Handheld mapping and data connectivity for NYC Dept of Finance
The context

• Long-term plan to upgrade technology applications at DOF

• CUR and DOF had been meeting to discuss collaborative projects; decided to seek funding through NYS Office of Real Property Services grant program

• Applied to ORPS for handheld pilot project:
  o Received approval mid-2006;
  o Focus on new construction properties;
  o Overall goals: develop proof-of-concept application; improve data efficiencies; facilitate research on changing neighborhood characteristics with access to better & more timely property data;
  o Dev408 developed actual application; and
  o DOF assessment team and CUR currently reviewing feedback and planning for next steps re: potential for larger-scale deployment with DOF.

• NOTE: application still in pilot-project stage. DOF is evaluating the results of the project for potential expansion to its entire field assessment team.
The device

• Top priority: needed to be ruggedized
• Other criteria: Windows-based; integrated with wireless and/or cellular connectivity; acceptable by DOF assessors; battery life
• Intermec CN3 was picked (though other similar devices have since come out on the market)
The application

The application is organized around the areas of:

1. **Task Lists** – Allows assessors to complete and track tasks.
2. **Parcel, Block and Building outline maps** – Users can see properties on a map, change their view and click on the map to access other information.
3. **Data entry forms** – Users can see all aspects of a parcel including building information, valuation, etc. Assessors can update selected information and have it uploaded to central computers.
4. **Contextual access to the nyc.gov DOB website** – The application will access the DOB Building information database to check for construction permit and other information.
The application

- Screens generally match flow of CAMA mainframe interface, but greatly improve on user interface and navigation
- Property and buildings information:
The application (continued)

- Land, neighborhood, and valuation information:

  - **Land**
    - PARCEL ID: 1/1405/31
    - Lot Type: 3 - Corner
    - Irregular Lot: R - Regular lot
    - Primary Frontage: 84
    - Depth: 111.25
    - Perimeter: 391
    - 2nd Frontage: 111
    - # Frontages: 2

  - **Property**
    - PARCEL ID: 1/1405/31
    - Nbrhood Type: 3 - Major Strip
    - Area Rating: 1 - Excellent
    - Adj. Influence: 3 - Normal/None
    - Compet: <undefined>
    - Street Type: <undefined>
    - Street Rating: <undefined>

  - **Valuation**
    - Summary: E - Equalization during tentative change
    - Reason: E - Equalization during t
    - Land Value: <undef> 0
    - Improv. Value: + 1400000
Maps

- Bytes of Big Apple parcel boundaries plus DoITT NYCMAP layers
- Parcels linked with underlying CAMA data loaded on device and/or accessible via wireless connection
- Direct link with NYC Dept of Buildings BISWEB site
Software

• All map-related functions developed through ESRI’s ArcGIS Server 9.2
  o Mobile ADF Framework for .NET
  o Web services created from ArcMap MXD files
  o ArcCatalog manages data (did not need SDE for pilot project)

• Other software:
  o Microsoft .net Compact Framework
  o SQL Server Mobile
  o c# programming language
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Michael Uffer
dev408
718- 802-0272
917-673-1036
michael@dev408.com
www.dev408.com

Steven Romalewski
CUNY Mapping Service
The Graduate Center, CUNY
212-817-2033
sromalewski@gc.cuny.edu
www.oasisnyc.net

Herb Stratton
Technology Solutions Group
NYC Department of Finance
strattona@finance.nyc.gov