



A Brief History of **clearNET**

WWRF 31 Vancouver

Bob Simmonds
October 22, 2013

Outline

- A Brief History of Clearnet (TELUS Mobility)
- Adaptive Radio & 6Harmonics

clearNET



Two Networks

800 MHz iDEN and 1900MHz PCS



Origins

- Lenbrook
 - Clearnet's Parent Company
 - Canadian Distributor for E.F. Johnson (radio vendor)
- E.F. Johnson
 - Pre - 60's
 - Amateur (ham radio) parts manufacturer
 - 60's & 70's
 - pre-eminent US CB Radio manufacturer
 - entered commercial radio market
 - mid 70's & early 80's
 - Cellular - new High Capacity Mobile Telephone technology
 - Trunked Radio – new 2-way technology



JOHNSON



800 MHz Band – Cellular and SMR

- **1979 ITU DECISION**

Broadcasting (TV channels 70-83)



Mobile (Cellular & Trunked 2-Way Radio (SMR))

- **Commercial services launched**

- US SMR - 1979
- US Cellular - 1983
- Canada SMR - 1984 (Clearnet, Motorola & others)
- Canada Cellular - 1985 (Telcos & Cantel)

800 MHz in CANADA (1980-1983)

- Lenbrook heavily involved seeking decisions (harmonized w/ US)
- Cellular Policy 1982
 - “beauty contest”
 - service launched July 1, 1985
 - Big players, big money, lots of “hype”
- SMR (Trunked 2-way Radio) Policy - 1982
 - Opened for licence applications in 1983
 - Commercial service to start April 1, 1984
 - Industrial focus, smaller players
 - Limited interest/visibility



Cleartnet Timeline

- 1984 – Began Commercial SMR Service
 - Lenbrook controlled JVs with Dealers (ClearNET Holdco created 1985)
 - Standardized licensing/technology/rates/billing
 - One point of contact for Industry Canada
 - Major competitors – Motorola directly, GE/dealers
- 1985-1994 – Growth & Acquisitions
 - Approx 25K subscribers (45% market share) by 1994
 - Airtime Revenue approx \$5M
 - Same size as Motorola Canada's SMR

Clearnet ESMR Proposal (MiKe) - 1994

- Needed Industry Canada's blessing
 - Significant \$ req'd → IPO
 - Needed to eliminate investor uncertainty
 - Needed some changes to SMR rules (eg. frequency re-use)
 - Needed to merge Clearnet & Motorola Canada – sufficient spectrum
- Formal Proposal made to Industry Canada – January 1994
- Written Permission received March 1994

IPO – Oct 1994

- Raised \$112 Million
- Complex deal
- 17 Law Firms, 89 Lawyers
- 4-week – Global Roadshow

This prospectus constitutes a public offering of these securities only in those jurisdictions where they may be lawfully offered for sale and therein only by persons permitted to sell such securities. No securities commission or similar authority in Canada or the United States has in any way passed upon the merits of the securities offered hereunder and any representation to the contrary is an offence.

Initial Public Offering

October 13, 1994



CLEARNET COMMUNICATIONS INC.

Cdn. \$112,275,000

7,500,000 Class A Non-Voting Shares

3,000,000 Class A non-voting shares ("Class A Non-Voting Shares") of Clearnet Communications Inc. ("Clearnet") are hereby offered in Canada (the "Canadian Offering"), The Canadian Offering forms part of a combined offering to be made by Clearnet of 7,500,000 Class A Non-Voting Shares (the "Combined Offering") for aggregate gross proceeds of approximately Cdn. \$112,275,000. In addition to the Canadian Offering, the Combined Offering is comprised of concurrent offerings of 3,000,000 Class A Non-Voting Shares in the United States and 1,500,000 Class A Non-Voting Shares outside of Canada and the United States. Nesbitt Burns Inc. and Prudential Securities Incorporated are the joint global coordinators (the "Joint Global Coordinators") of the Combined Offering. **There is currently no market through which the Class A Non-Voting Shares may be sold.** The offering price of the Class A Non-Voting Shares has been determined by negotiation between Clearnet and the Joint Global Coordinators on behalf of the Underwriters. See "Underwriting".

After giving effect to the Combined Offering and assuming that there has been no exercise by the Underwriters of the over-allotment options referred to below, the offering price of each Class A Non-Voting Share will exceed the consolidated net tangible book value thereof on a pro forma basis as at April 30, 1994 by \$10.96 on a fully diluted basis, representing dilution of 73.2% of the offering price. See "Dilution" and "Risk Factors" for a discussion of certain material factors which should be considered in connection with an investment in the Class A Non-Voting Shares offered hereby.

The Toronto Stock Exchange and the Montreal Exchange have conditionally approved the listing of the Class A Non-Voting Shares. Listing is subject to Clearnet fulfilling all of the requirements of such stock exchanges on or before January 3, 1995, including the distribution of the Class A Non-Voting Shares to a minimum number of public shareholders. The Class A Non-Voting Shares have also been approved for inclusion in the Nasdaq Stock Market's National Market under the symbol "CLNTF".

Price: Cdn. \$14.97 per Class A Non-Voting Share

	Price to the Public	Underwriters' Commissions (1)	Net Proceeds to Clearnet (1)(2)
Offered initially in Canada (3)(4)			
Per Share	Cdn.\$14.97	\$0.9822	\$13.9878
Total	Cdn.\$44,910,000	\$2,600,109	\$42,309,891
Offered initially in the United States (3)(4)(5)			
Per Share	U.S.\$11.125	\$0.73	\$10.395
Total	U.S.\$33,375,000	\$1,932,446	\$31,442,554
Offered initially outside of Canada and the United States (3)(4)			
Per Share	Cdn.\$14.97	\$0.9822	\$13.9878
Total	Cdn.\$22,455,000	\$1,300,055	\$21,154,945
Total (5)	Cdn.\$112,275,000	\$6,500,274	\$105,774,726

(1) The totals of the Underwriters' Commissions and the Net Proceeds to Clearnet reflect a reduced commission of \$0.4843 per share to be paid to the Underwriters by Clearnet in respect of the 1,739,760 Class A Non-Voting Shares purchased by Motorola, NEXTEL Communications, Inc. and Madison Dearborn Capital Partners, L.P. See "Underwriting." Motorola, NEXTEL Communications, Inc. and Madison Dearborn Capital Partners, L.P. will also engage in certain other transactions with respect to the shares of Clearnet. See "Capital Reorganization".

(2) Before deducting expenses of the Combined Offering estimated at Cdn.\$3.8 million which, together with the Underwriters' Commissions, will be paid by Clearnet out of its general funds.

(3) Clearnet has granted to the Underwriters options, exercisable for a period of 45 days from the date of this Prospectus, which may be exercised up to three times by the Underwriters during such 45-day period, to purchase a maximum of 1,125,000 additional Class A Non-Voting Shares on the same terms set forth above to cover over-allotments, if any. These additional Class A Non-Voting Shares are qualified for sale hereunder. If the Underwriters' over-allotment options are exercised in full, the Price to the Public, Underwriters' Commissions and Net Proceeds to Clearnet with respect to the Combined Offering will be Cdn. \$129,116,250, Cdn. \$7,605,249 and Cdn. \$121,511,001, respectively.

(4) Subject to the conditions contained in an agreement dated October 13, 1994 among the Underwriters, the respective Canadian Underwriters, U.S. Underwriters and International Managers are permitted to sell Class A Non-Voting Shares to each other for purposes of resale.

(5) The Class A Non-Voting Shares are being offered in the United States in U.S. dollars at the approximate equivalent of the Canadian dollar price calculated on prevailing U.S. — Canadian dollar exchange rates as of the day before the date of this Prospectus.

The Ontario Municipal Employees Retirement Board ("OMERS") has the right to purchase up to 20% of the Class A Non-Voting Shares offered in the Combined Offering at the Price to the Public shown above. See "Certain Transactions" and "Underwriting".

Motorola, NEXTEL Communications, Inc. and Madison Dearborn Capital Partners, L.P. have indicated that they intend to purchase, from the Underwriters, 1,056,656, 583,104 and 100,000 Class A Non-Voting Shares, respectively, in the Combined Offering at the Price to Public shown above. See "Underwriting". Motorola, NEXTEL Communications, Inc. and Madison Dearborn Capital Partners, L.P. will also engage in certain other transactions with respect to the shares of Clearnet. See "Capital Reorganization".

The Canadian Underwriters, as principals, conditionally offer 3,000,000 Class A Non-Voting Shares and any shares acquired by transfer from the U.S. Underwriters and the International Managers, subject to prior sale, if, as and when issued and sold by Clearnet and delivered to and accepted by the Canadian Underwriters in accordance with the conditions of the underwriting agreement described under "Underwriting" and subject to the approval of certain legal matters on behalf of Clearnet by Blake, Cassels & Graydon of Toronto, Ontario and on behalf of the Canadian Underwriters by Osler, Hoskin & Harcourt of Toronto, Ontario. Subscriptions will be received subject to rejection or allotment in whole or in part and the right is reserved to close the subscription books at any time without notice. Definitive certificates evidencing the Class A Non-Voting Shares will be available for delivery on closing of the Combined Offering to occur on or about October 20, 1994, or such other date as may be agreed upon, but not later than October 31, 1994.

Meanwhile...PCS @ 1.9GHz

- August 1995 – Call for Applications
- December 1995 – 4 Licence Winners Announced:
 - 2 existing Cellcos (10 MHz each)
 - +
 - Microcell (Fido) (30 MHz)
 - +
 - clearNET** (30 MHz) !!!!

1994-2000

- Launched MiKe network Oct '96
- Launched PCS network in Nov '97
- Rapid Growth
- By year 2000
 - Over 700,000 wireless customers
 - \$300M+ Revenue
 - 2600 employees
 - A TSX Top-30 company

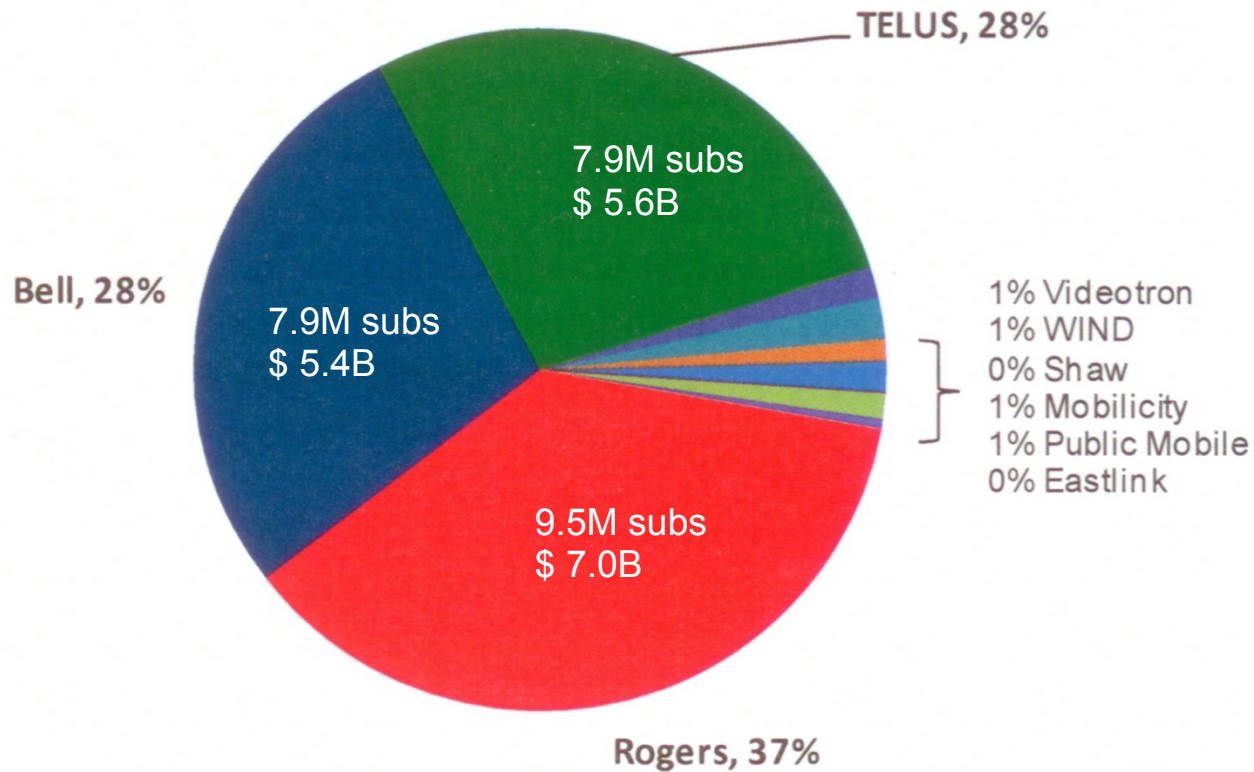
Oct. 2000 - Clearnet Acquired for \$6.6B

the future is friendly



Canadian Wireless Today

Wireless Revenue Share (2012)



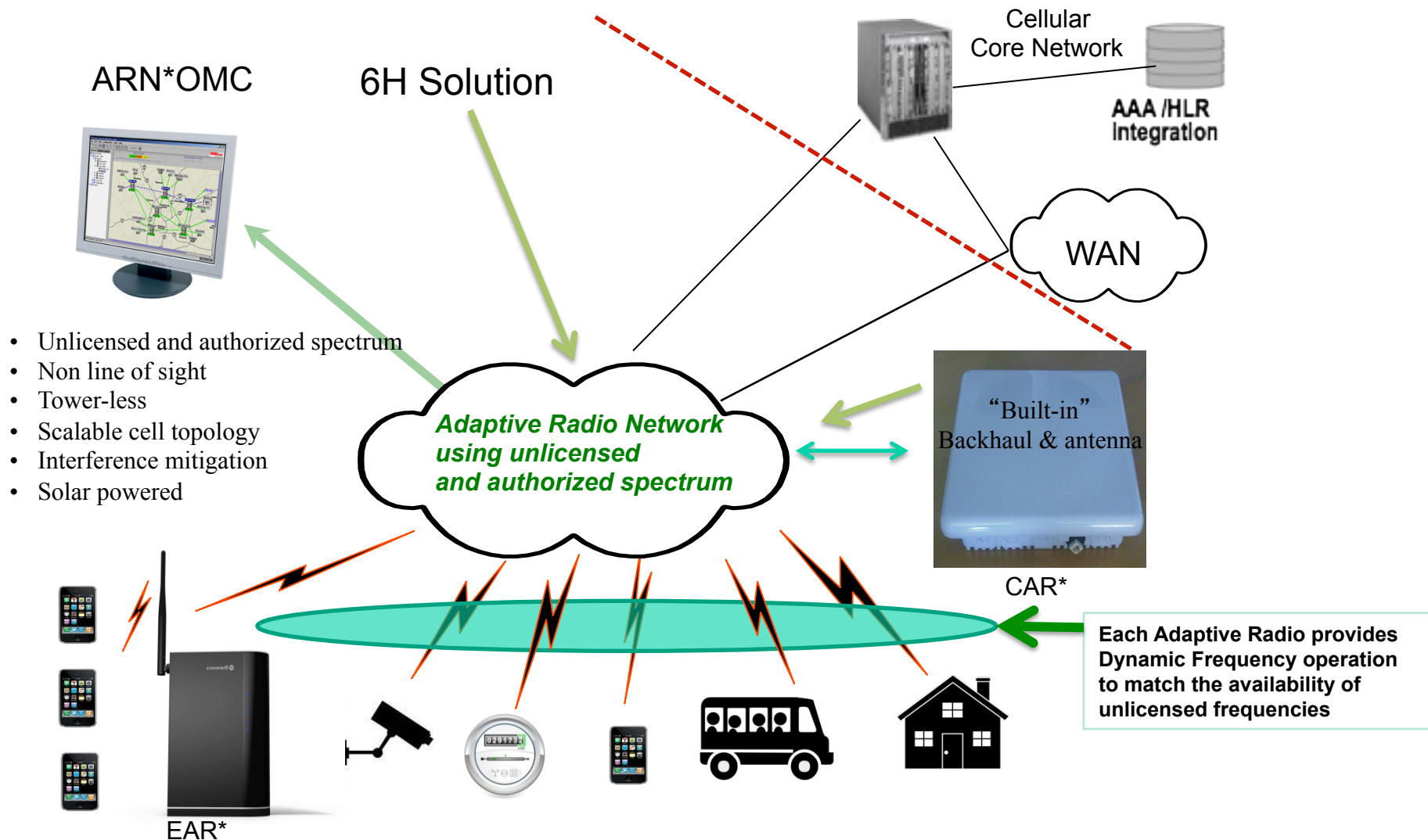
Adaptive Radio – The Next Big Thing?



6Harmonics Inc.



Global White Space Adaptive Radio Network (ARN*) Model



UK regulator names Microsoft, Google and others for white space wireless trials

By **Steve Dent** posted Oct 2nd, 2013 at 10:23 AM

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Though rural dwellers are often broadband-poor, there seems to be plenty of companies lining up to serve them in the UK.

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Thank You