Agenda

- Welcome our newest partner:
- Round-robin updates on the phone
- FAQ: We have answers!
- Challenges of UBID Integration: Lessons Learned
- Time permitting: CityBlock Demo
Frequently Asked Questions

1. How do you define buildings?
2. When in a building’s lifecycle do you create a UBID? Who does that?
3. Who maintains the system and updates it with new information over time?
4. How does the UBID apply to properties that may be owned under a single transaction but are not geographically contiguous?
How do you define a building?

Case 1: One address, multiple Structures

Case 2: One structure, with multiple units.

Credit: Census Bureau
How do you define a building?

Credit: U.S. EIA
Who/when in a building’s lifecycle do you create a UBID? Who maintains the system over time?

When?

- New Construction
  - Permitting or official approval of building design
  - Surveying for foundation placement
- Existing Building
  - At any point
  - Adjust as appropriate with any renovation which changes the building’s footprint

Who?

- The UBID is created, modified, and managed by the entity which owns the source data.
  - i.e.: if you have the footprint data, you create, change, and manage the UBID
  - Tooling surrounding the UBID code itself can ensure appropriate matches and management throughout the ecosystem
What about property UBIDs which are not geographically contiguous?

- UBID is a geospatial natural key. Therefore, the underlying object to be identified must be geographically contiguous.
- However, there can be a set of discrete geospatial objects identified by a UBID if they are contained by a larger, relevant, geospatial unit.
What about property UBIDs which are not geographically contiguous?
Challenges of UBID Integration
Physical reality of building data

The relationship of Buildings to Parcels/Tax Lots can be complicated

**Case A: 1 Building to 1 Parcel**
- Parcel 100
- Building
- Address 1

**Case B: Many Buildings to 1 Parcel**
- Parcel 101
- Building
- Address 2
- Address 3
- Address 4
- Address 5

**Case C: 1 Building to many Parcels**
- Parcel 200, Parcel 300, Parcel 450, Parcel 500, Parcel 501
- Building
- Address 6
- Address 7

**Case D: Campus -- many buildings to many parcels**
- Parcel 600, Parcel 700, Parcel 800
- Building 5
- Building 6
- Building 7
- Address 8
- Address 9
- Address 10
- Address 11
- Address 12
Sources of data to generate UBIDs

- **UBIDs**
  - By definition they are Unique IDs for Buildings

- **Non-Spatial Data Sources**
  - **Tax Assessor Data**
    - Parcel information (with Parcel ID); some limited information about Buildings
  - **Portfolio Manager Data**
    - Information about Buildings (with ESPM ID); possibly includes Parcel IDs where the buildings are located
Sources of data to generate UBIDs

- **Spatial Data**
  - Shape files for Parcel and Building footprints
  - City of San Jose has Shapefiles for:
    - Parcels
    - Building Footprints

![Basemap](image1)

![Basemap_2](image2)
Two Tax Lots (ID = APN)

APN = 67929007
- 3 buildings entirely on that parcel
- 2 of the buildings are small
- 1 building partially on this parcel

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### Building Footprint Spatial Data

- **APN = 67929007**
  - 3 buildings entirely on that parcel
  - 2 of the buildings are small
  - 1 building partially on this parcel

- **APN = 67929006**
  - 2 buildings entirely on that parcel
  - 1 of the buildings is small
  - 1 building partially on this parcel

- A UBID was generated for every building footprint

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<th>Facility ID</th>
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<th>AREA</th>
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What do the buildings represent?

- **Canyon Creek Plaza Shopping Center**
  - These multiple buildings are part of a shopping center

- **ENERGY STAR Portfolio Manager (ESPM)**
  - The owner will (generally) enter data based on how the buildings are metered
    - Metered separately?
      - They will probably be entered as separate buildings.
    - Same meter (unlikely)
      - Probably entered as one building
  - Could be a combination of metering

The city doesn’t know how the owner will group the buildings until they get the ESPM data.
What should the final UBIDs be?

- An individual UBID for every building
  - Even if the buildings are on the same meter and will be represented by one ESPM report?
- One UBID to represent the correct grouping of buildings
  - By meter or other criteria?
- What is the best / easiest / most efficient way to determine this?

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CityBlock Demo
Thank you!

Next call:
April 9th, 2019
Authoritative UBID Process
User 1 uploads geometry files
- CSV / ESRI Shapefile / line-delimited.txt file

System parses uploaded files
- Creates record in database for each geometry record

System generates UBIDs, adds labels to records:
- valid UBID / unverified
- invalid UBID

User 1 reviews invalid UBIDs

System identifies matching geometries in user's data

User 1 reviews matched groups and selects UBIDs to assert as verified

User 2 (privileged) approves User 1's asserted UBIDs

System updates UBIDs as verified

Verified UBID