



Mesh Networking for Local Business Areas

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Main Presentation Themes

- Urban Toronto Internet and Wireless Nomad Co-operative, Inc.
- Wireless Nomad's Technology and Practices
- Applications of Mesh Networking with Small Businesses
- Potential Areas of Opportunities and Challenges



Toronto Business Internet Costs

Service	Bell*	Rogers**
Up to 1 mbps	\$49.95/mo.	-
Up to 6 mbps	\$74.95/mo.	\$59.95/mo.
Up to 6 mbps with static IP	\$99.95/mo.	-
Up to 8 mbps	-	\$99.95/mo.
Up to 8 mbps with static IP	-	\$199.95/mo.

*Prices effective June 17, 2007 from http://www.bell.ca/shop/SmeSol_Internet_Landing.page for no contract services

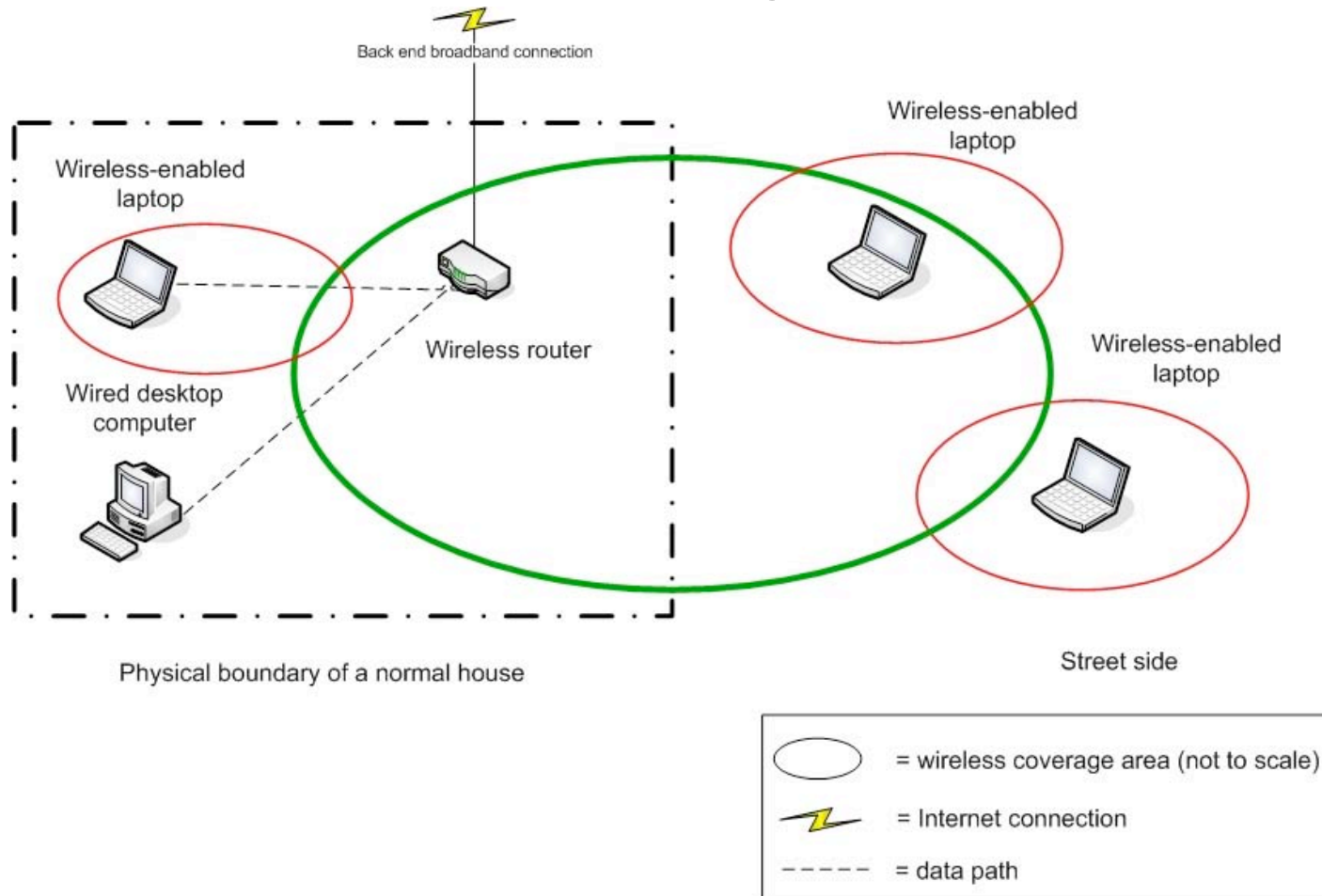
** Prices effective June 17, 2007 from <http://www.shoprogers.com/business/productsservices/internetservices/access/businessinternetaccess.asp> for no contract services



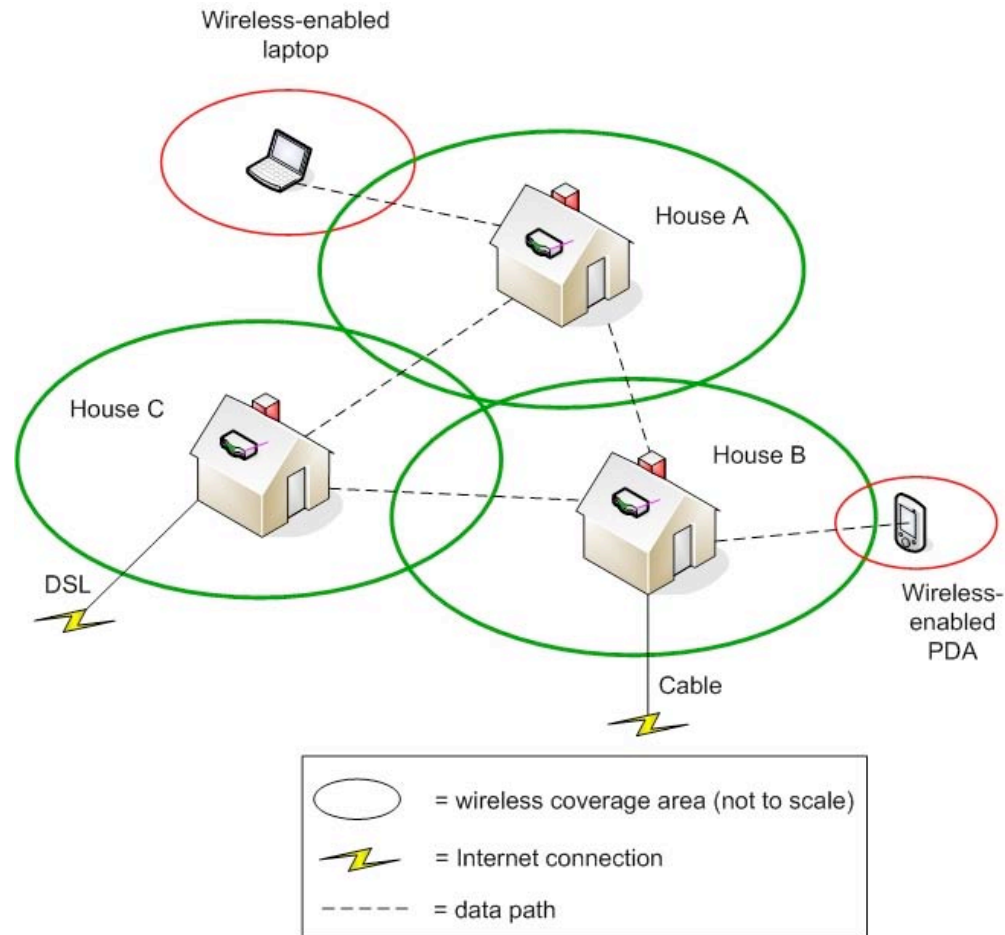
Wireless Nomad Co-op.

- Wireless Nomad Co-operative Inc.
 - Toronto-based ISP
 - A co-operative organization
 - Run by Damien Fox, Steve Wilton, volunteers
 - Started in February 2005
 - DSL subscriptions, home networking, free wireless accounts

Wireless Nomad Network Diagram



Mesh network diagram

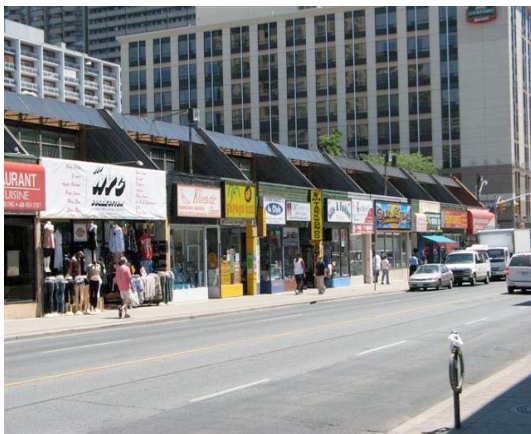




Wireless Nomad's Experiences with Small Businesses



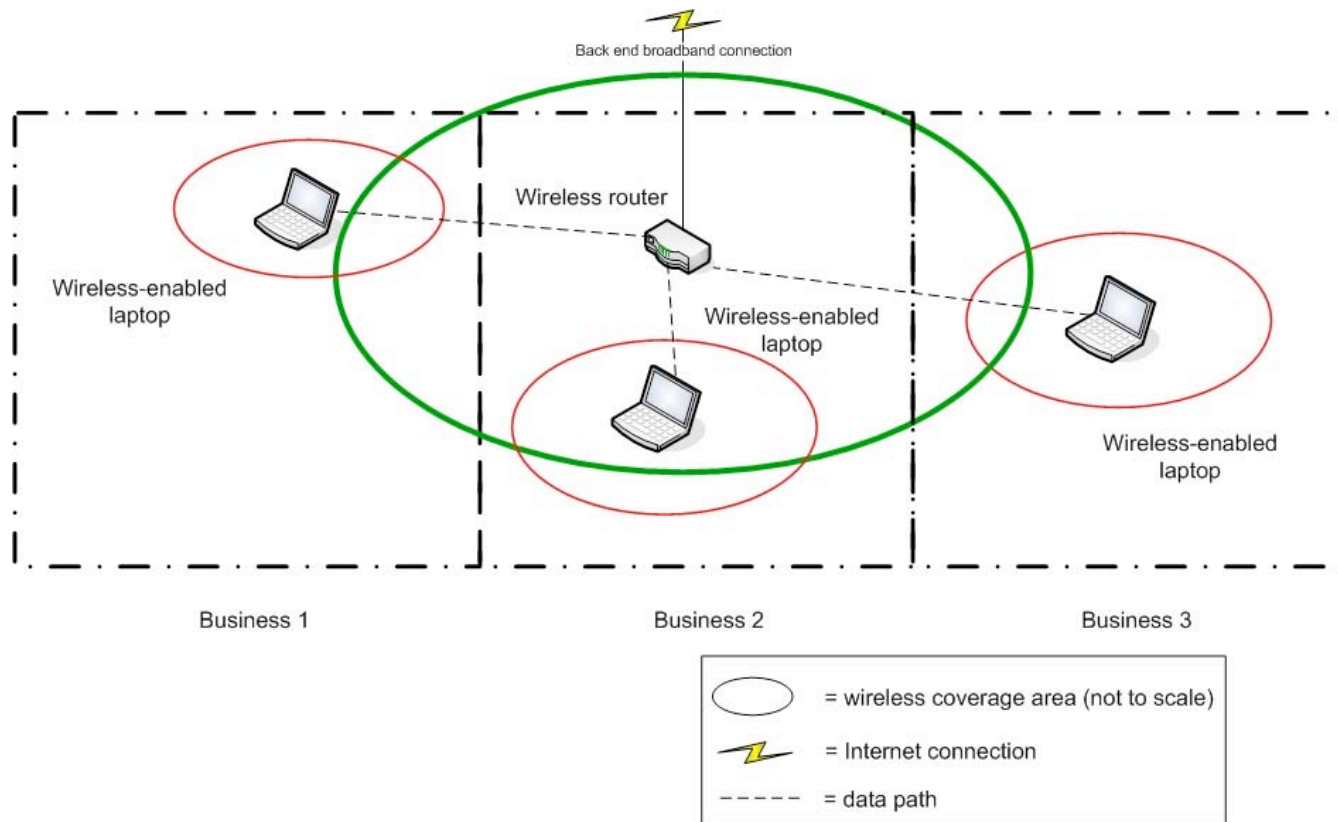
“Budget” Retail Operations



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Potential WAN Arrangement





Potential Areas of Opportunity

- Small businesses have different needs and resources available
 - May not require as much bandwidth
 - Might use Internet for low intensity applications
 - Would be willing to pay less to get less



Opportunities con't.

- Suitability of wireless for some locations
 - Geographically compact
 - Low RF barrier building materials
- Standardized wireless technology
 - 802.11g equipment and interface (e.g. Windows) common
 - Technology is relatively inexpensive

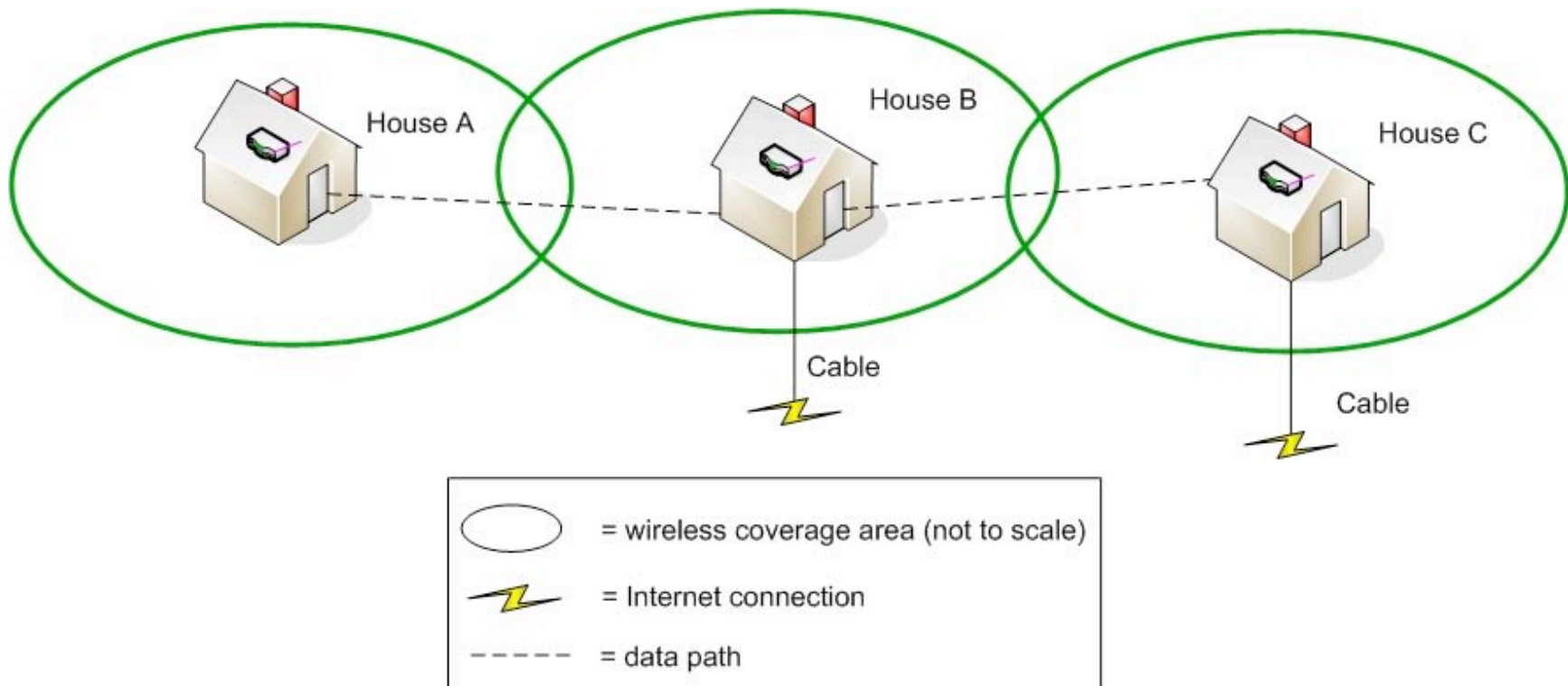


Potential Areas of Challenge

- Wireless limitations

- Susceptible to interference (e.g. other wireless devices, microwaves, garage door openers)
- Some building materials are stronger barriers
- Mesh-configuration

Challenges con't.





Challenges con't.

- Fitting wireless capability with business objectives
 - Lower speed and less reliable Internet access may become less suitable as business or business model matures
 - Determining what role Internet access should play in the location and operation of the business



Thank You

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