



Canadian Broadcasting Corporation

Canada's public broadcaster



Canada Lives Here

As Canada's public broadcaster, we are successful when we matter to Canadians and Canadians matter to us

This means that Canadians from across the country and from all walks of life know us, value us, are actively engaged in our programs and our services, and are participating in the creation of content

We measure this by the quantity and breadth of our audience and the emotional connection Canadians have with us



CBC English Services

CBC is *the* most important cultural organization in Canada

We offer primarily Canadian content:

- ▶ on multiple platforms such as television, radio, the internet and other new media, and
- ▶ in a wide variety of genres, including drama, comedy, news, sports, current affairs, documentaries, music, reality, lifestyle, variety, game shows, children's, performing arts and talk



CBC

English Radio



Approx. 500 Transmitters



62 Locations = 53 locations in Canada + 9 Foreign Bureaus



English Radio Programming

- Total Overall ERN Programming Hrs: > 70,000 hrs/yr ... 160 shows
- Over three quarters of our content is produced by the regions
 - Regions produce > 61,000 hrs/yr
- The regions produce > 46,000 hrs/yr for regional play...
105 shows
 - Regions produce > 15,000 hrs/yr network programming...a total of 21 shows produced for the Network
- The Toronto Network produces approx. 7,500 hrs/yr ... producing 34 network shows
 - 700-800 Remote Broadcast/year
 - Covering 5 time zones



Platforms

More value, more used, by more people, in more ways”...

- Live streaming from 33 locations
- On-demand streaming
- Radio on cable/satellite
- Radio on DAB
- International sales
- satellite radio channels
- cell phone – programs & ringtones
- Radio 3 on Galaxie
- Radio 3 and mobile project
- Considering alternate uses for DAB spectrum
- Strategy re: 5.1 Surround Sound
- HD testing
- Long term strategy to move Radio One to Stereo
- Sirius Radio One team as a Platform Team
- Podcast

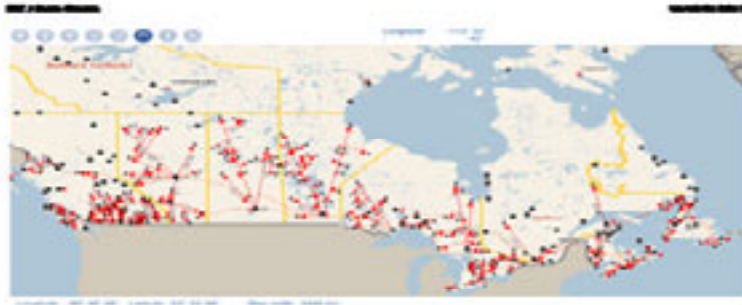


CBC Radio networks are extensive

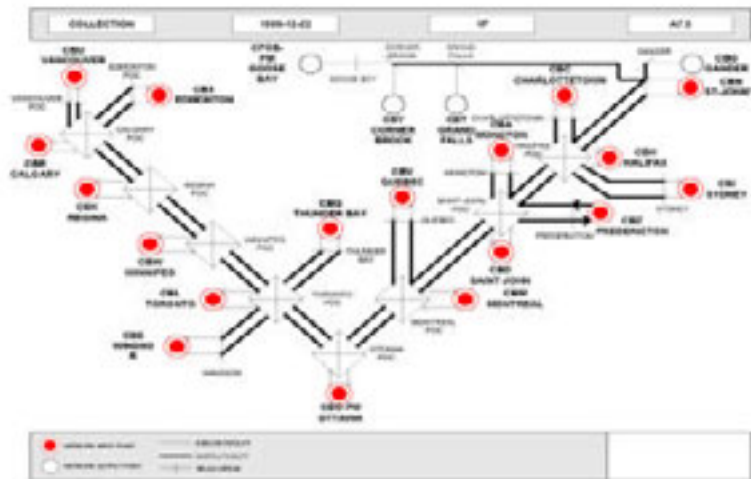
- ▶ More than 700 services
- ▶ Close to 600 sites across Canada
- ▶ Over 200 services fed by satellite
- ▶ Close to 350 services fed by terrestrial circuits
- ▶ Approximately 100 sites fed off-air
- ▶ Close to 100 sites fed directly by a studio



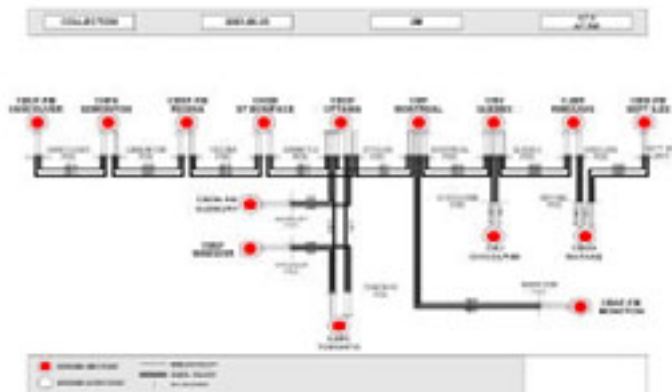
English Radio One Network



English Radio Collection -1P Network



French Radio Collection - 2M Network



IP Based Radio Networking?

- SW56 and ISDN networking technologies are approaching the end of life. CBC Radio has hundreds of units.
- IP based networking are a potential replacement solution.
- There is a need to recommend an IP based audio codec for implementation as a long term solution.



IP Codecs we use today...

- Skype
- Comrex
- Tieline
- Telos
- Audio TX



Desired Future State

- Studio to Studio – replace Sw56 and ISDN
- Remote to Studio – via High speed internet; wi-fi; EvDO; etc.
- Single Studio to multiple studio's (point to multi-point).



Progress towards our future state...



Requirements Defined

	Studio	Remote
1 Remote control Web access	1	3
2 ISDN option	2	2
3 Supported algorithm: AAC & apt-X®	1	1
4 Portability	N/A	1
5 Interoperability	1	1
6 Software availability to transform a portable computer into a codec	N/A	3
7 Bandwidth adaptability	2	2
8 5.1 audio supported	3	3
9 Automation control / Network management	1	N/A
10 Multicasting	2	N/A
11 Latency below 50 ms with good audio quality	1	1
12 Ease of use and simple user interface	1	1
13 GPI / GPO (Obtain functionalities from selected suppliers)	2	2
14 Encryption / Security		i
15 IP protocol / supporting DHCP		i
16 Dual mono / Stereo to one single IP address		i

Priority legend:

- 1 Must have
- 2 Important to have
- 3 Nice to have
- i Information to be obtained



IP Codec Status

- Completed lab testing
- 3 units selected for operational testing
- In the process of testing selected units that best meet requirements (Montreal – to - Vancouver)
- Smaller sites/smaller pipes to be tested next



Moving Forward – Things To Consider

- Existing collection network is 20 years old and no indication of upgrade
- Telco's do not seem interested in terrestrial...many circuits from Studio's to isolated transmitter sites
- Many of our Transmitter sites do not have the infrastructure to provide IP Quality of Service (EvDO; DSL; Wifi; WiMax)
 - Multicasting over WAN
 - Locations with bandwidth restrictions
 - Cost
 - Standards
- Phasing out older technology – talking to Sw 56 and ISDN





Thank You

