

NYPL & Temporal Data

Current Explorations in Linked Data

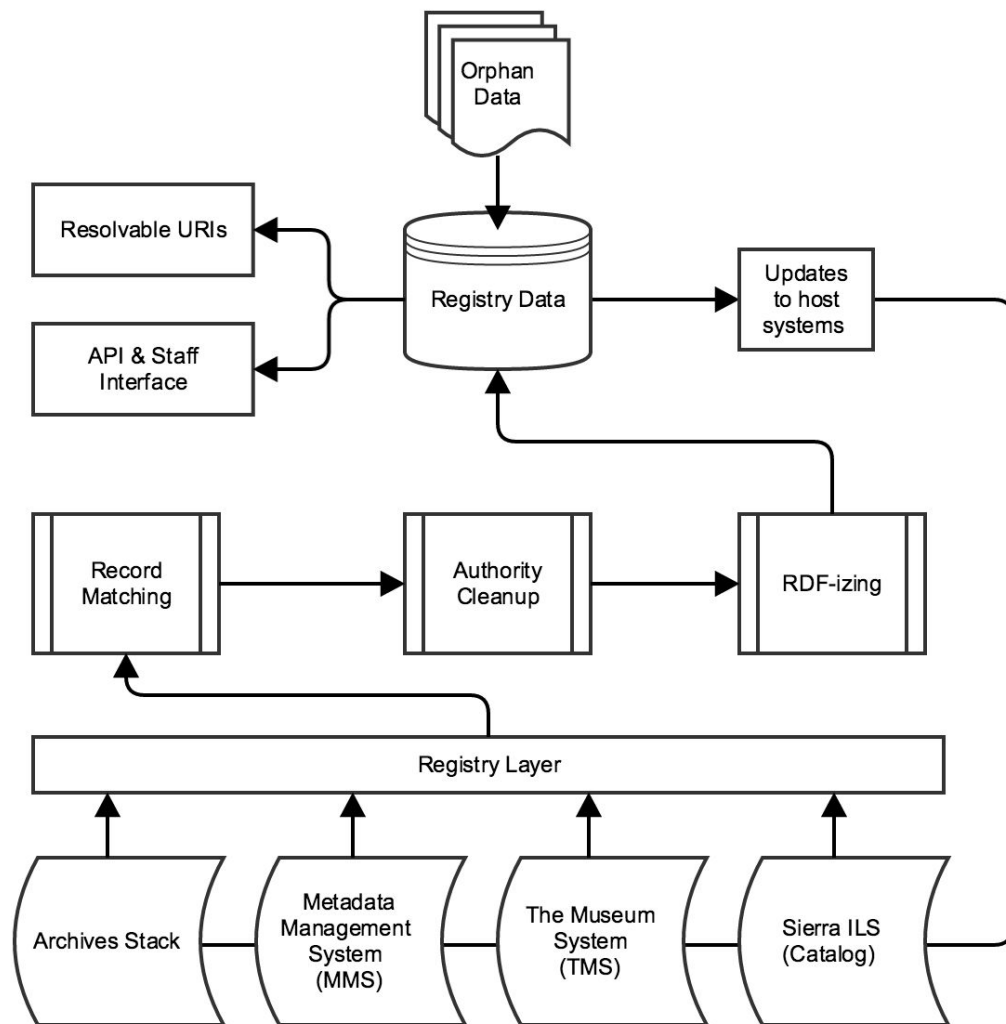
3 Major Linked Data Projects

- Research Libraries Discovery Layer (formerly Registry project)
- Digital Repository Migration
- NYC Space/Time Directory

Discovery

- User-focused discovery layer over our catalog and electronic resources
- Will eventually incorporate holdings from our Archives Portal, Digital Collections, and Prints and Photographs Catalog
- RDF-based, drawing on earlier R&D work with linked data
- Not a replacement for the catalog--enriched metadata serves discovery

Registry Project



Data Model

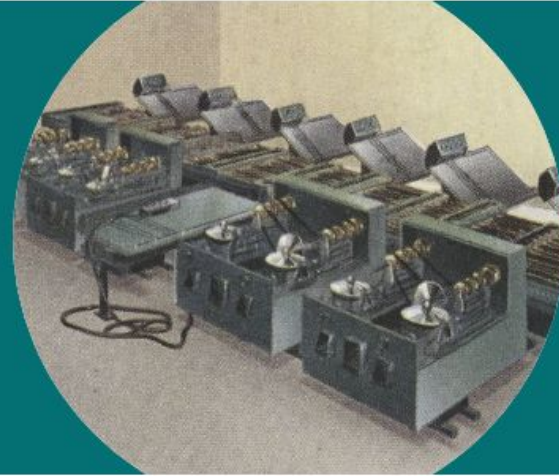
- PCDM for object structure
- Application profile drawn from DPLA MAP v4
- Entification where possible and beneficial
 - Agents (People and Organizations)
 - Terms (Subjects, Genres, Material Types)
 - Geospatial?
 - Temporal?

data.nypl.org



data.nypl

NYPL Labs
data.nypl



This site is the public side of an ongoing data project at [NYPL Labs](#). Feel free to explore but please keep in mind this site may break or go offline at anytime. While we are working towards persistent URIs for our resources we are not quite there yet, so please do not reuse any of the identifiers found on this site.

[Explore Agents](#)

Explore Terms (coming soon)

[Explore Resources](#)

Agents in data.nypl.org

Streisand, Barbra

American singer, actress, writer, film producer, and director

Performer, Singer, Composer, Speaker, Interviewee



Resources Created By

Collection(4)
Still Image(10)
Notated music(20)
Audio(107)
Moving image(10)
Mixed material(3)
Text(3)

Resources About

Still Image(9)
Text(34)
Moving image(4)
Mixed material(6)
Audio(1)

Type:edm:Agentfoaf:Person

Birth:1942-04-24






Death:

VIAF:44486523

LC:n80144605

Wikidata:Q4636

Notated music resources contributed to by agent:

- | | | |
|------|-------------------------------------------------------------------------------------------------------------------------------------------|---|
| 2012 | What matters most : Barbra Streisand sings the lyrics of Alan and Marilyn Bergman | > |
| 2010 | Love is the answer | > |
| 2006 | Guilty pleasures : piano, vocal, chords | > |
| 2004 |  The essential Barbra Streisand : [piano, vocal, guitar] | > |
| 2000 |  A love like ours : [piano-vocal-guitar] | > |
| 1998 |  Higher ground | > |
| 1996 | All of my life : from the motion picture "The mirror has two faces" | > |
| 1995 | Barbra, the concert | > |
| 1993 |  Back to Broadway | > |
| 1989 |  Till I loved you | > |
| 1987 | One voice : piano, vocal, guitar | > |
| 1985 | The Broadway album : piano, vocal, guitar | > |
| 1984 | Barbra : Emotion. | > |

Barbara Streisand <http://data.nypl.org/agents/10043204>

Digital Repository

- Upgrading from Fedora 3 to 4
- Major metadata migration from MODS XML to RDF-based application profile
- Interoperability with Discovery model

NYC Space/Time Directory = NYPL
data + external datasets + databases
+ APIs + search + geo + RDF + open
source + digitization + crowdsourcing
+ community



<http://spacetime.nypl.org> (watch this space!)

<https://github.com/nypl-spacetime>

Goals/principles

- Open data, plain JSON for everyone
- APIs, open source, search tools, user interface
- Tools that allow people to tell new stories about NYC's history

Crowdsourced datasets from primary sources

Double-click on both maps, then click **Add Control Point** . Do this for at least three points.

Control Panel

Control Points
Advanced options
WARP IMAGE! →
Apply clipping mask when rectifying? Yes No

<http://maps.nysl.org/warper/>

Model

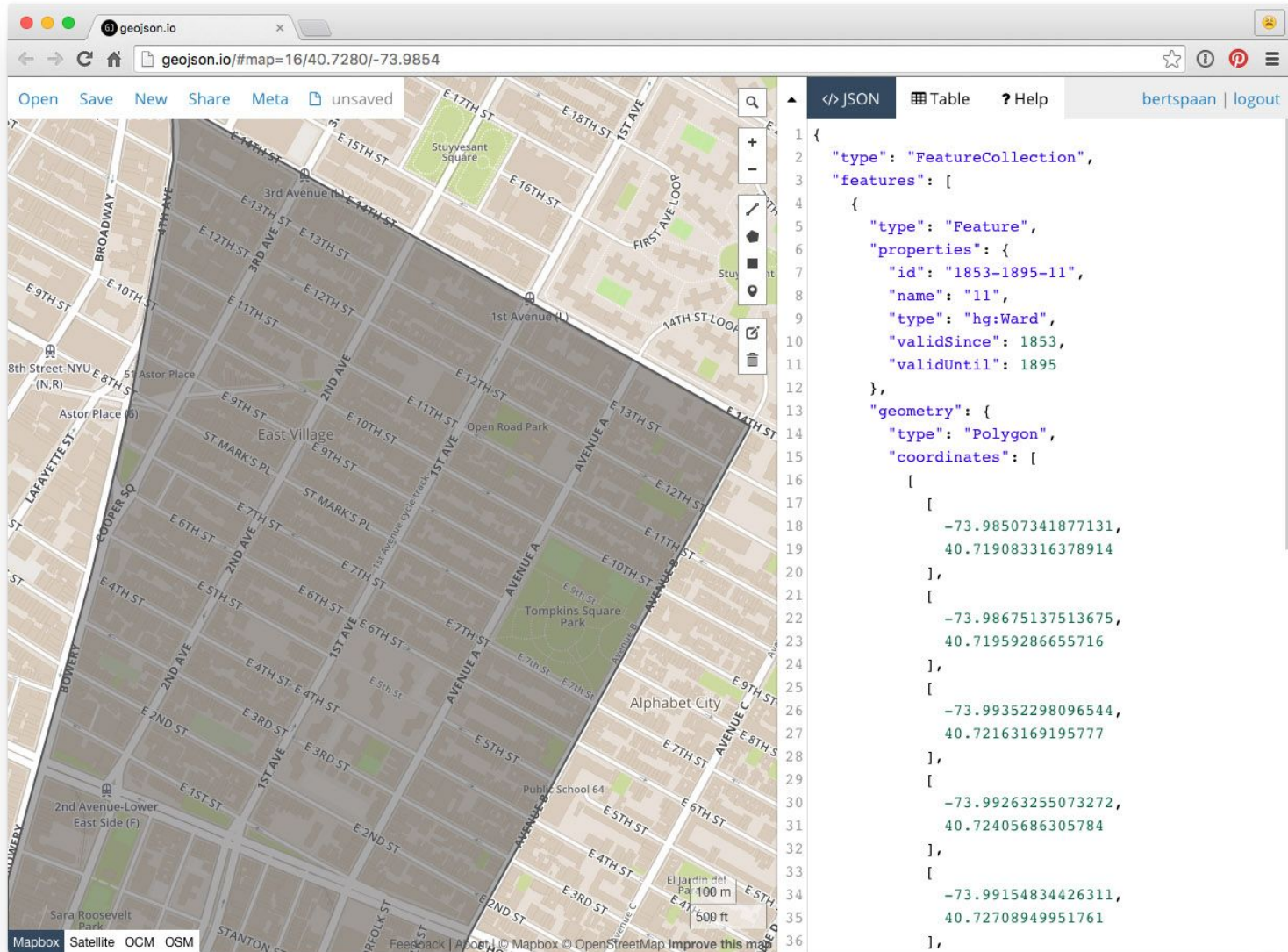
Space/Time **Object** (or “feature”) = a single geospatial concept (i.e. a populated place, a country, a street, etc.)

Space/Time Objects consist of one or more **Places in Time (PIT)** objects

PITs each can have their own:

- Name
- Geometries
- Date

GeoJSON for Ward 11



The screenshot displays the geojson.io interface. On the left, a map of Manhattan shows a shaded polygon representing Ward 11, bounded by Avenue A to the west, Avenue C to the east, and East 1st Street to the south. The map includes street names like Broadway, 3rd Avenue, and 1st Avenue, as well as landmarks like Stuyvesant Square and Tompkins Square Park. On the right, the JSON editor shows the following GeoJSON data:

```
1 {
2   "type": "FeatureCollection",
3   "features": [
4     {
5       "type": "Feature",
6       "properties": {
7         "id": "1853-1895-11",
8         "name": "11",
9         "type": "hg:Ward",
10        "validSince": 1853,
11        "validUntil": 1895
12      },
13      "geometry": {
14        "type": "Polygon",
15        "coordinates": [
16          [
17            [
18              -73.98507341877131,
19              40.719083316378914
20            ],
21            [
22              -73.98675137513675,
23              40.71959286655716
24            ],
25            [
26              -73.99352298096544,
27              40.72163169195777
28            ],
29            [
30              -73.99263255073272,
31              40.72405686305784
32            ],
33            [
34              -73.99154834426311,
35              40.72708949951761
36            ],
37            [
38              -73.98507341877131,
39              40.719083316378914
40            ]
41          ]
42        ]
43      }
44    }
45  ]
46 }
```

Reasoning to support complex queries

- What existed at this address from 1890-1900?
- What library resources are available about this geometry from 1910?
- Who lived in this ward in 1865?

Challenges

- What are the boundaries around place concepts when geometries conflict?
(What happens when places move?)
- How to use Space/Time objects in Discovery?

More Resources

Space/Time Architecture: <http://spacetime.nypl.org/architecture/>

Histogram API & data model definition: <https://github.com/histogram/api>