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Standards and Data Structure for Statistical Geography

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Outline

- Statistical geography
  - Standard Geographical Classification
  - Sub-municipal statistical geography
- Key elements of the geography structure
- Geospatial data for statistical geography
- Sources of geospatial data
- Updating of geospatial data

Statistical geography

- Several general types:
  - Administrative – e.g. municipalities, health regions
  - Functional – e.g. metropolitan areas
  - Sub-municipal – e.g. census tracts
  - Environmental – e.g. drainage basins
  - Economic – e.g. economic region
- Institutional review and approval process
- Stakeholders
  - Consulted on development of all statistical geography
  - Actively participates in maintaining specific areas

Standard Geographical Classification (SGC)

- Based on governmental administrative units
  - Easily recognized by respondents
  - High level of usefulness for general statistical information, particularly by government
- Complete national classification
- Established in 1960s
- Updated every 5 years

Standard Geographical Classification (SGC)

- 3-level hierarchical classification system
  - Province/territory
  - Regional governments
  - Local municipalities (e.g. incorporated city or town)
- Where regional or local government does not exist, areas are defined jointly with provincial/territorial statistical focal points
- Includes variants, based on local municipalities
  - e.g. census metropolitan areas

Sub-municipal statistical geography

- Developed for Census of Population output
- Designated Place
  - Defined in conjunction with statistical focal points
  - Target is small, well defined communities within a larger municipal entity
- Census Tract
  - Defined by local municipal planners to meet local planning needs
  - Defined within metropolitan areas with population of 50,000 or more

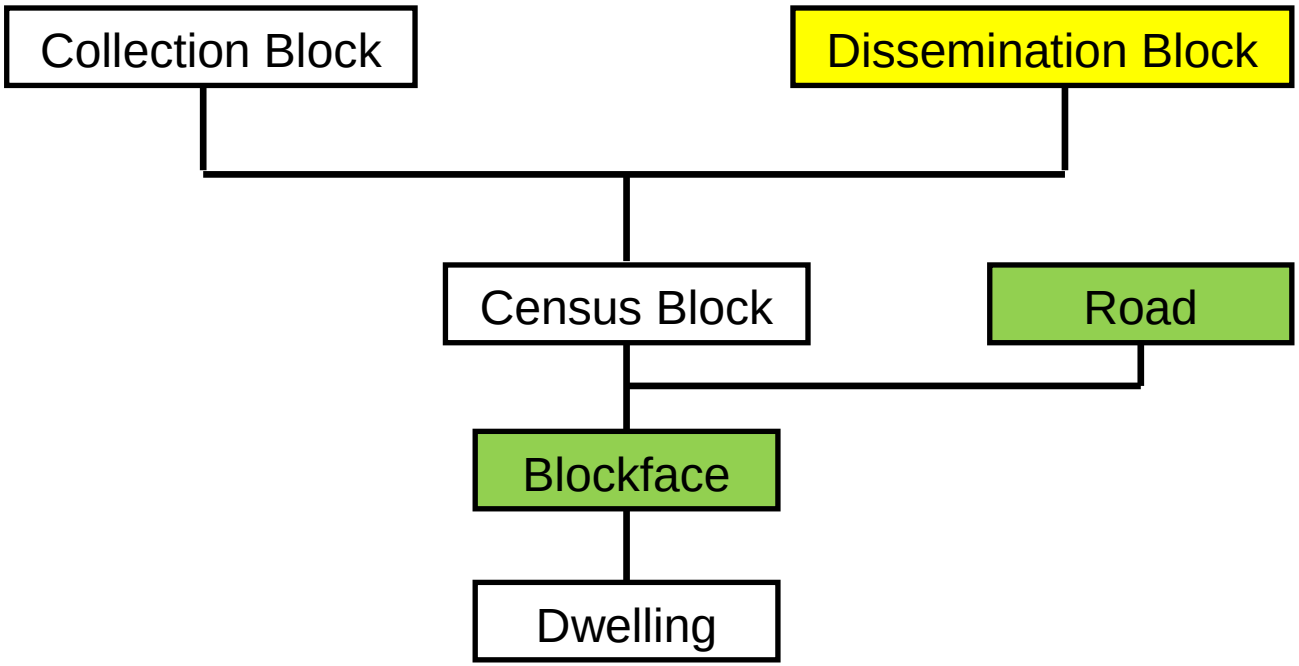
Sub-municipal statistical geography

- Dissemination Area
  - Respects local municipality, Census Tract
  - Designed to minimize data suppression at output
  - Fairly stable over time
- Dissemination Block
  - Defined using road network and all statistical areas for dissemination
  - Facilitates tabulation by custom area of interest
  - Fairly stable over time

Address Register of Dwellings

- Supports Census of Population and dwelling-based surveys
- Updated from numerous sources
  - Administrative sources – quarterly
  - Targeted field listing – quarterly
  - Census and survey operations feedback
- No national addressing standard

Key elements of geographic data structure



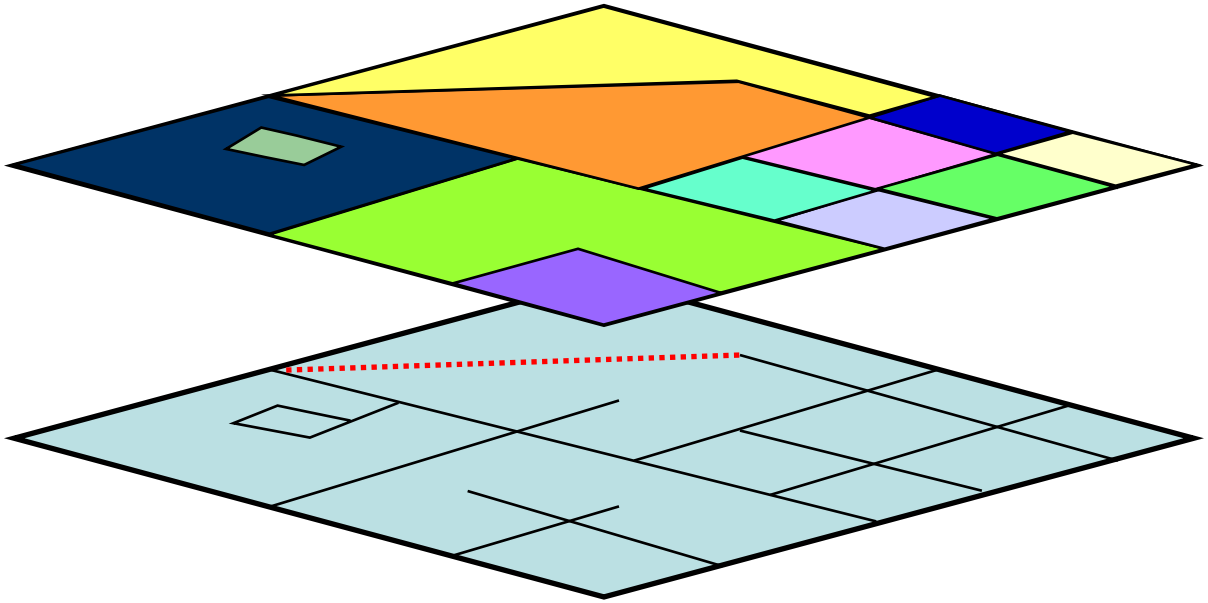
The need for geospatial data

- Delineating/defining areas
- Compiling statistical data for areas
  - Collecting data
  - Processing data
- Interpreting statistical data
  - Critical for statistical geography not based on governmental administrative areas

Key geospatial data required

- Road network – named and addressed
  - Used to define statistical geography
  - Key data for coding data to statistical geography and for statistical collection operations
- Boundaries
  - Governmental organization, e.g. municipalities
- Hydrographic data
  - Helps to define statistical geography
  - Contextual information for interpreting statistical geography

Example: geospatial data for blocks



Sources of geospatial data

- National Initiatives
  - GeoBase
    - Infrastructure data layers (e.g. road network, hydrography)
    - Data model standards
- Internal operations
  - Inability to relate dwellings to road network
  - Field observed feedback
- Municipal data

Updating of geospatial data – road network

- Continuous maintenance
  - Needed to support geocoding of Address Register of Dwellings to geographies – both operational and statistical geographies
  - Results of geocoding of Address Register of Dwellings used to identify deficiencies
- Improvement of road network geometry using provincial/territorial source data (GeoBase)

Updating of geospatial data – boundaries

- Continuous maintenance of municipal boundaries
  - supports key statistical programs
- Maintenance to maintain relevancy of sub-municipal geographies
  - Readiness for next census
  - Primarily based on population
  - Requires detailed stakeholder input
- Improvement to geometry as improvements to road network geometry occurs

Summary points

- Various standard statistical geographies are needed to meet user needs
- Need flexibility to respond to custom areas of interest
- Geospatial data are integral in the production of statistical data
- Require high level of coverage and currency in key geospatial data
- Common framework data – coherence of geospatial data