Broadband Changes Everything

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CCTA

• Canadian Cable Telecommunications Association (CCTA)
  • Represents 78 cable companies
  • CCTA’s primary role is to communicate the industry views to regulatory bodies, governments, and other stakeholders
  • CCTA helps members to promote standards of excellence, assess new technology and business opportunities and advance the development of services to Canadian consumers
  • CCTA recently changed its name to reflect shift from broadcasting to broadband

Industry Background

• Structure
  • 4 large companies
  • Over 80 smaller companies
  • $4.5 billion in revenues
  • Over 11.6 million homes passed
  • Over 7.5 million cable television customers
  • Over 1.6 million digital cable subscribers
  • Over 3.1 million high-speed internet customers
  • Digital telephone launched 2005
Cable Industry Services

- Regulated under both Broadcasting & Telecommunications Acts
- Program distribution remains cable’s core service
  - Basic cable accounts for less than half of all cable revenues
  - Growth in distribution revenues driven by digital cable
- Broadband internet is cable’s fastest growing segment
- Cable telephony represents a new opportunity

More than TV

- Cable industry engaged in 5 year/$7.5 billion digital transformation
- Grown from simply video distributors to suppliers of advanced media and communications on demand
- IP is the most recent stage in a communications revolution that began 25 years ago
- Transformation accelerating from VoIP today to IPTV tomorrow

“Broadband by Cable”

- The Goal:
  - Accelerating the transition to fully digital broadband cable networks to be the preferred choice of consumers for all their entertainment, information and communications needs.
Canadian Internet Facts

- Canada has one of the highest adoption rates of broadband internet in the world
  - 5.7 million subscribers in total
  - 44% of all households and two-thirds of internet homes
- Cable companies provide broadband internet to more than 3 million Canadian homes
- Nearly 11 million Canadian homes have access to cable high-speed
- Universal broadband a challenge in remote areas

Digital Divide is Disappearing

- Since its introduction in 1996, cable broadband subscription has grown to over 3 million and is accessible to nearly 11 million homes
- Broadband prices range from $20 to $45 per month (13 to 30 Euros)
- Deployment of satellite-based initiatives will extend broadband coverage to all homes

Digital / IP Changing Everything

- Telecom is...
  - Death of distance
  - Commodity voice
  - Integration with IT
  - Mobility
- Broadcasting is...
  - Content on demand
  - Personalization (PVR)
  - Integration (IPTV)
  - Portability
- Retail is...
  - Digital appliances/networking
  - Hardware to software
  - Accelerated product cycle
  - Low margin
  - Personalization
  - Portability

Sources: Statistics Canada, CCTA
2005 figures are estimates
### Changes in 10 Years

**Video**
- DTH
- Digital cable
- VOD
- HDTV
- PVR

**Internet**
- Broadband
- Music downloading
- IPTV

**Telephony**
- Digital cellular (PCS)
- IP telephony
- VDSL

- IP will accelerate change

### Cable Convergence

- Super fast “big broadband” internet with real-time DVD quality
  - Faster internet and more capacity than competitors
- Sophisticated HD video experiences and thousands of virtual channels on-demand/in any language
  - Emphasis on personalization and on-demand service
- Full service communications alternative that adds video and mobile functionality to voice and data services
  - Bundles, choice and flexibility
- Cable has made significant investments to make transformation to suppliers of video, internet and phone services

### Convergence is Disruptive

- Content and services can be delivered over multiple platforms
  - Telco/cable competition
  - Satellite/wireless
  - Applications-based services (VoIP/IPTV)
- Software versus networks
  - VoIP (changes cost structure)
  - IPTV (movies online)
  - Desktop media centres
Convergence Disrupts Regulation

- Consumers use technologies to bypass controls
  - Satellite signal theft (black market)
  - Ad avoidance through PVR
  - Impact of peer-to-peer networks on intellectual property rights
- Networks can be broadcast, internet or telecom on demand

Barriers to Convergence

- Digital cable (Packaging flexibility, more services, digital migration)
- Video-on-demand (Rights)
- HDTV (Need content)
- Digital video recorders (Marketing)
- Broadband internet (Investment)
- Telephony (ILEC market power)
- Interactive TV (Standards)

The Crux of the Debate

- Rolling out advanced services from broadband to HDTV requires significant investment
- Need an environment that stimulates revenue growth and investment
- Public policy must place more emphasis on competition and consumer demand to produce innovative services
What Government Can Do To Accelerate the Digital Transition

- Create the proper incentives to invest in digital capacity (foreign ownership, tax credits, regional grants, access to rights of way/support structures)
- Reduce regulatory constraints on use of capacity to facilitate digital migration and allow for the internal generation of funds (new services) to finance transition
- Create the right environment to compete (rules for IP telephony, packaging flexibility)

Policy Challenges

- Stimulating investment in broadband
  - Does unbundling reduce investment?
    - Do application independent services reduce bottleneck issues?
    - Do we need to reconsider essential facilities test?
  - Ownership/investment control
    - Canadian ownership restrictions may promote culture at cost of competitiveness

Policy Challenges

- Minimizing regulation of the internet
  - Can solutions to spam be legislated?
  - Conflict between privacy/security
  - Responsibility for restricting hate/porn
  - Costs of compliance with internet regulation
Policy Challenges

- Maintaining content protections in broadcasting
  - Emergence of black/grey market
  - IPTV
- Resolving intellectual property issues
  - Copy protection standards
    - Impact of DRM on rollout of HDTV, PVR, VOD
  - ISP liability
    - Notice and takedown in peer to peer environment

Policy Challenges

- Promoting facilities-based competition
  - Regulation of ILECs/CLECs
    - Does VoIP technology change nature of market power test?
    - Application dependent/independent
    - Targeted pricing

Regulation of Voice Services That Use Internet Protocol

Process
- CRTC initiated public process in April 2004 and offered preliminary views:
  - P2P/Skype–type services not touching the public telephone network need not be regulated
  - Services provided and used as local service and that rely on North American numbering plan resources and connectivity to PSTN should be regulated in same manner as other local services.
Regulation of Voice Services That Use Internet Protocol

Decisions 2005
- With respect to 911 issues, CRTC ordered that fixed, non-nomadic services must provide 911 service and that industry committee convene to address technical implementation issues
- With respect to other matters, the CRTC held to its preliminary view on the basis that IP-based local voice services were in all material ways being packaged, promoted and sold as local voice services

Regulation of Voice Services That Use Internet Protocol
- All new entrants are free from economic regulation.
- Incumbent telephone companies are free to provide VoIP services
- Incumbents (who, collectively, hold between 91% of business and 98% of residential lines) must seek prior approval of pricing and cannot price below cost
- Resellers can price as they see fit and without prior approval and with the exception of 911 and contribution to universal service
- Broadband network providers cannot block or degrade access to competitive VoIP services

Regulation of Voice Services That Use Internet Protocol
- More significantly, the CRTC had initiated a process that would set the stage for the reduction and ultimate removal of incumbent price regulation
- The CRTC has committed to delivering this framework as early as March 2006
- On evidence of sustainable competition (including from IP-based local services), incumbents would be relieved of pricing obligations for local services, regardless of technology
Regulation of Voice Services That Use Internet Protocol

Cable Industry View
- Local voice is the last remaining monopoly in the Canadian telecommunication market
- The Decision provides for a light handed approach and balances the requirement for innovation and consumer choice with the need to safeguard emerging competition
- The CRTC has set out a roadmap to reduce or remove incumbent regulatory burdens
- The right decision for the right time

Government Telecommunications Policy Review
- To develop modern telecommunications framework for Canada
  - New regulatory framework adaptive to technological change
  - Access to modern and affordable services
  - Expanded use of ICT to drive economic growth

Telecom Review – Cable Position
- Promote sustainable competition and convergence in all markets
- Deployment of broadband networks on a competitive basis key to growth and connectedness agenda
- Investment in facilities should be encouraged
- Resale of incumbent facilities based on commercial negotiation
- Efficient interconnection critical for the development of advanced network services
- Access for end users
The Benefits of Fully Digital, Interactive, Broadband Cable Networks in All Communities Across Canada

- A competitive alternative for all consumers entertainment, information and communications needs (digital home)
- Gateway to regional/economic growth bringing e-commerce and access to global markets to large and small communities across Canada
- Community access to government and social services, tele-health and education on-line
- Abundant channel capacity and new interactive applications to serve Canada’s cultural objectives