLOGIES

WHAT NEEDS TO BE DONE? (contd.)

- GOVERNMENT AND LOCAL BODIES TO SWITCH OVER TO E-TRANSACTIONS AND OFFER INCENTIVES FOR THE USE OF E-APPROACH. THIS WILL DEMONSTRATE THE EFFICIENCY ENHANCEMENT BENEFITS OF BROADBAND TO THE MASSES WHO IN TURN WILL TRY TO USE THEM FOR THEIR OWN DAY TO DAY ACTIVITIES

WHAT NEEDS TO BE DONE? (contd.)

- IPTV AND MOBILE TV GUIDELINES NEED TO BE ANNOUNCED QUICKLY. ONCE AGAIN A KEY FACTOR WILL BE ACCESS AND FOR THIS
 - INCENTIVISATION OF COPPER CABLE AND Coaxial Cable INFRASTRUCTURE UPGRADATION
 - MAKE 700 MHz BAND SPECTRUM CHANNELISATION PLAN AND CARRY OUT EARLY AUCTION FOR USE BY MOBILE TV OPERATORS WHILE RESERVING ENOUGH SPECTRUM FOR IMT OPERATIONS AND DIGITAL BROADCASTING



THANK YOU