

LINKED JAZZ



Using Linked Open Data to Map Relationships Among Musicians

Bill Levay, Pratt Institute
48th Annual ARSC Conference, May 16, 2014

Overview

- Project goals
- Why Linked (Open) Data?
- What has Linked Jazz done so far?
- Where is Linked Jazz going in the future?

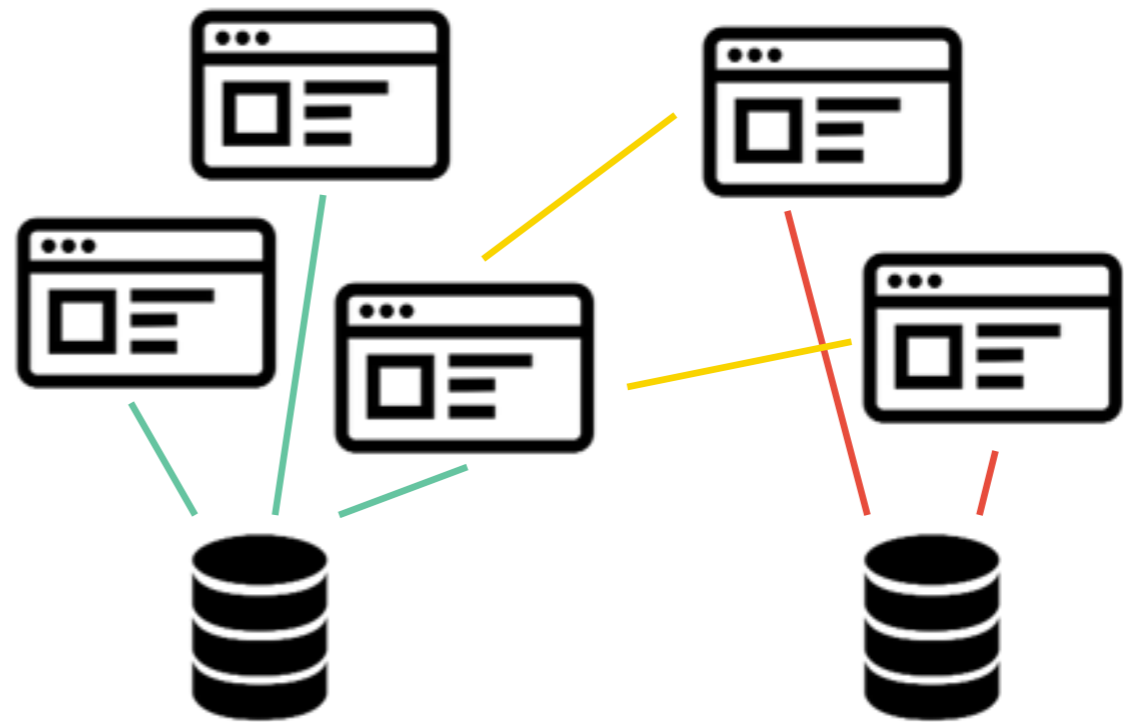
The Project

- Experiment with applying Linked Open Data technology to archival materials in order to enhance visibility and access
- Develop tools to facilitate discovery and analysis of the archives of jazz history
- Make Linked Jazz dataset openly available on the web

From a web of documents...

Current landscape:

- Lots of linked documents
- Databases are silos of information
- User interprets how documents are related



Linked Data

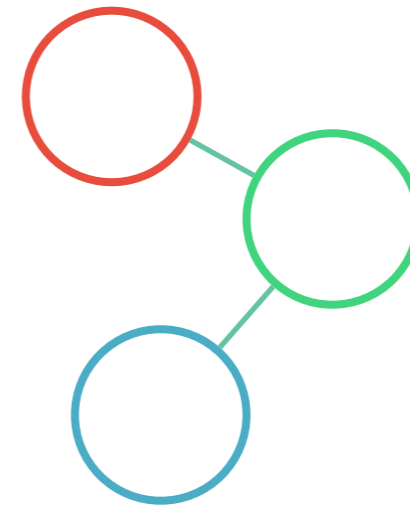
...to a web of data

- Databases are interconnected



- Data is structured in a standardized way

- Relationships between data are made explicit



- URIs point to data `<http://dbpedia.org/resource/John_Coltrane>`



John Coltrane

From Wikipedia, the free encyclopedia

"Coltrane" redirects here. For other uses, see Coltrane (disambiguation).

John William Coltrane, also known as "**Trane**" (September 23, 1926 – July 17, 1967),^[1] was an American **jazz saxophonist** and composer. Working in the **bebop** and **hard bop** idioms early in his career, Coltrane helped pioneer the use of **modes** in jazz and was later at the forefront of **free jazz**. He organized at least fifty recording sessions as a leader during his career, and appeared as a sideman on many other albums, notably with trumpeter **Miles Davis** and pianist **Thelonious Monk**.

As his career progressed, Coltrane and his music took on an increasingly spiritual dimension. His second wife was pianist **Alice Coltrane** and their son **Ravi Coltrane** is also a saxophonist. Coltrane influenced innumerable musicians, and remains one of the most significant saxophonists in music history. He received many posthumous awards and recognitions, including **canonization** by the **African Orthodox Church** as **Saint John William Coltrane** and a special **Pulitzer Prize** in 2007.^[2]

Contents [hide]

1 Biography

- 1.1 Early life and career (1926–1954)
- 1.2 Miles and Monk period (1955–1957)
- 1.3 Davis and Coltrane
- 1.4 First albums as leader
- 1.5 First years with Impulse Records (1960–1962)
- 1.6 Classic Quartet period (1962–1965)

John Coltrane

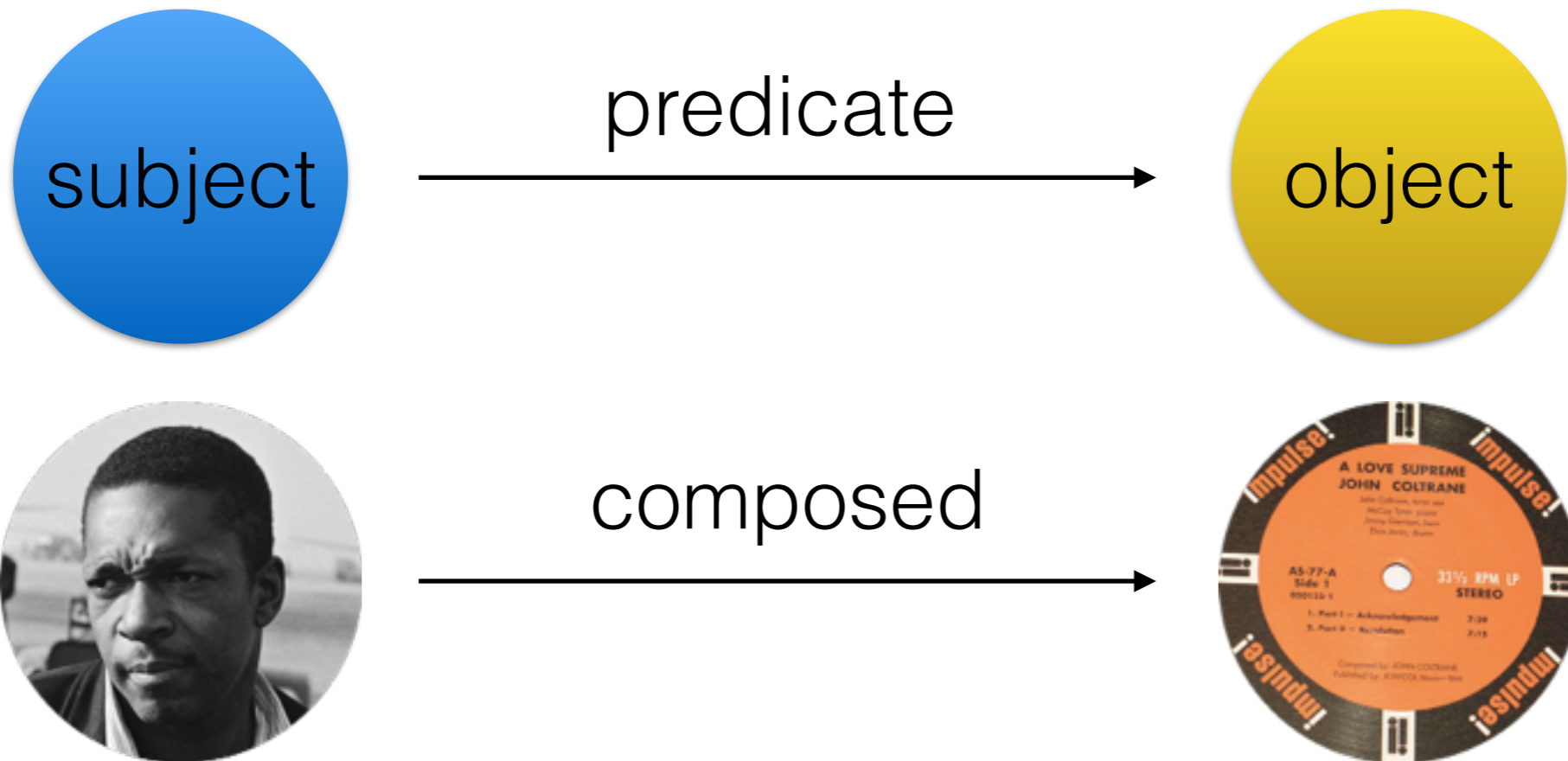


Coltrane in 1963

Background information

Birth name	John William Coltrane
Also known as	"Trane"
Born	September 23, 1926 Hamlet, North Carolina, USA
Died	July 17, 1967 (aged 40)

RDF Triples























```
<http://dbpedia.org/resource/John\_Coltrane>  
<http://purl.org/ontology/mo/composer>  
<http://dbpedia.org/resource/A\_Love\_Supreme>
```

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dbpedia-owl:birthPlace	<ul style="list-style-type: none"> dbpedia:Hamlet,_North_Carolina dbpedia:United_States dbpedia:North_Carolina
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dbpedia-owl:wikiPageExternalLink	<ul style="list-style-type: none"> http://www.johncoltrane.com/ http://www.mossiehigh.com/Coltrane http://www.johncoltrane.com http://www.infography.com/content/736735270236.html http://jazztimes.com/articles/24832-john-coltrane-images-of-trane http://www.colby.edu/music/honors/Bertholf.pdf

http://dbpedia.org/resource/John_Coltrane

Linked Open Data

Best Practices

-  Available on the web with an open license 
-  Available as structured data (formatted, editable)  
-  Use non-proprietary formats (CSV instead of Excel)   
-  Use URIs to denote things so people can 'point' to it    
-  Link your data to other data and provide context     

Linked Jazz, so far

- Get the names of musicians
- Find the names in oral history transcripts
- Describe the relationships and map them

First phase was funded through an OCLC/ALISE Library and Information Science Research grant.

Linked Jazz Name Directory

- *Data processing:*
Extract and ingest names from DBpedia and name authority files (LC & VIAF) via Python scripts
- *Human curation:*
Manually refine results with the Curator Tool
- *Resulting Linked Jazz Name Directory:*
~9,000 individuals represented by triples, e.g.:

```
<http://dbpedia.org/resource/Mary\_Lou\_Williams>  
<http://xmlns.com/foaf/0.1/name> "Mary Lou Williams"
```

Curator Tool

LINKED JAZZ 

Perfect (965) High (1,319) Medium (2,498) Low (1,725) Many (1,256) None (1,089) | Verified (13) Deleted(1) | 

Big Joe Williams	1903 - 1982			VI AF			
Claude Williams	1908 - 2004			VI AF			
Fess Williams	1894 - 1975			VI AF			
Harold Ivory Jr' Williams	1949 - 2010			VI AF			
Joe Williams	1918 - 1999			VI AF			
Johnny Williams	1905 - 1984			VI AF			
Mary Lou Williams	1910 - 1981			VI AF			
Paul Williams	1915 - 2002			VI AF			
Richard Williams	1931 - 1985			VI AF			
Robert Pete Williams	1914 - 1980			VI AF			
Skippy Williams	1916 - 1994			VI AF			
Spencer Williams	1889 - 1965			VI AF			
Tony Williams	1945 - 1997			VI AF			
Bob Wills	1905 - 1975			VI AF			

Mary Lou Williams



Mary Lou Williams (May 8, 1910 – May 28, 1981) was an American jazz pianist, composer, and arranger. Williams wrote hundreds of compositions and arrangements, and recorded more than one hundred records (in 78, 45, and LP versions). Williams wrote and arranged for such bandleaders as Duke Ellington and Benny Goodman, and she was friend, mentor, and teacher to Thelonious Monk, Charlie Parker, Miles Davis, Tadd Dameron, Dizzy Gillespie, and many others.

 LIBRARY OF CONGRESS

<http://id.loc.gov/authorities/names/n82025133>

altLabel | Scruggs, Mary Elfrieda, 1910-1981


prefLabel | Williams, Mary Lou, 1910-1981

LINKED JAZZ 

Transcript Analyzer

- Oral history transcripts from the Smithsonian, Rutgers, Hamilton College, University of Michigan
- Automated named-entity recognition enabled through the use of natural language processing
- Splits interview content into question-and-answer segments, later used in the Linked Jazz 52nd Street crowdsourcing tool

Transcript Analyzer

LINKED JAZZ  [Load Transcript](#) [Reprocess Transcript](#) [Publish](#)

[Names](#) [Partials](#) [Others](#) [Meta-Structure](#) [Rules \(6\)](#)

- Bill Coleman
- Bill Sousa
- Billie Holiday
- Billy Taylor
- Black Actors
- Blanche Calloway
- Boo Frazier
- Brother John Sellers
- Bubber Miley
- Buck Clayton
- Bud Powell

going with Bubbles. He'd come to Pittsburgh and he'd say, Now I'm going to teach you some of my things. " **Buck** was a great teacher for me. We'd be in the Subway jamming and he'd say, "Hey, look, girl, you're like me. Come over here. I'm going to teach you something. " He showed me runs. 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. He said, "Now when you get in front of **Count Basie** and **Art Tatum**, you make it like this," and he turned it around. One night I was jamming with Art Tatum. Art played and I was playing so I played this run that **Buck** had taught me and **Art Tatum** said, "Hey, what's that? Play it again. " For about 3 or 4 years he and **Count Basie** were making this run the wrong way. That's the type of musician **Buck** was. He'd show me something but he didn't want me to play it when they were around, 'cause he didn't want them to learn it. They came around and would hear me turn it around and make it some other way.

52nd Street Crowdsourcing Tool

LINKED JAZZ



Revealing the relationships
of the jazz community

About | Login

Let's get started!

31% of Relationships Defined



choose a musician



explore the
conversation

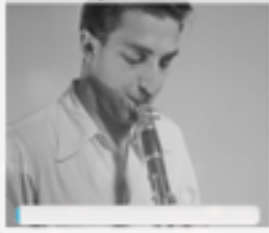


uncover relationships



grow our network

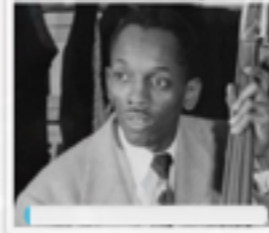
Buddy DeFranco



Sam Rivers



John Levy



Louie Bellson



Bob Haggart



Stanley Kay



Charles McPherson



Mary Lou Williams



Bill Berry






We need your feedback, tell us what you think

LINKED JAZZ



52nd Street Crowdsourcing Tool

LINKED JAZZ  Milt Hinton talks about *Cannonball Adderley*  (1 of 1 mentions)  Transcript Source [About](#) | [Account](#)

Cannonball Adderley
Louis Armstrong
Lil Armstrong
Pearl Bailey
George Barnes
Count Basie
Louis Bellson
Ben Bernie
Chu Berry
Bill Berry

Joe Williams (Interviewer)

It was beautiful to see the expression on you face and Osie's and Hank, when the new music was put in front of you. I mean like "ayyy, yeah, hey look what we got," you know. Wow, like it was like somebody bought you a new gift. Cause Jimmy Jones was writing then, and...

Oh, yeah, well he was contractor, you know, Jimmy Jones. We could really read music and that was the thing that I thank my mother this very day for that, because I wanted to play everything, and she says "you got to learn to read that music. " And that's what we could do, we could read. And young Cannonball Adderley's on the boat here, and yesterday on the Meet the Stars he was telling some people about a picture I have, I have a picture I took of Cannonball, sitting down with a stack of music and it's falling down off the music stand, all over the floor. And he says "I got that picture of yours. " I say well "that was on a date with Barry Galbraith on guitar, Art Farmer on trumpet, Cannonball Adderley on saxophone, and yours truly on bass. No piano, no drums. I said "it's the hardest record date I think I ever made in my life. " John Benson Brooks wrote a thing called "Alabama Suite" and [inaudible] off everybody. And Cannonball Adderley was sitting there looking at that music, and he played every note on it, it was so beautiful.

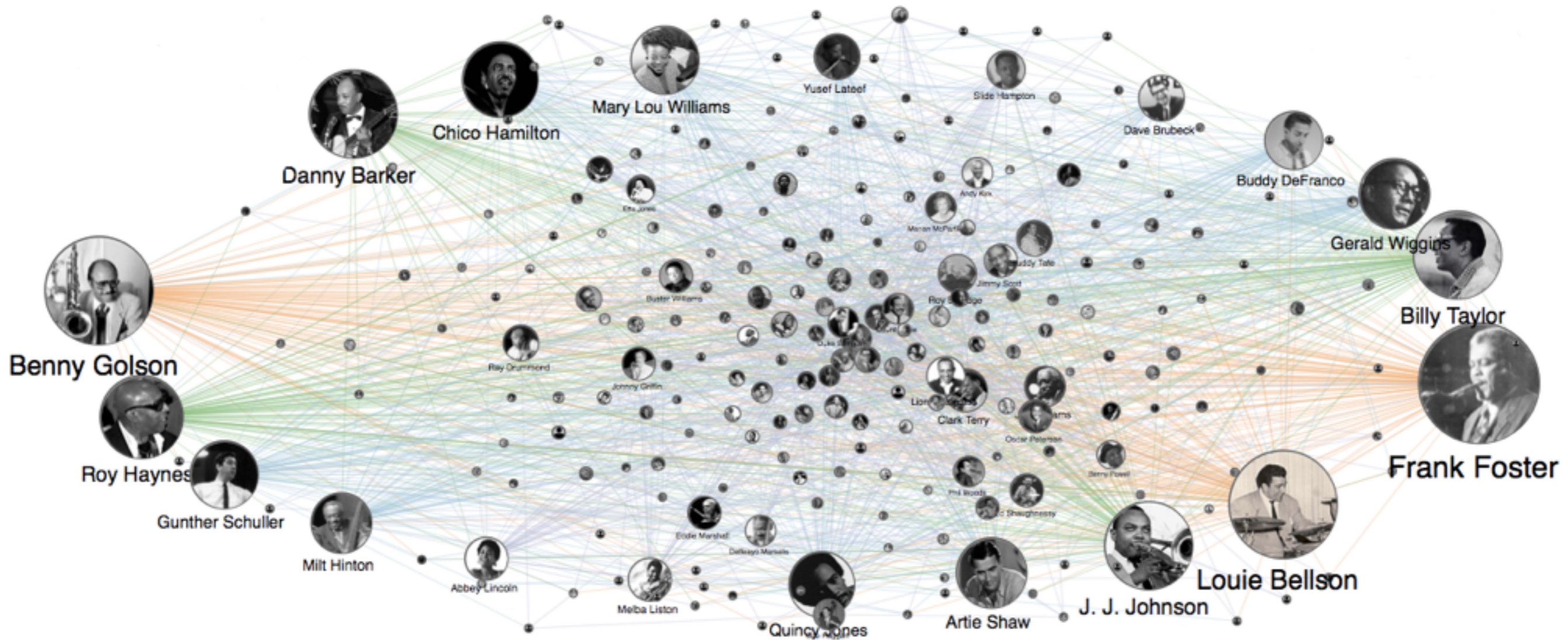
Based on this text, how would you describe this relationship?

Knows of
Has met
Acquaintance of
Close friend of
Collaborated with
Influenced by
Mentor of
Skip
Add Comment

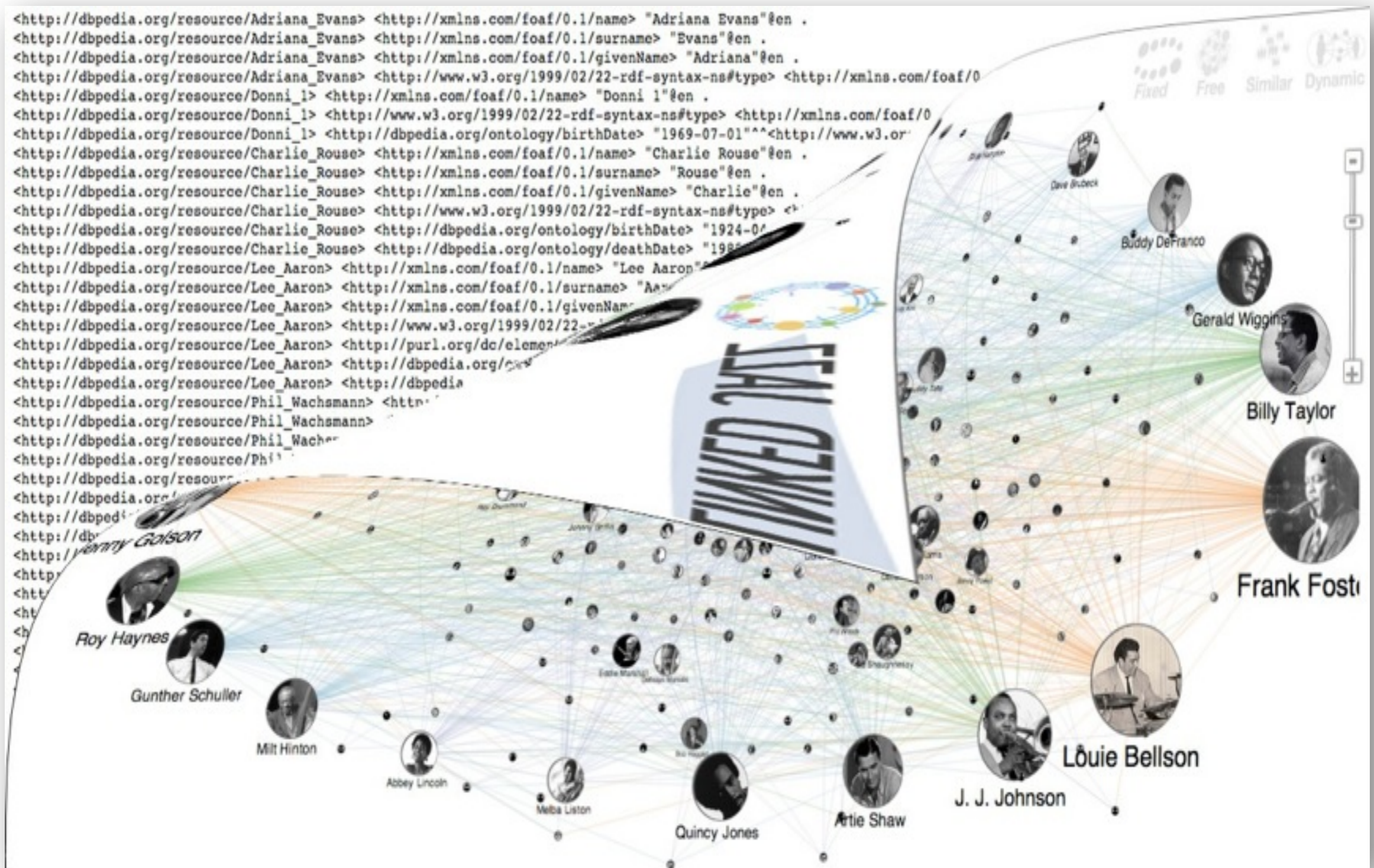
0% Complete!

What is this? Feedback

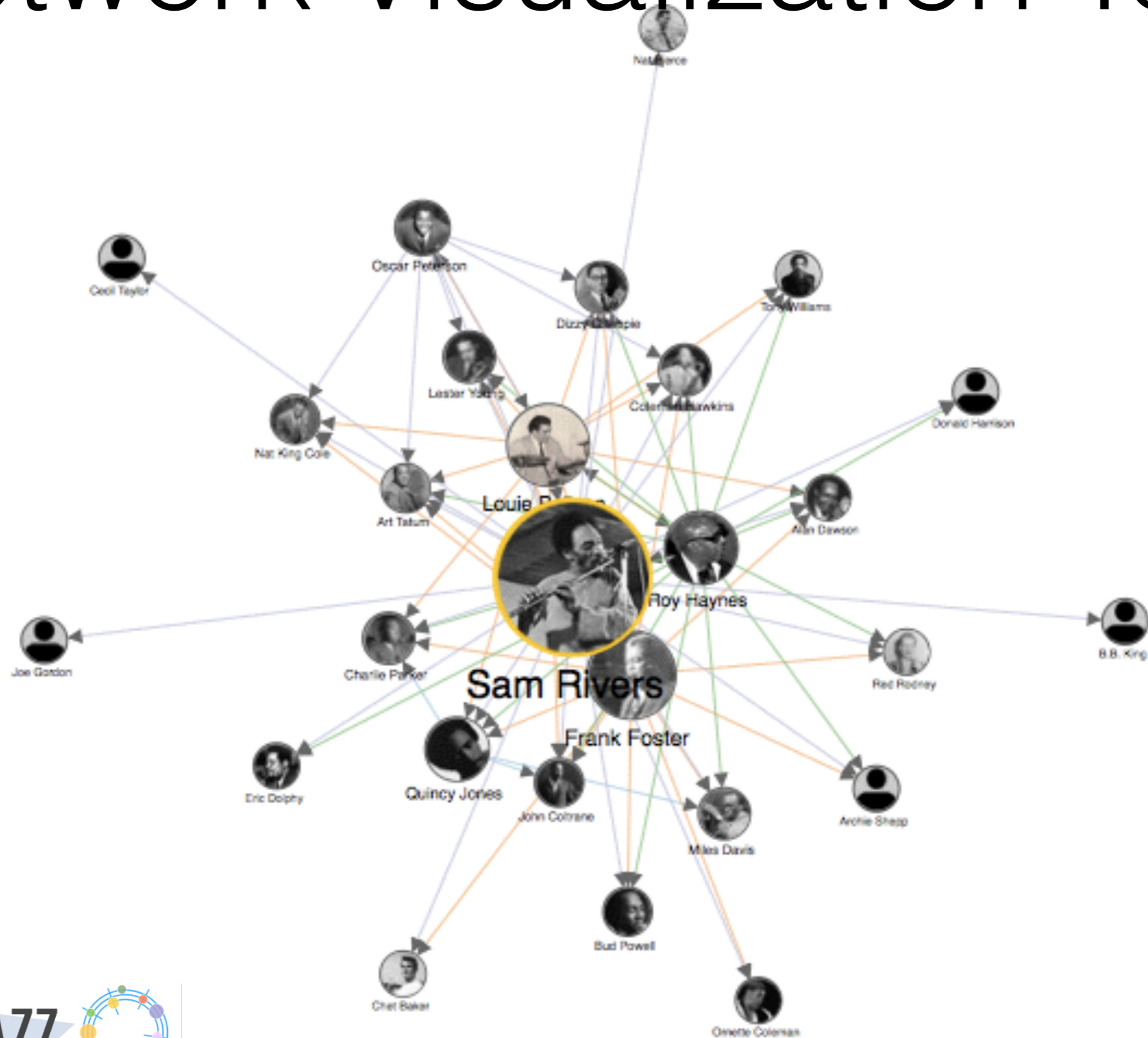
Network Visualization Tool



Network Visualization Tool



Network Visualization Tool



What's Next?

- Women in Jazz
 - Rutgers Women in Jazz project
 - Wikipedia Edit-a-Thons

What's Next?

- Women in Jazz
- Tulane University Hogan Jazz Archive Photo Collection

Search

Search [Advanced Search](#)Results
2 of 9[Home](#) >> [Hogan Jazz Archive Photography Collection](#) >> **Mahalia Jackson**[Reference URL](#)[Share](#)[Add tags](#)[Comment](#)

Rate ★★★★★

[Save to favorites](#)

Mahalia Jackson

[View Description](#)[Download](#)[Print](#)

What's Next?

- Women in Jazz
- Tulane University Hogan Jazz Archive Photo Collection
- Freely available jazz discographies:
Columbia University's J-DISC

Basic Search

Type Filter

<Any>

GO

God Bless The Child

Song:

God Bless the Child

Playtime: 2:33

Session Information

Session: Count Basie August 31, 1950

Order: 2

Track Production Status: Master

Session Personnel *(complete session personnel)*

Clark Terry (trumpet)
Buddy DeFranco (clarinet)
Wardell Gray (tenor saxophone)
Count Basie (piano)
Freddie Green (guitar)
Jimmy Lewis (bass)
Gus Johnson (drums)

Track Personnel Changes *(variances from session personnel)*

Billie Holiday (vocal)

< Session's Previous track | total: 6 | Session's Next track >

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- Archival metadata from EAD finding aids
- Redesign tools based on user feedback

You Can Help

- Explore our network maps and our tools at linkedjazz.org
- Use our 52nd Street Crowdsourcing Tool and give us feedback
- Use our data: linkedjazz.org/api
- Suggest other openly available data we could mash up with our dataset

LINKED JAZZ



Thanks for listening!

Visit linkedjazz.org for more information.

Many thanks to Dr. Pattuelli and the entire Linked Jazz team.

Bill Levay | wjlevay@gmail.com | wjlevay.net

References

- Pattuelli, M. C., et al. (2013). Crafting linked open data for cultural heritage: mapping and curation tools for the Linked Jazz project. *Code4Lib*, 21. <http://journal.code4lib.org/articles/8670>
- Pattuelli, M. C., et al. (2013). Linked Jazz 52nd Street: a LOD crowdsourcing tool to reveal connections among jazz artists. *Digital Humanities 2013*, July 16-19, 2013, Lincoln, Nebraska, USA.

Image Credits

- John Coltrane
http://upload.wikimedia.org/wikipedia/commons/6/66/John_Coltrane_1963.jpg
- “A Love Supreme” label
<http://www.vinylrecords.ch/J/JO/John/John-Coltrane/Love/john-coltrane-love-supreme.html>
- Linked Jazz screenshots
<http://linkedjazz.org>