

Extending your LAN to a WAN with Inexpensive Point-to-Point Wireless

John Cuzzola

Director Of Information Technology
School District No.73 Kamloops/Thompson



Kamloops / Thompson

- 14,000 students
- 1,200 Educational staff
- 800 Support staff
- Service communities:
 - Logan Lake, Barriere, Chase, Blue River, Heffley Creek, Clearwater, Vavenby, Savona, Sun Peaks
- Sites:
 - 5 Administration
 - 33 elementary
 - 11 secondary
 - 2 alternate education programs
 - 1 distance education

Internet Bandwidth



- 33 Elementary
EADSL, E10, T1, E30(shared), Satellite
- 4 Secondary (rural)
E10

**UNUSABLE
(2-10 Mb/s)**

- 7 Secondary (urban)
- 2 Administration
- 1 Alternate Education Program
Kamloops Community Fibre (KCN)

**ACCEPTABLE
(1000 Mb/s)**

Cost Sharing Model



School	Current Connection	Current Monthly	New Monthly	SD73 Uplift Cost
A E Perry Elementary	EADSL	450	1853	1403
Aberdeen Elementary	EADSL	773	1853	1080
Arthur Stevenson	EADSL	773	1853	1080
Barriere Secondary	E10	1625	2602	977
Beattie School of the Arts	EADSL	450	1853	1403
Chase Secondary	E10	1625	4045	2420
David Thompson Elementary	EADSL	773	1853	1080
Dufferin Elementary	EADSL	773	1853	1080
Kay Bingham Elementary	EADSL	773	1853	1080
Logan Lake Secondary	E10	1625	2602	977
Marion Shilling Elementary	EADSL	450	1853	1403
McGowan Park Elementary	EADSL	773	1853	1080
Pacific Way Elementary	EADSL	450	1853	1403
Robert L Clemitson Elementary	EADSL	450	1307	857
South Sahali Elementary	EADSL	450	1853	1403
Summit Elementary	EADSL	773	1853	1080
TOTALS		12986	32792	19806

The Wireless Approach



EADSL

KCN Fibre

4 Mb/s

1000 Mb/s

Line-of-Sight

??? Mb/s
??? Cost



BSA

NKSS

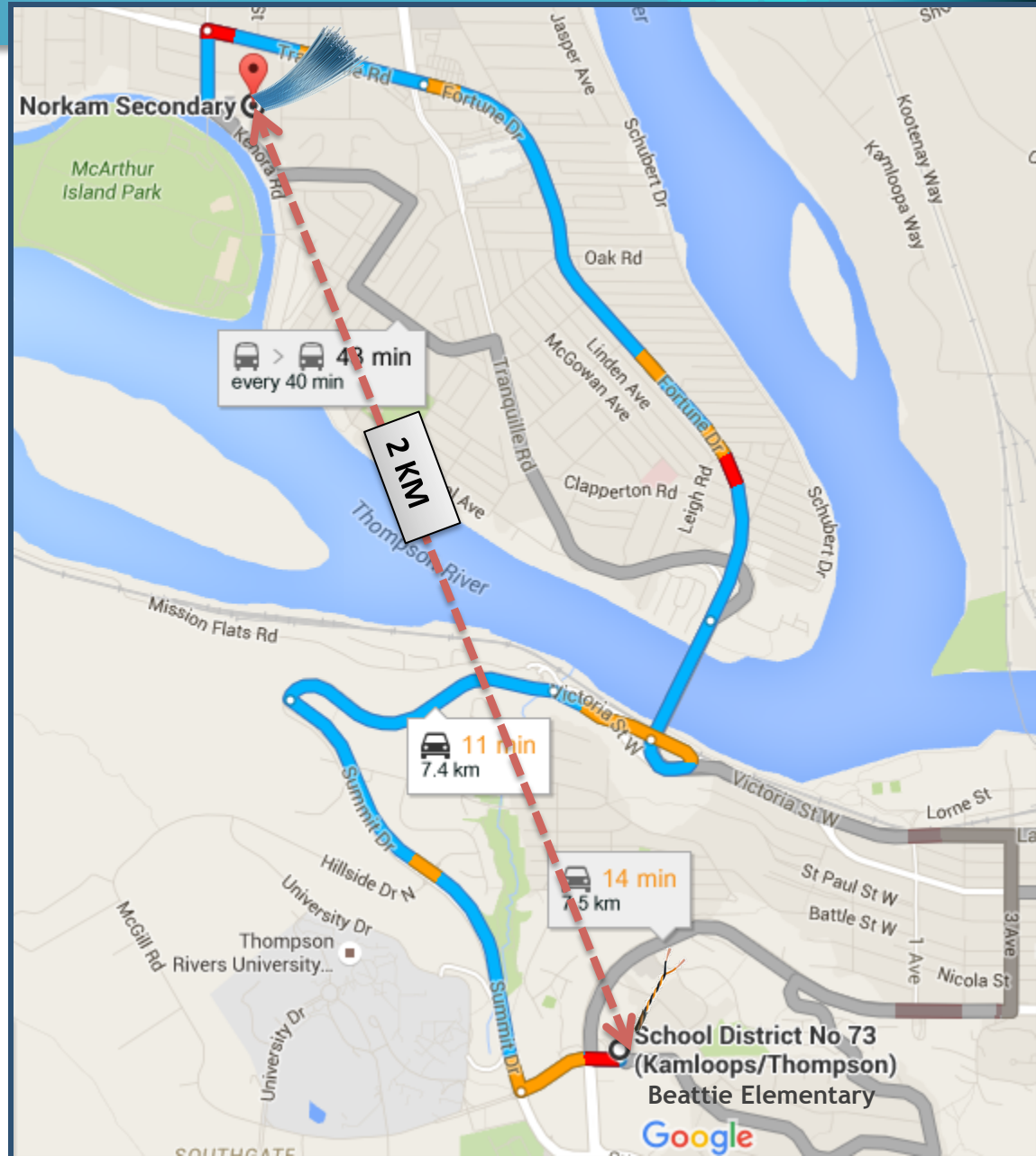
The Wireless Pilot

Pilot: April, 2013

50-70 Mb/s (max 100)
\$200 USD

Used dishes that operated on the
“unlicensed” (free) band.

- 24 Ghz
- 5 Ghz



Dish Footprint



Operating Conditions



-55 Celsius
30 Mb/s
(max. 100 MB/s)

What about the Weather?





NANOBRIDGE M5-25

Max. speed: 300Mb/s (100Mb/s older models)

Frequency: 5.8 Ghz

Distance: 30 Km

\$99 US (per dish)



AIRFIBER 24

Max. speed: 1.4 Gb/s

Frequency: 24 Ghz

Distance: 13 Km

\$1550 US (per dish)

AIRFIBER 5

Max. speed: 1.2 Gb/s

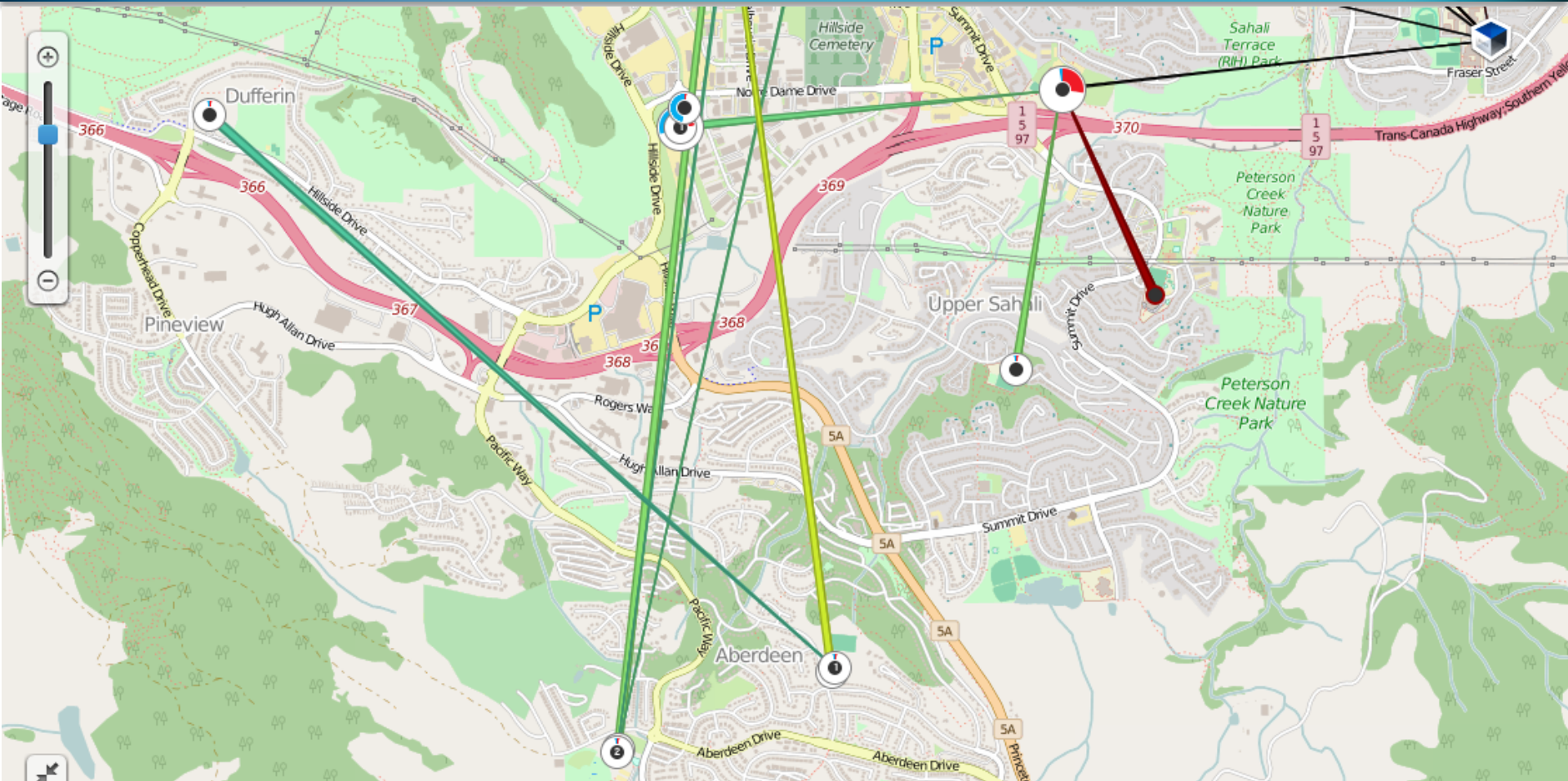
Frequency: 5 Ghz

Distance: 100 Km

\$1100 US (per dish)



Our Dish Network



THE END



THANK-you
