

Development Services Committee April 7, 2009

Update to Policy
Establishing
Telecommunication
Tower/Antenna
Facilities

Index

- ◆ Purpose of Presentation
- ◆ Wireless Network System
- ◆ Existing Protocol
- ◆ Consider Facilities on Town Owned Property
- ◆ Proposed Changes to Protocol
- ◆ Next Steps

Purpose

- ◆ To update current Town protocol
- ◆ To include provisions for considering facilities on Town owned property
- ◆ Address E3 initiative (revenue generation)

Radiocommunication Act

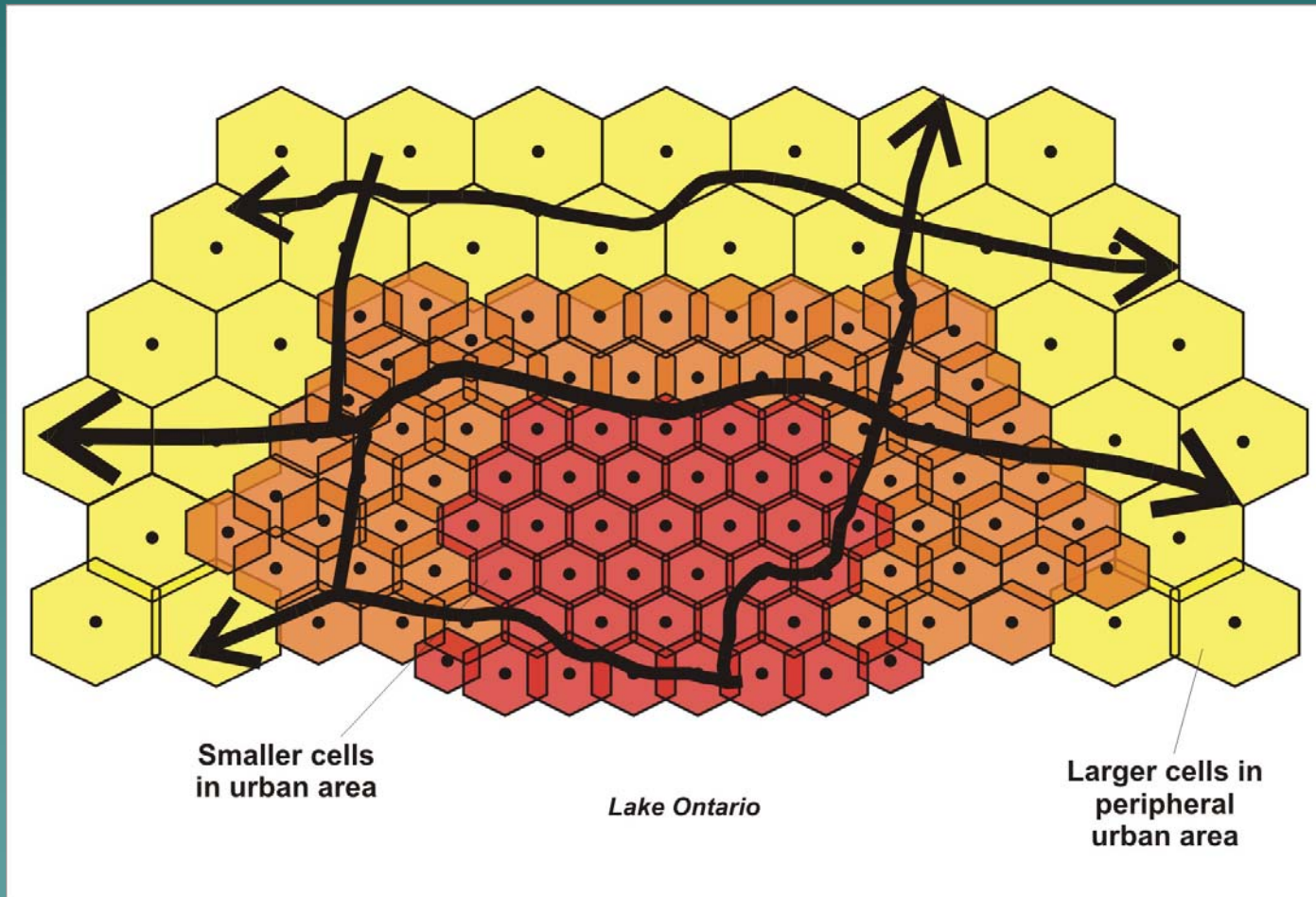
- ◆ Radiocommunication and broadcasting services are used daily by: public, safety and security organizations, government, wireless service providers, broadcasters, utilities and businesses
- ◆ Administered by Industry Canada
- ◆ Includes installation or modification of antennas, whether on masts, towers or other structures such as buildings, water towers, etc.
- ◆ Apply to: Personal Communications Services and cellular, fixed wireless, broadcasting, land-mobile, licence-exempt and amateur radio operators

Demand for Wireless

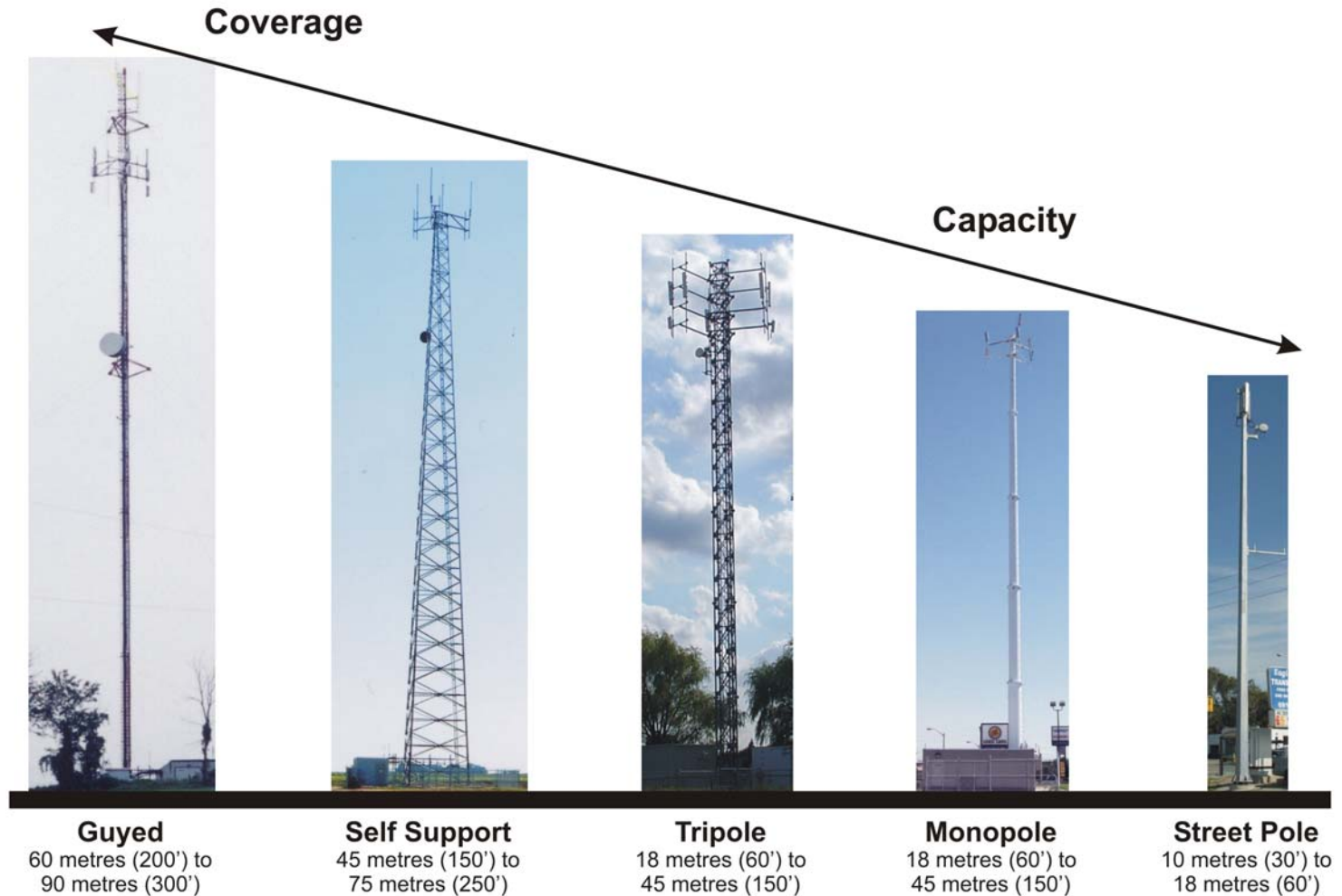
- ◆ Cell Phones, Pagers, Instant Text Messaging, Instant Photo Messaging, E-Mail, etc.
- ◆ Currently 3 major providers; Bell, Telus and Rogers
- ◆ Market has been opened up introducing new providers
- ◆ Each antenna (cell site) has limited capacity
- ◆ Cell site growth is required to provide capacity where services are more concentrated
- ◆ Coverage area of additional cell sites are adjusted to reduce overlap and interference
- ◆ As demand increases, cell sites in urban areas become more numerous
- ◆ Cell sites in rural areas can remain fewer in number due to demand

Cellular Network

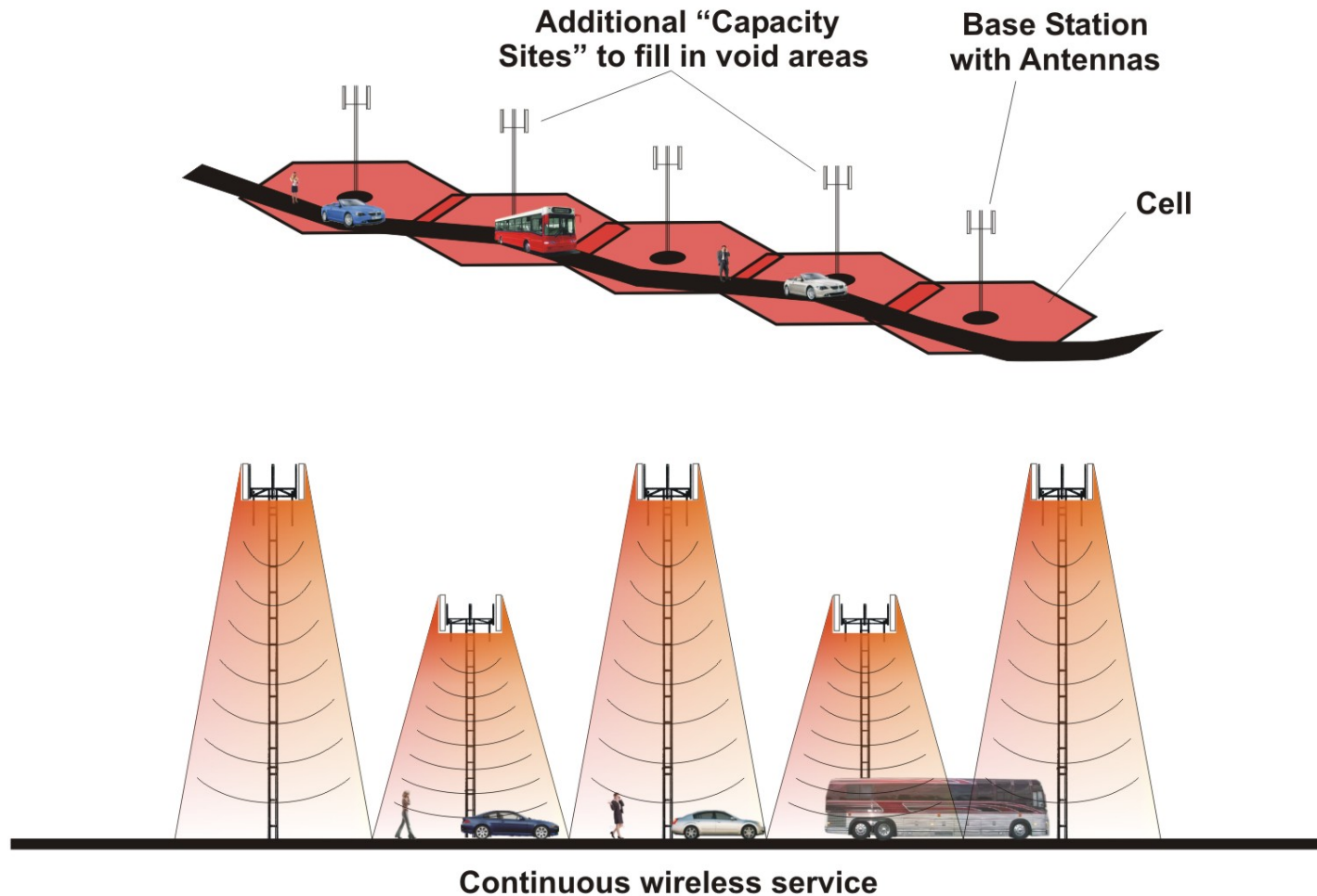
The number of Cell Sites is related to the concentration of use and increasing public demand



Coverage and Capacity



Continuous cellular network requires filling gaps



Antenna Locations

Pole Mounted



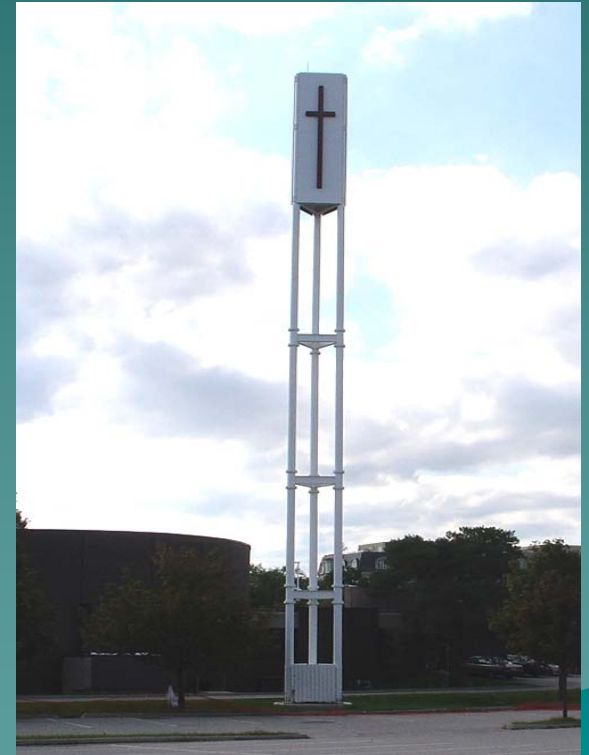
Antenna Locations

Roof Top



Antenna Locations

Camouflage Sites



Antenna Locations

Camouflage Sites



Antenna Locations

Camouflage Sites



Mechanical/Electrical Units

- ◆ A mechanical/electrical unit is required for each cell site
- ◆ For cell sites on buildings these units can be placed inside the building (space needs to be provided)
- ◆ For cell sites on towers/poles, etc. these units are usually at the base
- ◆ Security of the units are required

Examples of Ground Units



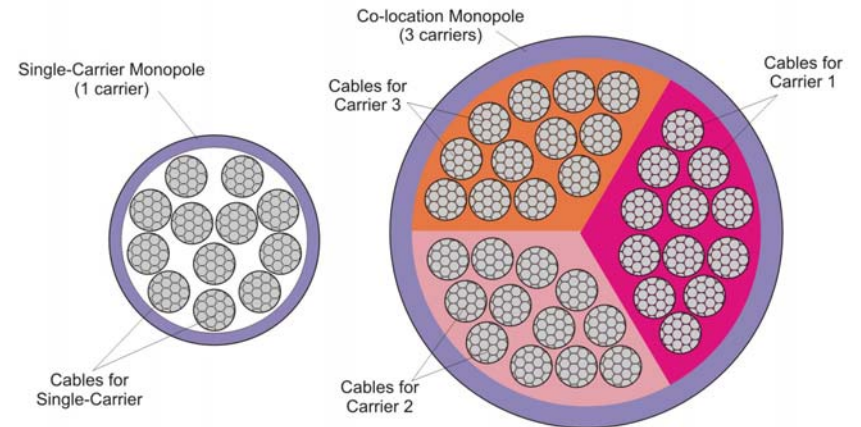
Co-Location

- ◆ Co-location refers to the sharing of telecommunications facility sites by two or more Wireless providers
- ◆ Required to carry the wireless service equipment necessary for multiple Wireless providers thus increasing the amount of equipment on the tower and at the tower base
- ◆ Co-location helps minimize the need for numerous telecommunications facilities, but generates a greater negative visual impact
- ◆ Monopoles can support co-location, however to conceal the additional equipment the shaft of the tower will increase in diameter¹⁶

Co-Location



Cross Section of Single-Carrier and Co-location Monopole towers



A monopole must carry all cables to the antennas within the shaft of the tower. The more wireless carriers sharing a monopole, the larger the diameter the shaft of the tower needs to be in order to contain them. A single-carrier monopole is the thinnest possible monopole tower.

Industry Canada's Protocol

- ◆ Industry Canada (IC) requires proponents to consult with the "Land-Use Authority" (LUA)
- ◆ Approval authority remains with IC
- ◆ IC released new antenna siting and approval procedures effective Jan. 1, 2008
- ◆ New protocol is more detailed and better follows our procedures in our existing protocol
- ◆ Provides a "Default Public Consultation Process" if local LUA does not have one
- ◆ We will continue to use our existing protocol modified to include some of IC's default requirements
- ◆ All proponents must abide by Health Canada "Safety Code 6" and Transport Canada guidelines

Region of York Protocol

- ◆ In a report dated March 4, 2009, Region is replacing their 2002 Protocol with the Default Industry Canada's protocol (CPC-2-1-03)
- ◆ As Region is not the LUA, any siting approvals would be directed to the Local Municipalities

Existing Town Protocol

- ◆ Town established a “Policy for Establishing Telecommunication Tower/Antenna Facilities” in October 2002
- ◆ Provides guidance to the Town, Proponents and the public in considering facility locations
- ◆ Lays out: objectives, consultation requirements, site selection and design criteria, exemptions and process

Existing Town Protocol

Objectives

- ◆ Balance demands for facilities with desire to preserve natural and cultural landscape and minimize community impacts
- ◆ Outline general process to ensure public consultation
- ◆ Promote economic development and business and safety needs of the public

Existing Town Protocol

Site selection and Design

- ◆ Consider using existing structures or towers (co-location)
- ◆ Maximize distance from residential areas and public/institutional uses
- ◆ Avoid natural features and areas of topographical prominence
- ◆ Structures and ground base facilities shall be designed to minimize visual impact and fit into context of surrounding area (flagpoles, Church Tower, etc.)

Existing Town Protocol

Municipal Review (Process)

- ◆ Municipal review follows our Site Plan process including pre-consultation
- ◆ Fees are required at application stage
- ◆ Proponent to consult adjacent municipality if proposal is within 500 metres
- ◆ Cell sites that require public consultation require Development Services Approval
- ◆ All others are approved at staff level
- ◆ Building Permits may be required for certain facilities

Existing Town Protocol

Exemptions to Municipal Review

- ◆ Co-location on existing towers
- ◆ Replacements or modifications to existing towers as long as proposed height does not exceed original by more than 10% and replacement tower remains in development envelope/leased area
- ◆ Towers on buildings where height does not exceed 25% of the building height or exceeds 16.6 metres above grade

Existing Town Protocol

Public Consultation

- ◆ Proponent is responsible for holding a community information session
- ◆ Notice is given to property owners:
 - in urban area, 120 metres or 3 x the height of the tower from the tower base, whichever is greater
 - In rural area, 250 metres from the tower base
- ◆ Notice is also given to local ratepayer association, condominium corporation, DSC Chair, Ward Councillor, Director of Planning and Town Clerk
- ◆ Proponent shall prepare record of meeting and respond to issues arising from meeting
- ◆ For all towers requiring public consultation, approval by DSC shall be required

Existing Town Protocol

Exemptions to Public Consultation

- ◆ Towers less than 16.6 metres above ground
- ◆ Replacements or modifications to existing towers as long as proposed height does not exceed original by more than 25%
- ◆ Towers within industrial or commercial zones where the tower base is located a minimum of 120 metres or 3x the height of the tower, whichever is greater, from residential zone

Use of Town Owned Land for Antenna Facilities

- ◆ Town is largest property owner in municipality
- ◆ Meet with proponents to review their siting requirements in relationship to Town owned lands
- ◆ Opportunity for Town to receive an annual lease fee per cell site (approximately \$12,000 - \$15,000/year)
- ◆ Proponent enters into master lease agreement, each additional location is attached as a schedule

Use of Town Owned Land for Antenna Facilities

- ◆ Suggested structure types are: Town buildings, ball field light standards, flag poles, bell towers, light standards on town right-of-ways, other innovative structures
- ◆ Any proposal on Town owned land requires a site plan application (no exemption from municipal review)
- ◆ Must fit into context of surrounding area (e.g. landscape treatment for mechanical/electrical unit)
- ◆ Requires full review by Town staff
- ◆ Use same criteria for public consultation and exemptions from consultation
- ◆ Requires DSC approval for any application requiring public consultation

Proposed Changes to Town's Protocol

- ◆ Revise objective to include a new source of revenue for the Town using Town owned property
- ◆ Revise site selection to include consideration of Town owned properties
- ◆ Include a statement to encourage proponents to consult with area artists or host a public art competition to develop innovative and creative solutions to the design and installation of fencing, gates, accessory structures or cell towers

Proposed Changes to Town's Protocol

- ◆ Revise height of tower exemption from 16.5 m. to 15.0 m. (IC Default)
- ◆ Reduce consultation requirement for cell sites abutting municipalities from 500 metres to 3 times height or 120 metres, which ever is larger
- ◆ Proponent must post notice of public consultation meeting in local paper for all towers requiring public consultation that are greater then 30 metres (IC Default)
- ◆ All proposals on Town owned property are subject to municipal review
- ◆ For cell sites on Town owned property, they must enter into a lease agreement with the municipality acceptable to the Town Solicitor

Next Steps

- ◆ Finalize protocol
- ◆ Consult with Proponents and IC if required
- ◆ Report back to Committee before summer recess