TECHNOLOGY FUTURES INC.

Sample Track Record

YEAR/ TECHNOLOGY	TFI FORECAST THEN	SITUATION THEN	COMMON WISDOM THEN	ACTUAL OUTCOME
2003 Fiber to the Premises	14% of Households to be passed by FTTP in 2008 (Middle Scenario)	No Announced Plans by Major ILECs	FTTP Too Expensive	11% of Households passed by FTTP in 2008
2003 Broadband Subscribers	52% of Households will Subscribe to Broadband by 2007	14% of Households Subscribe to Broadband	Broadband is for Higher Income Consumers	58% of Households Subscribe to Broadband in 2007
2001 Wireless-Only Households	30% of Households will be Wireless-Only by 2007	Wireless-Only Households Very Rare	Wireless-Only is Just a Niche Market	16% of Households are Wireless-Only in 2007
2001 Residential Access Lines	Residential Access Lines to Fall to 85 Million by 2007	Access Lines Stable at 122 Million	Small Decline Possi-ble due to Loss of 2nd Lines to Broadband	Residential Access Lines in 2007: 84.5 Million
2001 3G Cellular Subscribers	7.5% of Cellular Subscribers will be 3G by 2007	Neither 2.5G nor 3G Deployed Yet	3G Risky due to High Investment and Wireless LANs	Estimated 10.6% of Cellular Subs are 3G in 2007
1999 Internet Bandwidth	Annual Growth Rate Below 100% by 2003 (Base Case)	Recent Annual Growth Rates of 200% or More	Let’s Drastically Expand Fiber Networks!	Annual Growth Rate in Mid-2000s: 50-60%
1998 Demise of Analog Cellular	Last Analog Subscriber Most Likely in 2008	88% of Subscribers Still Analog	Digital will be Concentrated in Metro Areas	Last Analog Subscriber March 2008
1997 Broadband Subscribers	37% of Households will Subscribe to Broadband by 2007	Residential Broadband Unavailable	56 Kb/s Dial-up is Good Enough for Consumers	58% of Households Subscribe to Broadband in 2007
1997 Premium Broadband	18% of Households will Subscribe to Premium BB (~6Mb/s) by 2007	No Residential Broadband at Any Speed	See Above	25% of Households Subscribe to Premium in 2007
1997 Very Highspeed Broadband	1%-2% of House-holds will Subscribe to VHS BB (>10Mb/s) by 2007	See Above	See Above	1.7% of Households Subscribe to VHS BB in 2007
1995 HDTV	28% of Households will have an HDTV by 2007	HDTV Intro Still 5 Years in Future	Success of HDTV Uncertain	30% of Households have an HDTV in June 2007
1995 Local Exchange Access Lines	Switched Access Lines to Peak in 2000	Access Lines Growing at3% Annually	Continued Growth due to 2nd Lines for Voice and Data	Switched Access Lines Peak at 187.3M in 2000
1992 Online Households	17% of U.S. Households Will Be Online by 1997	Less Than 1% of Households Online	Videotex/Online Services “Dead on Arrival”	20% of All HHs Online in 1997, Over 40% by 2000
1991 Electronic Image	Most Computer-based Images Sent Electronically by 2000	Most Images Sent by Hard Copy, Tape, Diskette or Fax	Varied	Internet/WANs Handle Wide Variety of Imaging
1990 Digital Communi-cation Services	Mass Market for Digital Communication Services will Develop in 1990s	Severe Problems Rolling Out ISDN	No Need for Digital; Analog Modems Okay for Mass Market	1-2 Million XDSL and Cable Market Modems in 2000 and Rapidly Growing
1989 SONET	40% of LEC Fiber Circuits on SONET in 1997	SONET in Technical Field Tests	SONET Promising but Unknown	40% of LEC Fiber Circuits on SONET in 1997
1988 Digital Loop Carrier	15% of Access Lines on Fiber Digital Loop Carrier by 1996	1% of Access Lines on Fiber Digital Loop Carrier (DLC)	DLC Only Useful for Long Loops (<10% of Access Lines)	15% of Access Lines on Fiber DLC in 1997
1987 Wireless vs. Wireline	Wireless Will Compete With Wireline by the Late 1990s	U.S. Wireless Subscribers Under 1 Million	Wireless Is Strictly a Complement to Wireline	100 Million U.S. Sub-scribers in 2000. Wireless for Wireline Begins
1987 Cellular Prices	Cellular Total Monthly Cost (250 Minutes) Down to $40-60 by 1997	Total Monthly Cost: $145	Cellular Inherently Expensive	$30 Monthly for 250 Minute Plans Common
1986 Local Digital Switching	All Local Digital Switching by1997-2001	11% Digital, 60% Analog ESS & Growing	Few Analog ESS Retirements Before 2000	92% Digital in 1998; 98% by 2000