

Telecom Services: Broadband
Highlights of Research Results

Telecom Policy Review Panel
September 2005



Disclaimers

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- The study was conducted in March 2005.
- The work was funded by the Institute for Competitiveness and Prosperity. (<http://www.competeprosper.ca/>)
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About the Presentation

- The purpose of the presentation is not to provide specific recommendations but to offer areas where further discussion can be initiated.

Broadband Definitions

- Broadband is high speed internet access with 200kbps data transfer speeds, or more, in at-least one direction.
- Broadband access is delivered to the end user via:
 - DSL
 - Cable Modems
 - Wireless Networks
 - Satellite Access
 - Broadband over power lines (BPL)
- The major players providing broadband access can be categorized as:
 - ILECs (Bell Canada, Telus etc)
 - CLECs & Resellers (Primus Communications, Futureway Communications etc)
 - Cable Companies (Rogers Cable, Shaw Cable, Cogeco etc)
- Only the most prevalent technologies were considered when doing intensive market / industry level analysis including:
 - DSL
 - Cable Modem

Issues Addressed in Presentation

- Comparison between Canadian and US regulatory regimes.
 - Attitudes
 - Policies
- Points to consider for increasing innovation in broadband.

Competitiveness

- Traditional definition competitiveness
 - A major indicator of competitiveness of many industries depends on structural concentration.

Q4 2004 (Estimates from Point Topic)	Herfindahl-Hirschman Index (HHI)	C4
Canada	1980	80.8%
US	1035	56.0%

*Typically, a **HHI** number above 1,800 is a concentrated marketplace (i.e. not competitive).*

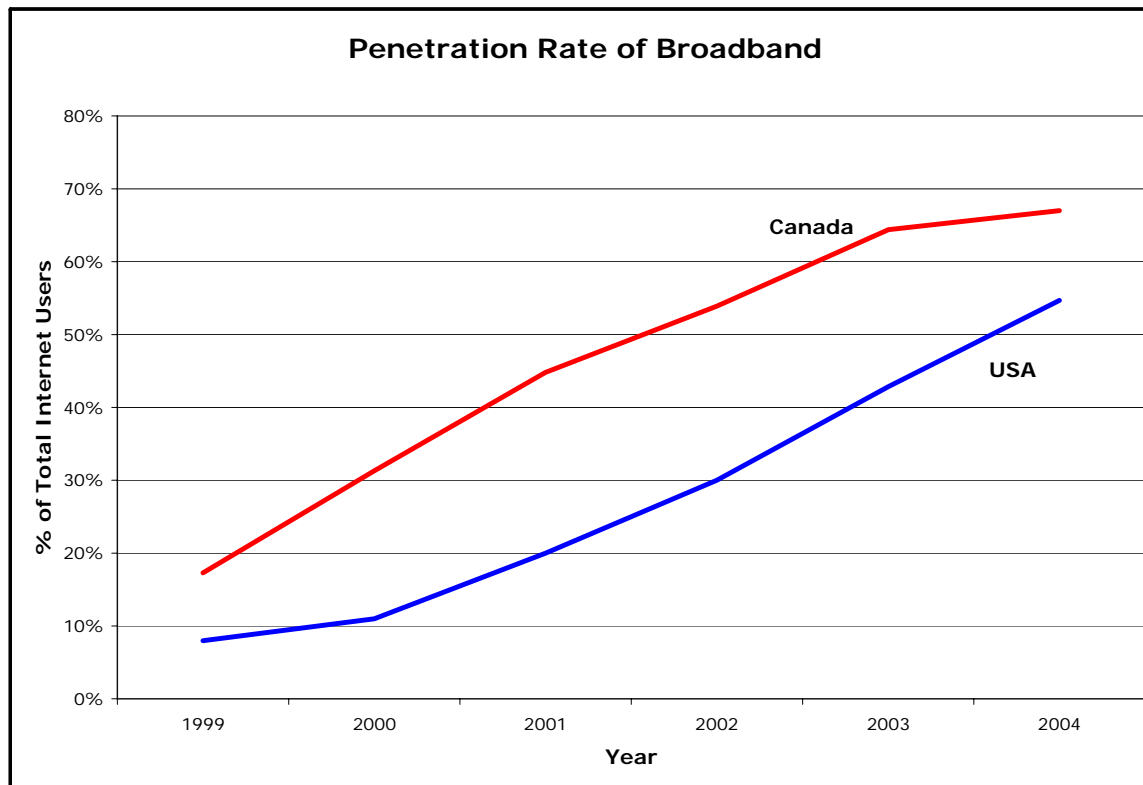
C4: *Four-firm concentration. The market share of the top 4 firms in this industry.*

Issues with Structural Concentration

- These traditional definitions miss out on the innovation that is required in order to satisfy the demand of consumers.
 - Triple-play: Consumers are looking for content. Firms are looking at delivering phone, internet and TV from a single pipe.
- For the purposes of this project, the definition used is: Competition is “for” the market, not “in” the market
 - Based on study done for the C.D. Howe Institute “Dynamic Competition in Telecommunication Services”.

Penetration Rates

- Commonly used metric for penetration rates:
 - Penetration of high speed users vs. dial up users.



This metric can be misleading and leaves out important information which will be covered from here-on-in.

Supply vs. Demand

- In order to study and compare Canadian and US broadband services. The supply and demand were separated.
- Definitions:
 - Supply is the percent of the population which have access to at least one broadband provider.
 - Demand is the percent of the population with access and who actually subscribe.
- The following slides present both researched and calculated data which is required in order to distinguish supply from demand.

Supply vs. Demand

Canada		2.6 People per household				Stats Can	
	2000	2001	2002	2003	2004E		
Population	31,338,601	31,626,916	31,917,883	32,211,528	32,507,874	<i>CIA Fact Book</i>	
% Population with Access	75%	85%	85%	86%	87%	<i>CRTC Competition Report</i>	
# Population with Access	23,503,950	26,882,878	27,130,201	27,701,914	28,281,850		
Total Number of Subscribers	1,355,000	2,558,000	3,527,000	4,513,000	5,405,465	<i>CRTC Competition Report</i>	
Total Broadband Availability	9,039,981	10,339,569	10,434,693	10,654,582	10,877,635		
% of People with Avail. & Sub.	15%	25%	34%	42%	50%		
Total Population that Subscribe	11%	21%	29%	36%	43%		
USA		2.57 People per household				Census Bureau	
	June	2000	2001	2002	2003	2004	
Population		282,487,684	285,086,570	287,709,367	290,356,293	293,027,571	<i>CIA Fact Book</i>
% Population with Access		75%	84%	89%	94%	96%	<i>Accelteon Research</i>
# Population with Access		212,007,031	240,688,981	255,932,953	272,449,245	282,185,551	
Total Number of Subscribers		3,121,653	7,812,375	13,984,287	20,645,769	30,088,091	<i>FCC High Speed Report</i>
Total Broadband Availability		82,493,008	93,653,300	99,584,807	106,011,379	109,799,825	
% of People with Avail. & Sub.		4%	8%	14%	19%	27%	
Total Population that Subscribe		3%	7%	12%	18%	26%	

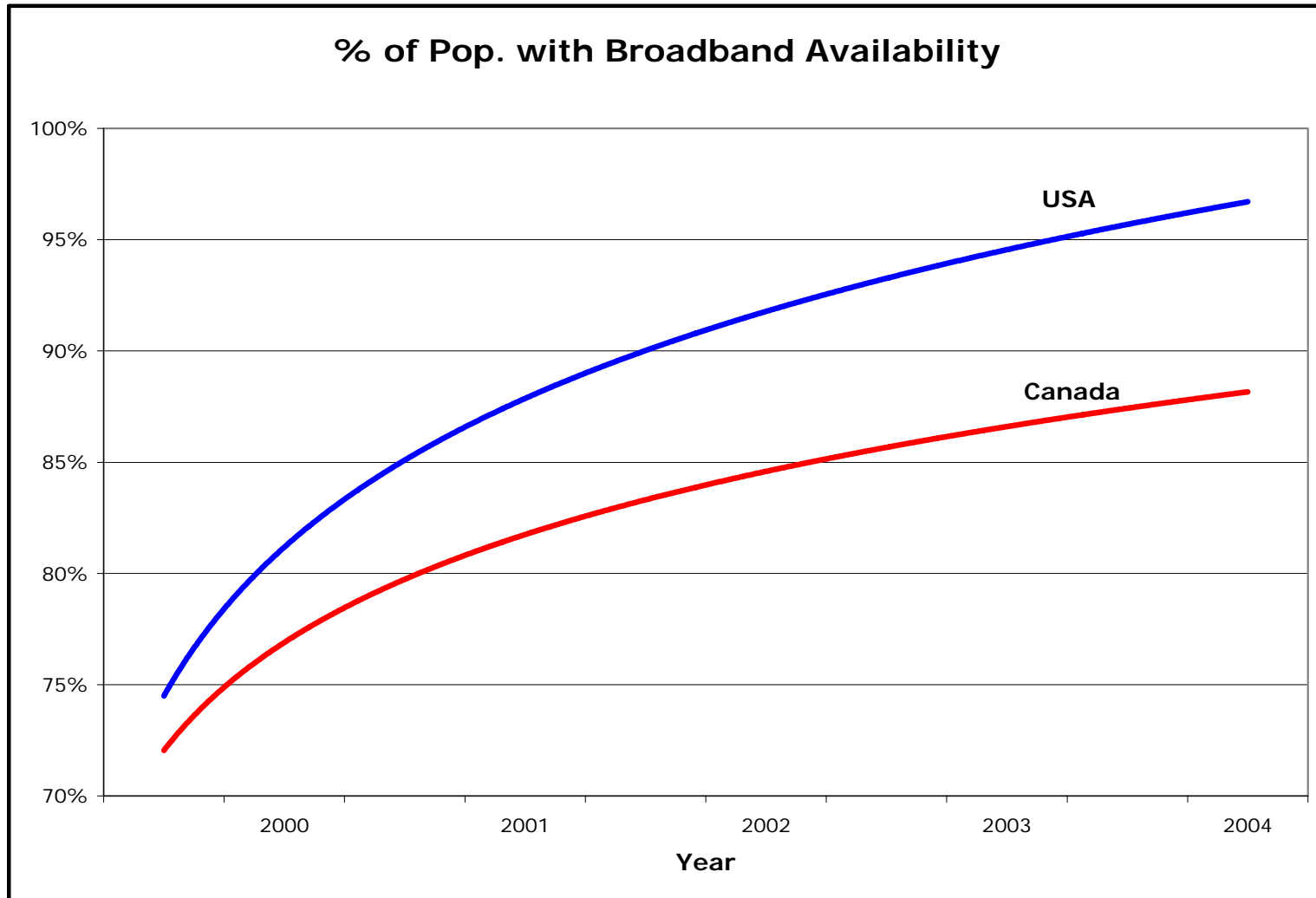
Note: % Population with Access for USA has been verbally corroborated with James Eisner co-author of High-speed Services for Internet Access from the FCC Wireline Competition Bureau.

Supply vs. Demand

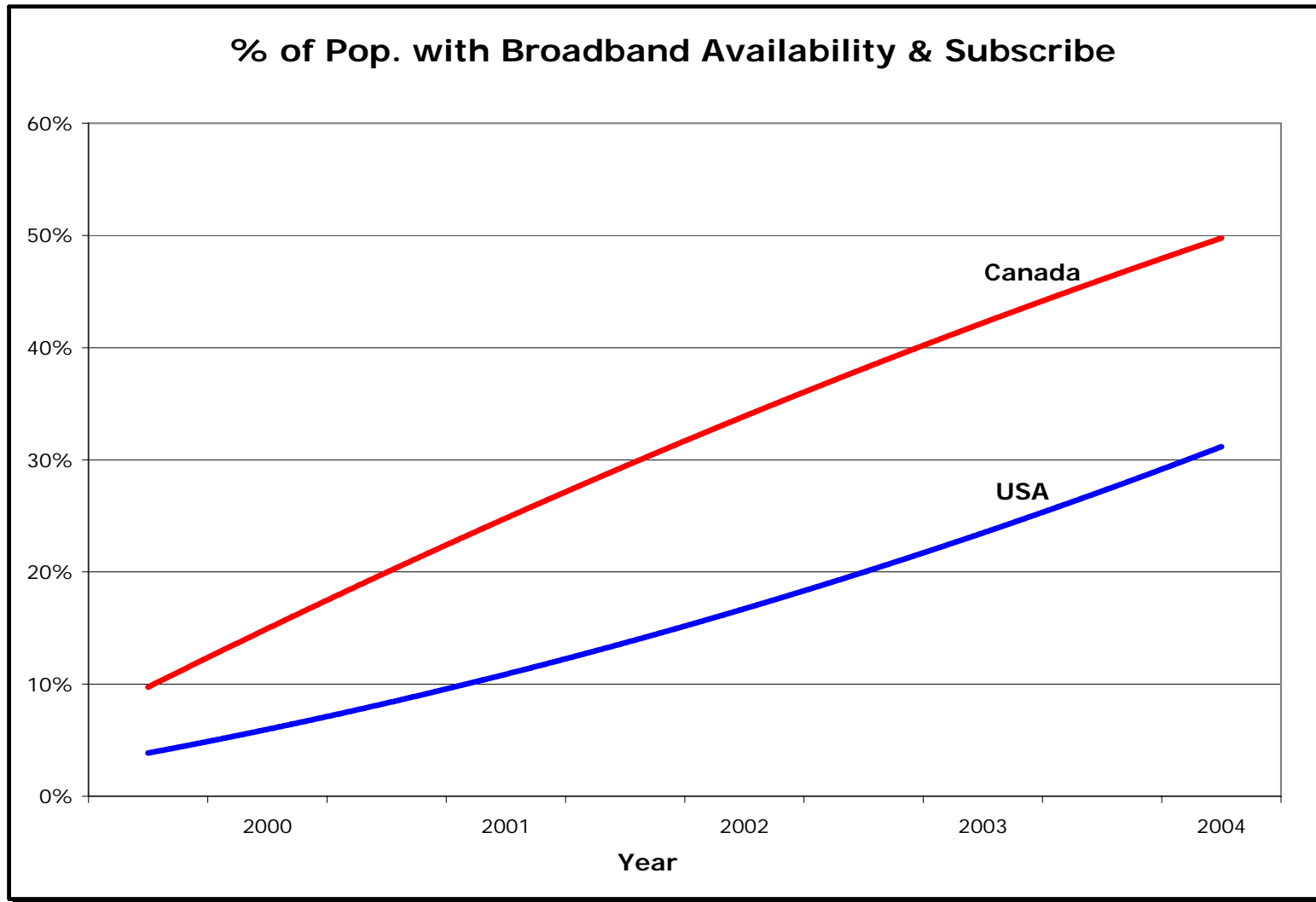
2004	Percentage of population with access to broadband	Percentage of population with access & subscribe to service	Total percentage of population with broadband subscription
CANADA	87%	50%	43%
US	96%	27%	26%
%points (CAN –US)	- 9%	23%	17%

- Thus, a greater number of people in the US have the ability to connect with a broadband service than Canadians do. However, Canadians are more likely to subscribe.
- The explanation of the demand side of the phenomenon is beyond the scope of the presentation.

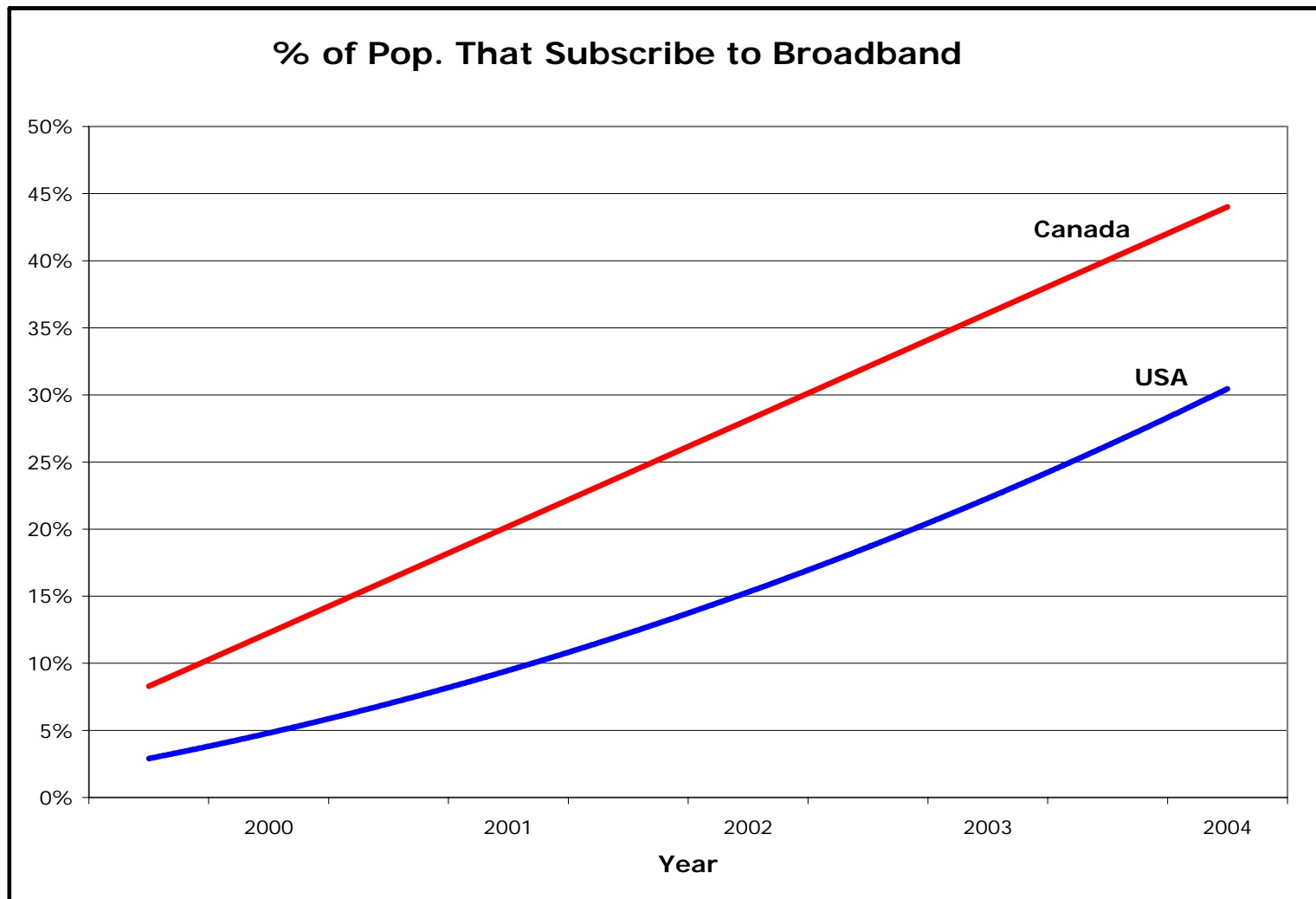
Supply Trends



Demand Trends



Total Population With Broadband



Regulatory Environment

- Both the CRTC (Canada) and the FCC (USA) have forborne from regulating this sector.
 - Price regulations do not exist at the consumer level (Maybe present at the State Public Utility level)
 - Regulation still is prevalent for network access. (i.e. unbundling)

Regulatory Environment – Summary of Key Issues

Issue	CRTC / Industry Canada	FCC / State Utility
ILECs must provide network access to CLECs & Resellers	ILECs must provide unbundled network access	ILECs must provide unbundled access to high frequency portions
Regulation for Network Access Charges	CRTC sets network access price for each ILEC (Bell: \$22/month ADSL)	FCC provided guidelines for state utility to set the price based on standard cost components.
CLECs must provide network access to ILECs	Yes	Unknown
FTTH / FTTP / FTTN / FTTC	No overall guidance. Decision: case by case	ILECs are not required to give FTTP access
Cable Cos. must provide network access to TPIA	Network access mandated at 25% below the lowest list price	No known regulation mandating network access
Emerging Technologies: WiMax / BPL	No specific guidance Stance: encourages competitive technology Access Issues critical.	Wireless: Unknown BPL: No restrictions or access requirements
FDI Restrictions	Foreign Ownership Max: 20% of operating company 1/3 of holding company 46.7% effective cap	No Restrictions. Possible blockage due to Exon-Florio provision if viewed as a threat to security
VoIP	Only regulates ILECs (From recent CRTC ruling)	Ruling: Not under FCC jurisdiction

Comparisons

- High level of competition “in” the market in both US and CAN.
- View points:
 - CRTC: affordable access; demand side focus.
 - FCC: availability; supply side focus.
- Attitude towards innovation:
 - CRTC: punish ILECs & promote competitors.
 - Not effective due to FDI restrictions limiting capital flow.
 - FCC: innovation drives sector growth.
- Regulatory body operating behaviour:
 - CRTC: Reactionary, wait-and-see if someone complains.
 - Difficult for companies to make long-term investments.
 - FCC: Forward looking, mandate to foster innovation.
- Geographical Boundaries in the US lead to a favorable network access pricing environment for the players.
 - FCC allows each state utility to mandate network access pricing.
 - CRTC mandates network access pricing for each ILEC.
 - Each province usually has only one major ILEC.
 - Canadian provincial geography does not allow for profitable homogenous pricing.

Conclusions

- Delays and no clear framework/leadership from CRTC stifles innovation and hinders investment from larger players, especially ILECs.
 - Innovation leading to better service requires a regulatory body who is efficient in making decisions and allowing companies to receive maximum return on their investments.
- Next wave FTTH or FTTP is induced in the US by removing unbundling requirements to resellers.
 - Panel should investigate if removing these requirements is feasible in Canada.
- Focus should be on quality of competition, not number of competitors.
 - Larger players (ILEC's vs. Cable companies) are fighting for one-pipe to deliver phone, internet and TV. Thus, no one player has the incentive to be predatory in pricing, nor can afford to undercut competition anymore.

Further questions or feedback



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