Linked Jazz: An Exploratory Pilot

DC 2011

The Hague, 23 September, 2011

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connected creativity

Experimenting with the application of Linked Open Data technology to digital archives of jazz history.

project's objectives

- To help **identify** and **give legibility** to the network of relationships among the jazz artists described in primary sources.
- To provide a **new perspective** on the interpretation of archival content.
- To **expose** archival data to the web and to contribute cultural heritage RDF triples to the LOD ecosystem.

FOAF in the archive

FOAF applied to represent relationships among people from the past.

- Core FOAF vocabulary.
- Extension of FOAF.

application scenario

Domain: history of jazz.

The jazz community is characterized by a high degree of interaction and connectivity.

Primary audience: researchers, jazz fans, and archivists.

"A Great Day in Harlem"



Red Allen, Buster Bailey, Count Basie, Emmett Berry, Art Blakey, Lawrence Brown, Scoville Browne, Buck Clayton, Bill Crump, Vic Dickenson, Roy Eldridge, Art Farmer, Bud Freeman, Dizzy Gillespie, Tyree Glenn, Benny Golson, Sonny Greer, Johnny Griffin, Gigi Gryce, Coleman Hawkins, J.C. Heard, Jay C. Higginbotham, Milt Hinton, Chubby Jackson, Hilton Jefferson, Osie Johnson, Hank Jones, Jo Jones, Jimmy Jones, Taft Jordan, Max Kaminsky, Gene Krupa, Eddie Locke, Marian McPartland, Charles Mingus, Miff Mole, Thelonious Monk, Gerry Mulligan, Oscar Pettiford, Rudy Powell, Luckey Roberts, Sonny Rollins, Jimmy Rushing, Pee Wee Russell, Sahib Shihab, Horace Silver, Zutty Singleton, Stuff Smith, Rex Stewart, Maxine Sullivan, Joe Thomas, Wilbur Ware, Dickie Wells, George Wettling, Ernie Wilkins, Mary Lou Williams, Lester Young

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http://dbpedia.org/resource/Marian_McPartland

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pilot

Method to create a dataset of RDF triples representing jazz artists and their connections.

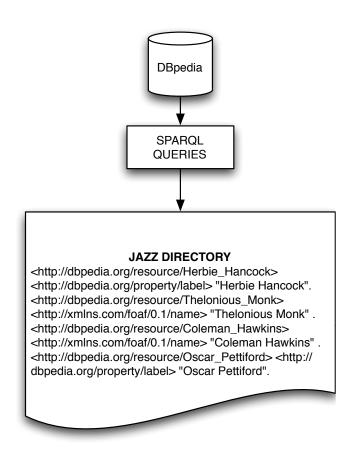
Sample: 12 transcripts of taped interviews with jazz musicians.

methodology

Create a directory of names.

Find matches between name directory and transcripts.

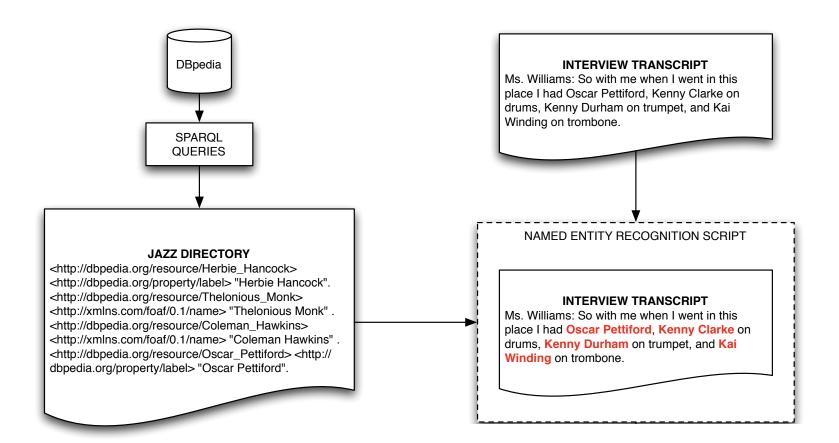
Record the relationship between the interview subject and the resulting matches as RDF triples.



Name Directory

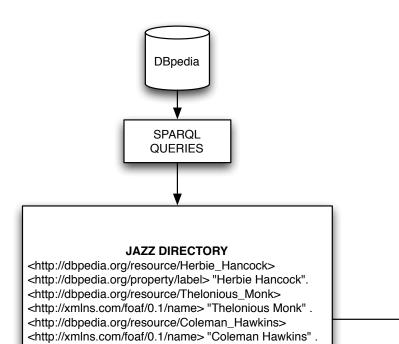
- Inconsistencies within DBpedia
- Refinement as an ongoing process
- 17,559 triples describing
 6,444 individuals

<http://dbpedia.org/resource/Artie_Shaw> <http://xmlns.com/foaf/0.1/name> "Artie Shaw" .



Searching and Matching

To search for and record the instance of the names, a Python script was written that parsed the jazz directory and searched for each name in the transcript.



INTERVIEW TRANSCRIPT

Ms. Williams: So with me when I went in this place I had Oscar Pettiford, Kenny Clarke on drums, Kenny Durham on trumpet, and Kai Winding on trombone.

NAMED ENTITY RECOGNITION SCRIPT

INTERVIEW TRANSCRIPT

Ms. Williams: So with me when I went in this place I had Oscar Pettiford, Kenny Clarke on drums, Kenny Durham on trumpet, and Kai Winding on trombone.

Encoding Connections

http://dbpedia.org/resource/Oscar_Pettiford http://dbpedia.org/resource/Oscar_Pettiford/http://dbpedia.org/resource/Oscar_Pettiford/http://dbpedia.org/resource/Oscar_Pettiford/http://dbpedia.org/resource/Oscar_Pettiford/http://dbpedia.org/resource/Oscar_Pettiford/http://dbpedia.org/resource/Oscar_Pettiford/http://dbpedia.org/resource/Oscar_Pettiford/<a href="http://dbpedia.org

dbpedia.org/property/label> "Oscar Pettiford".

The matches are recorded as RDF triples.

http://dbpedia.org/resource/

Mary Lou Williams

<http://xmlns.com/foaf/0.1/knows>

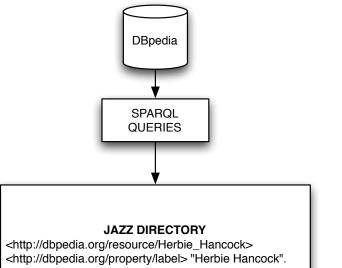
<http://dpedia.org/resource/Art_Blakey>

RESULTS FILE

http://xmlns.com/foaf/0.1/knowshttp://dbpedia.org/resource/Oscar_Pettiford.

http://xmlns.com/foaf/0.1/knows>http://dbpedia.org/resource/Kenny_Clarke.

http://xmlns.com/foaf/0.1/knowshttp://dbpedia.org/resource/Kenny_Durham.



<a href="http://dopedia.org/resource/Thelonious_Monk".http://xmlns.com/foaf/0.1/name "Coleman Hawkins" .http://dopedia.org/resource/Oscar_Pettiford http://dopedia.org/property/label "Oscar Pettiford".

Encoding Connections

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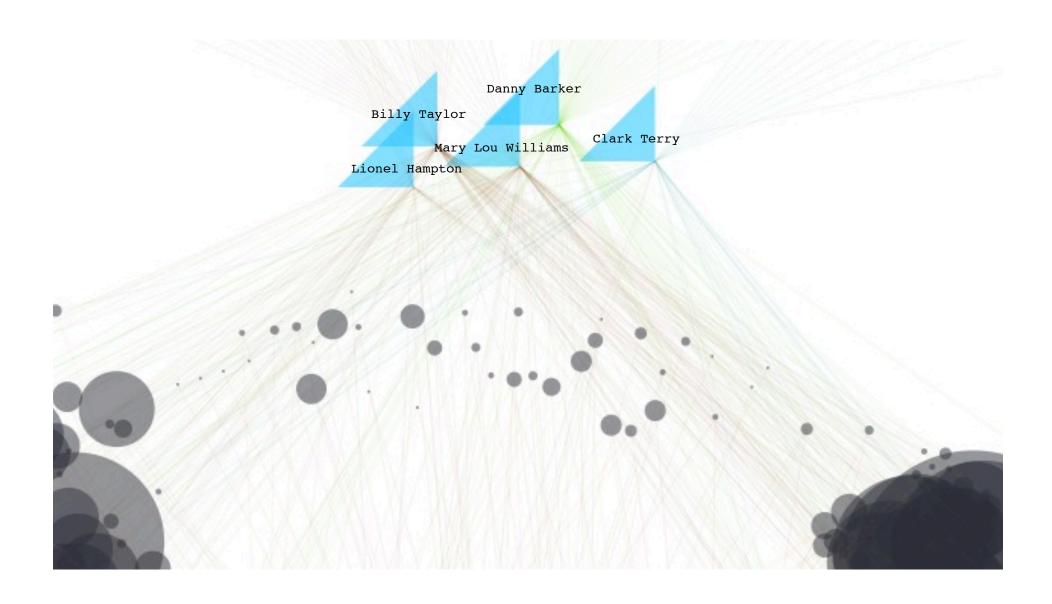
http://xmlns.com/foaf/0.1/knowshttp://dbpedia.org/resource/Kenny_Durham.

Danny Barker Billy Taylor Clark Terry Lionel Hampton Mary Lou Williams

Social graph revealing communities and social proximities of individual jazz musicians based on foaf:knows relationships identified in interview transcripts.

(generated using the JavaScript InfoVis Toolkit's force-directed algorithm)

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Nature of the connections identified remains implicit. We can only assume that jazz artists citing other jazz artists are likely to have some kind of social connection.

degree of knowing someone

doesn't know rel:knows_of rel:knows by_reputation rel:knows_in_passing rel:has_met foaf:knows rel:acquaintance_of rel:close_friend_of rel:influenced_by mo:collaborated_with rel:mentor_of



"No, we jammed here. **Thelonious Monk** - I remember once one morning I got sleepy so I said, 'I'm going to bed.' When the guys left, the door was open and Monk rang the doorbell and he came inside [...] I screamed. He yelled too and ran out the door and ran in to the closet and the clothes fell on him."



"...and this was the, like the biggest jazz festival ever.

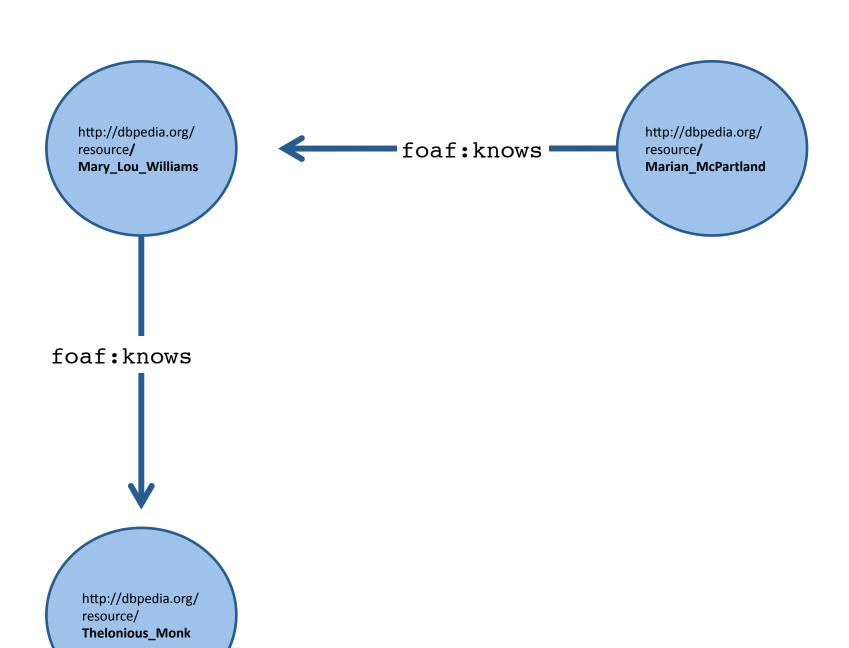
Mary Lou Williams played it and I played it and

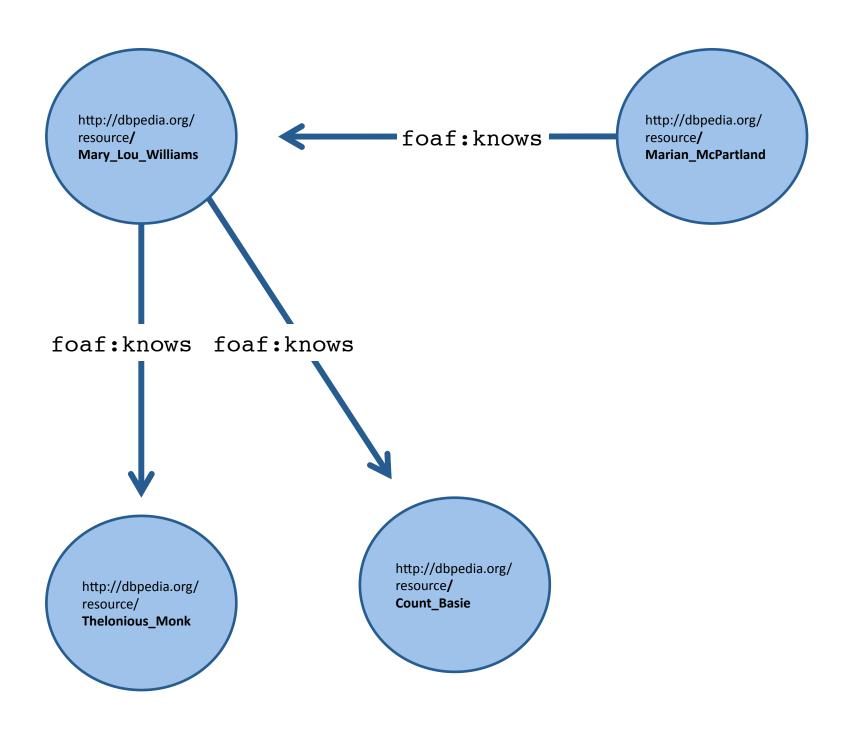
Toshiko Akiyoshi had her big band, and I mean it was
a large event."

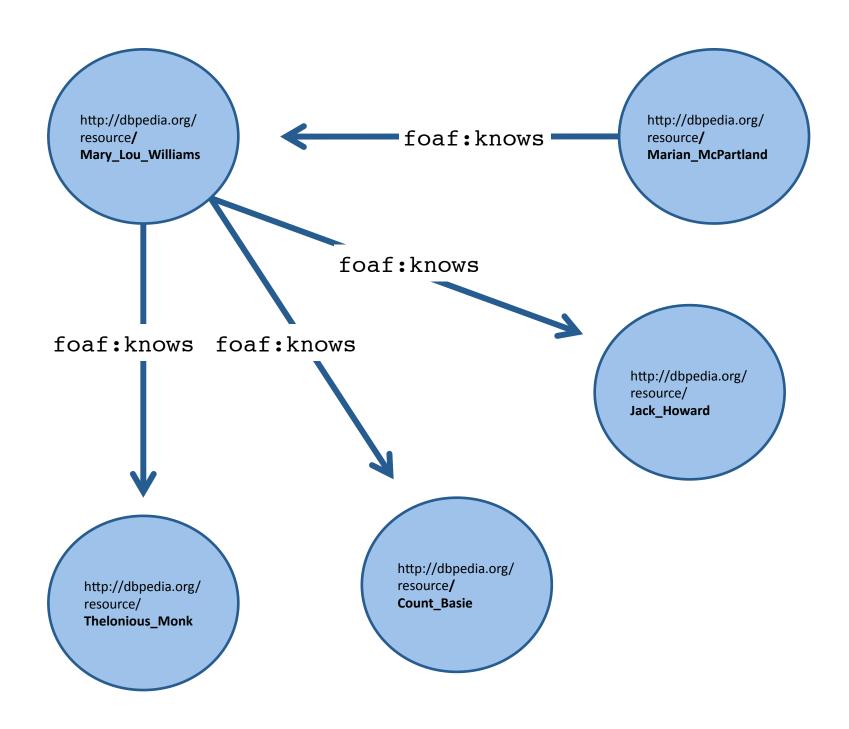


"Later on after I met **Count Basie** and Art Tatum, Buck showed me a run that Art Tatum - it was his famous run. He made it from top to bottom and Buck had taught me that run."

"Jack Howard was an influence as far as giving me strength on the piano... He taught me a lot of professional things it would have taken me years and years to learn."







"...the biggest jazz festival ever. **Mary Lou Williams** played it..."

rel: knows of

"Later on after I met Count Basie ..."

foaf: knows

"Jack Howard was an influence as far as giving me strength on the piano... He taught me a lot of professional things it would have taken me years and years to learn."

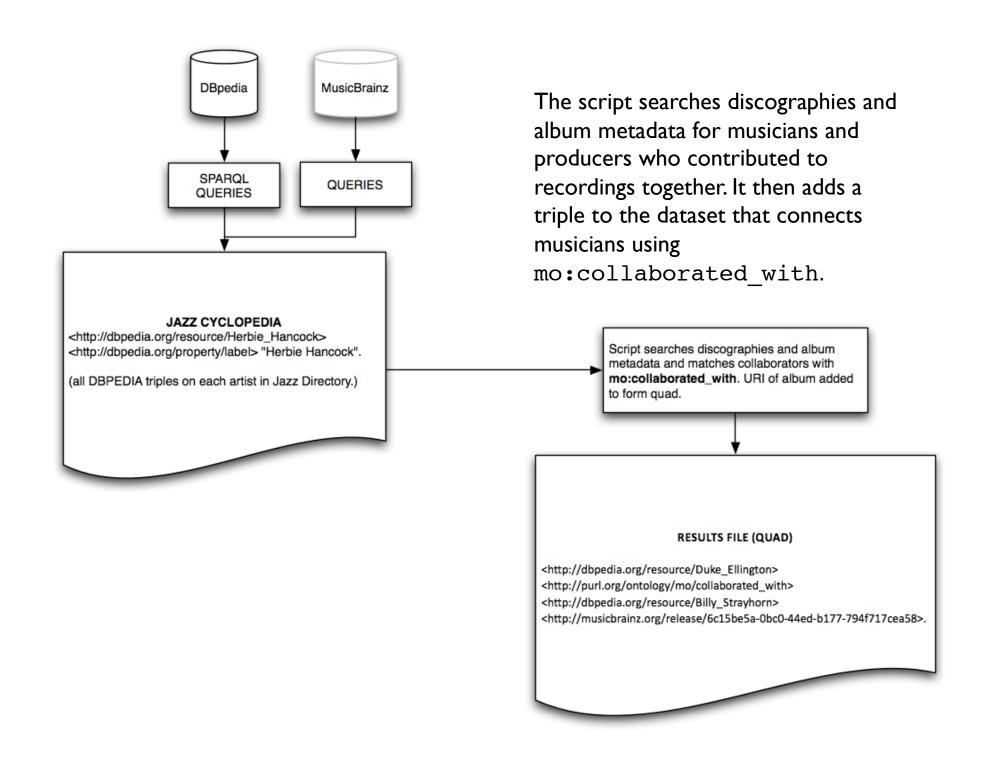
rel: mentor of

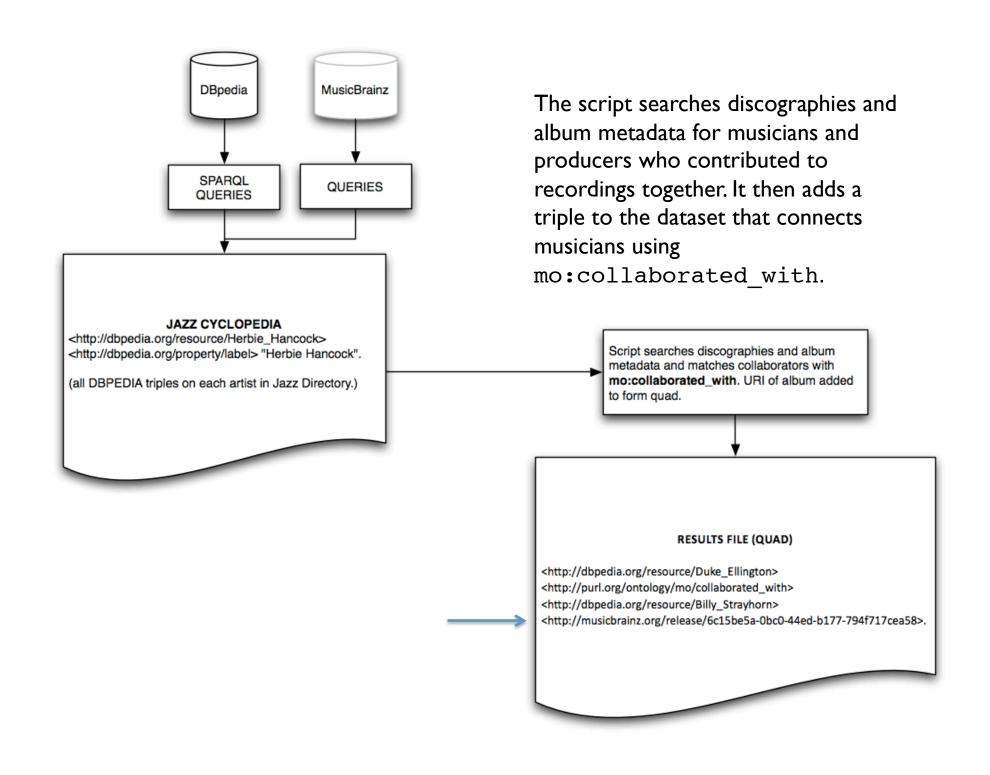
"No, we jammed here. Thelonious Monk - I remember once one morning I got sleepy so I said...

rel: close friend of

current work

• Relationships refinement.

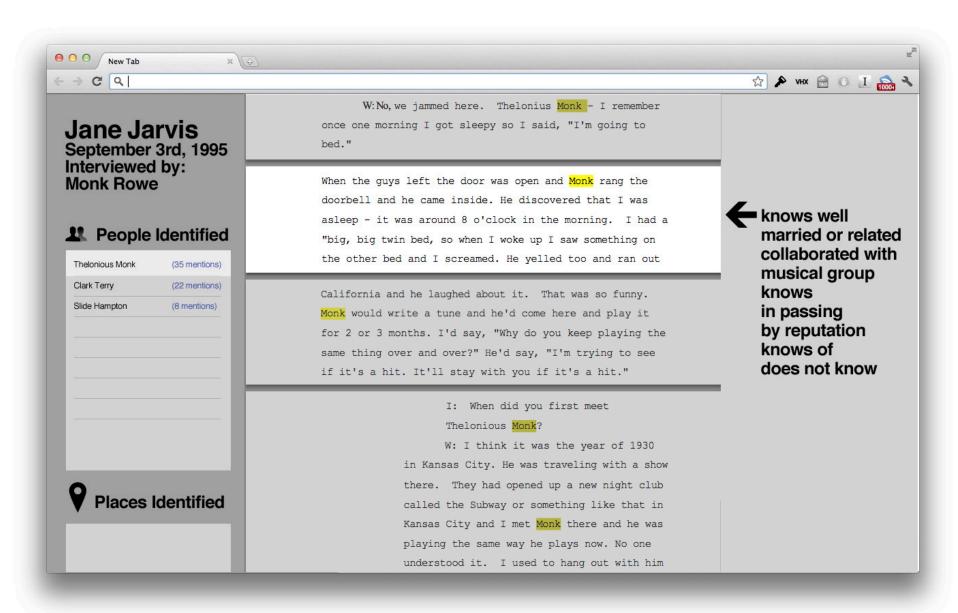




future work

• Crowd-sourcing for relationships assessment/validation.

Crowd Sourcing to Domain Experts



future work

• Linked jazz data available for linked dataenabled applications.



Team members Cristina Pattuelli Chris Weller Ben Fino-Radin Genevieve Szablya

Sponsors







Thank you!

Questions?

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