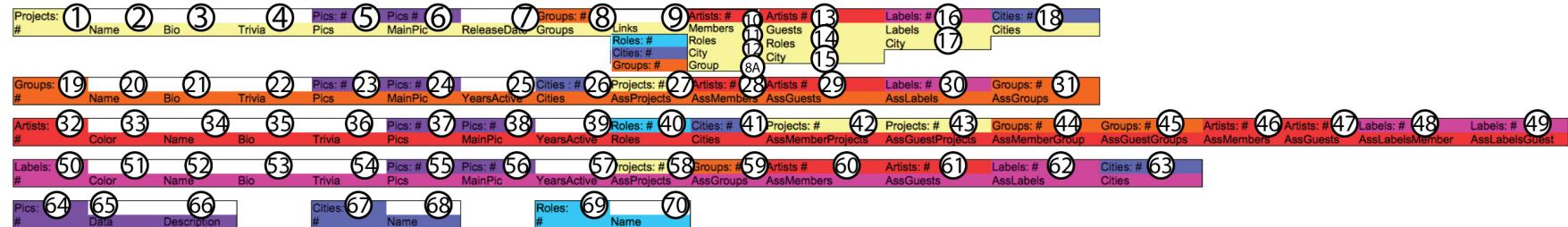


<http://philogb.github.io/jit/static/v20/Docs/files/Visualizations/Hypertree.js.html>
 visualized, it looks like this:
<https://philogb.github.io/jit/static/v20/Jit/Examples/Hypertree/example1.html>
<https://philogb.github.io/jit/static/v20/Jit/Examples/Hypertree/example2.html>

This graph uses the example2 as a basic template. Example1 is a better visualization of the hyperbole geometry, but the example2 uses a nonhierarchical structure rather than a tree structure.



Ursa Polaris Records

The goal of this site is to provide an interesting way for music fans to browse and listen to music, while providing independent musicians with a useful and compelling way to manage their careers. The primary means of this is a musicians' graph, a web application that displays the social and professional connections between musicians and the people who help them share their music with the world. The graph is populated by information input by users in a manner similar to Wikipedia, using the same information found in liner notes.

The first stage of this application is building a basic design of the graph itself. This document covers this stage, and suggests a few potential future updates to the application.

The graph consists of multiple layers, one each for individual artists, groups, , and their projects. These layers are then projected onto a hyperbolic plane, with an asymptote around the edge of the graph's containing circle. The hyperbolic geometry was pioneered by Xerox's PARC laboratory in the '80s, and referred to as a "hypertree". In the modern collaborative Internet age, open-source programmers have released versions of this hypertree, with various adjustments. Some examples are above.

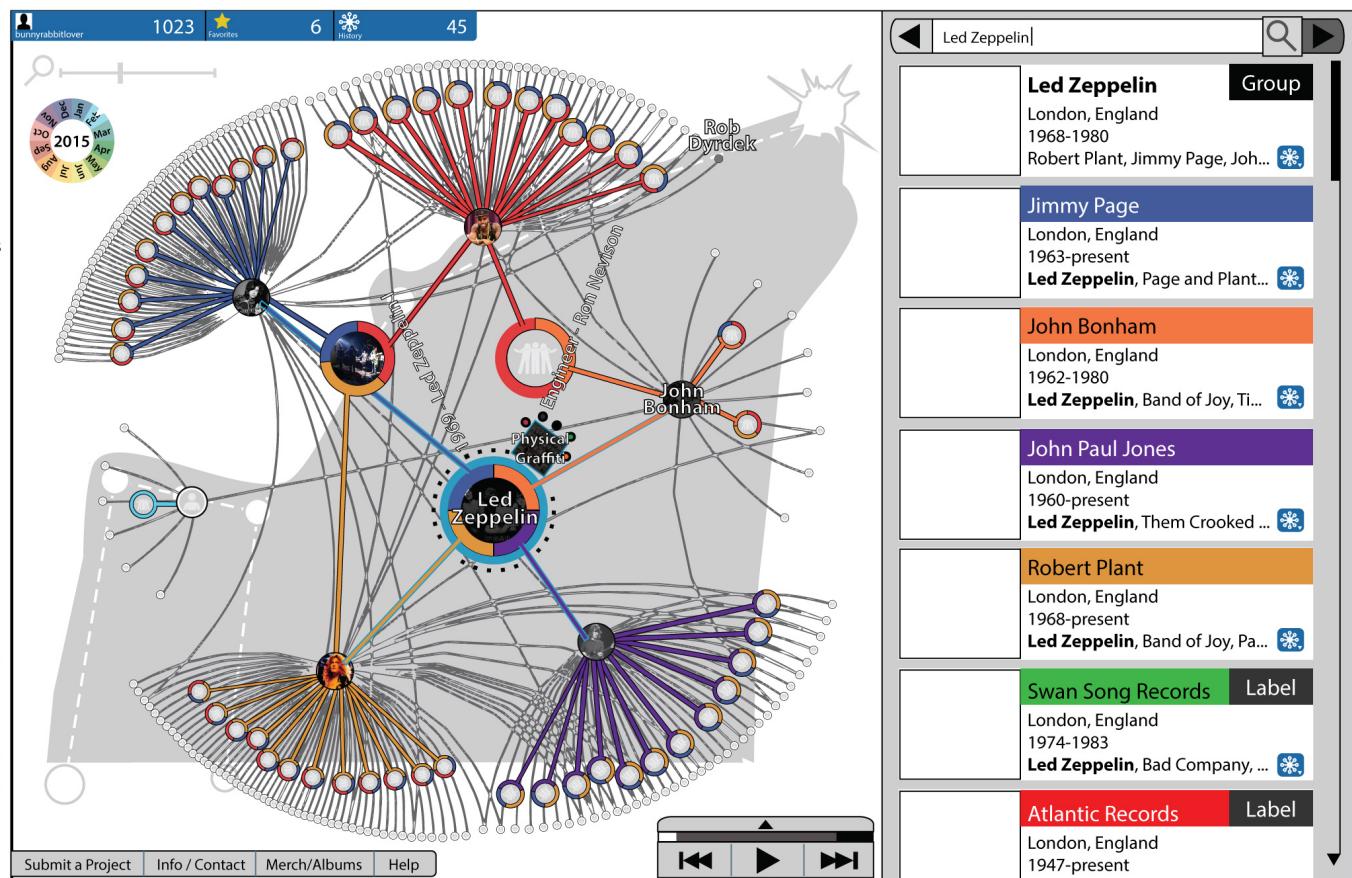
The basic design of the graph is a base layer of Artists (32) that are displayed as different nodes displaying thumbnails of their main picture (38) . Around the edges, the size of the nodes gets smaller, so after a certain point the main picture should disappear, maybe under 20 pixels or so. When the node is clicked once, it should light up all the connections to associated groups as a member or guest (44/45). When it is double clicked, it should center.

The second layer displays the Groups (19) the artists are associated with (44/45). For associated projects as a guest (45), a gray line extends to that group. For associated projects as a member, the artist's color (33) extends to groups the artist is a member of (44). It connects to a slice of the donut graph surrounding each group's main picture (24). The size of the slice is calculated by finding the total number of projects that a specific member of a group worked on, and dividing it by the total number of group members on every project. Speaking in data terms, it's counting the intersection of a group's associated projects (27) and an artist's associated projects as a group member (44), as long as the group the artist is involved with (8A) matches the group (19), and dividing it by the count of the total number of group members (10) involved in each of the group's projects (27), for the relevant group (8A).

The third layer displays projects that a group has worked on (27). These projects are displayed as small gray squares surrounding a group. The squares are not visible unless the group's picture is clicked. Again, if double clicked, the graph should re-center.

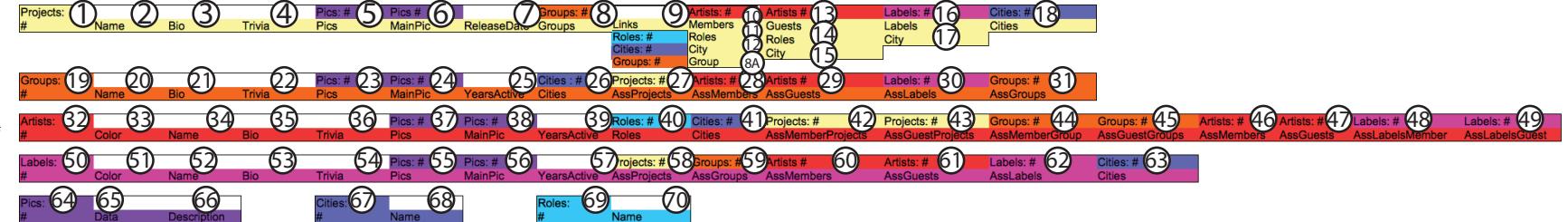
When a small gray square is clicked, it should expand into a small thumbnail of the album art, and the project's guests (13) should be displayed as small colored circles surrounding the thumbnail, with the color corresponding to the guest's color (33).

The music player should be able to connect to Spotify, Bandcamp, and Soundcloud.



<http://philogb.github.io/jit/static/v20/Docs/files/Visualizations/Hypertree-js.html>
 visualized, it looks like this:
<https://philogb.github.io/jit/static/v20/Jit/Examples/Hypertree/example1.html>
<https://philogb.github.io/jit/static/v20/Jit/Examples/Hypertree/example2.html>

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The graph consists of multiple layers, one each for individual artists, groups, , and their projects. These layers are then projected onto a hyperbolic plane, with an asymptote around the edge of the graph's containing circle. The hyperbolic geometry was pioneered by Xerox's PARC laboratory in the '80s, and referred to as a "hypertree". In the modern collaborative Internet age, open-source programmers have released versions of this hypertree, with various adjustments. Some examples are above.

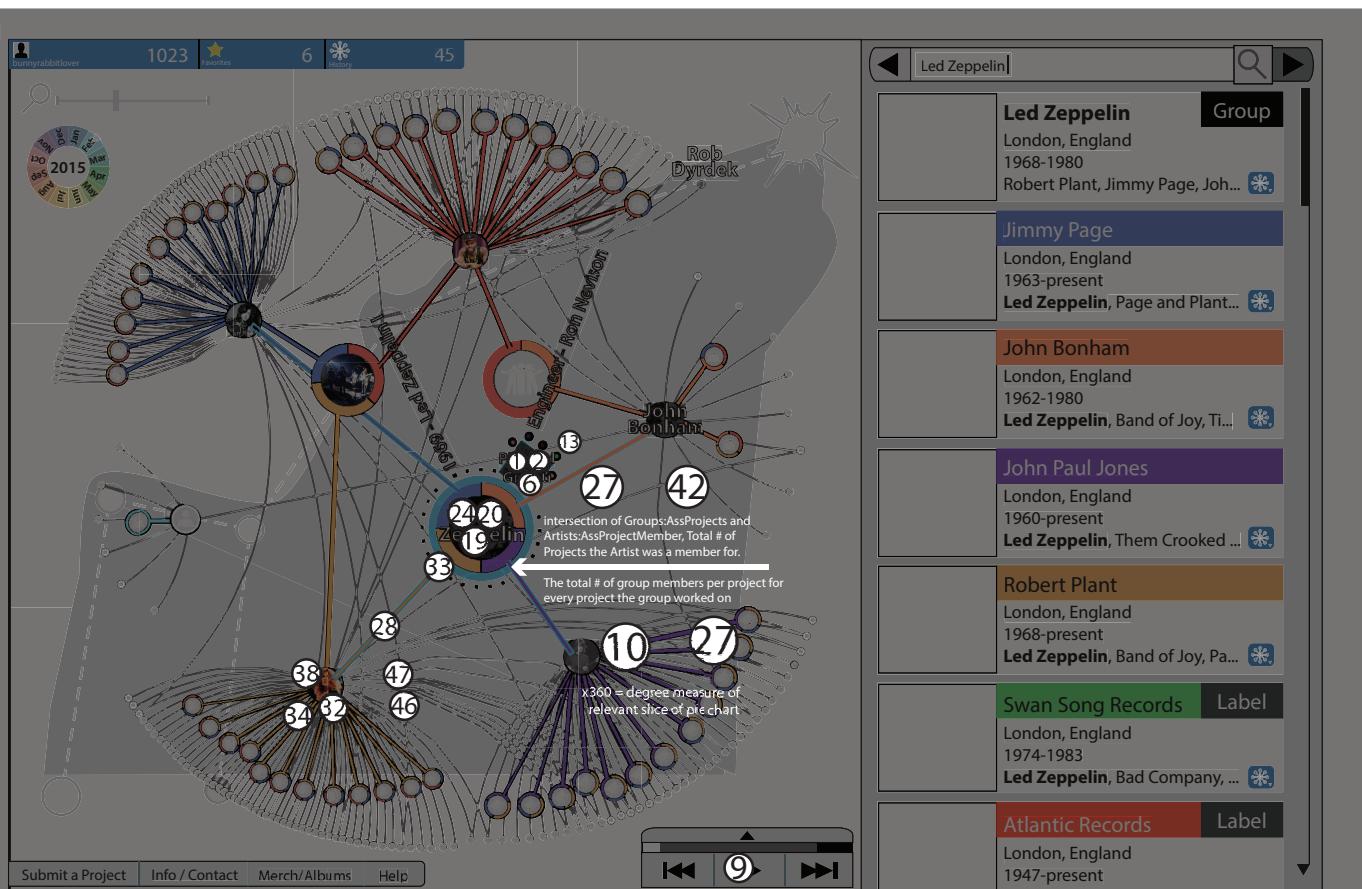
The basic design of the graph is a base layer of Artists (32) that are displayed as different nodes displaying thumbnails of their main picture (38) . Around the edges, the size of the nodes gets smaller, so after a certain point the main picture should disappear, maybe under 20 pixels or so. When the node is clicked once, it should light up all the connections to associated groups as a member or guest (44/45). When it is double clicked, it should center.

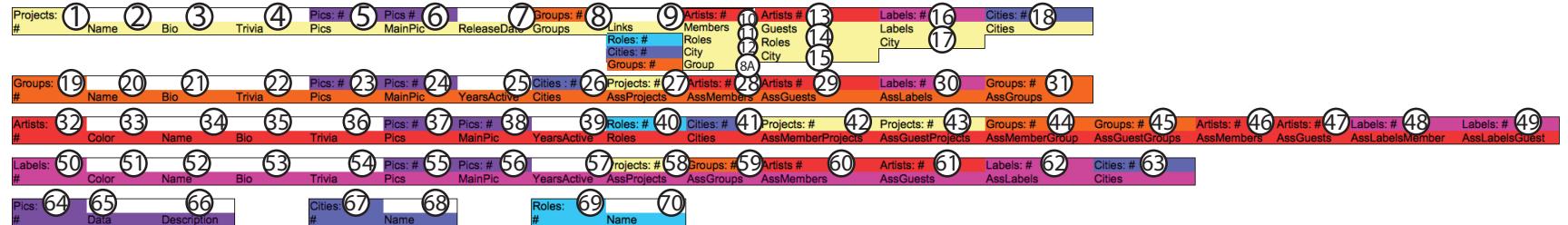
The second layer displays the Groups (19) the artists are associated with (44/45). For associated projects as a guest (45), a gray line extends to that group. For associated projects as a member, the artist's color (33) extends to groups the artist is a member of (44). It connects to a slice of the donut graph surrounding each group's main picture (24). The size of the slice is calculated by finding the total number of projects that a specific member of a group worked on, and dividing it by the total number of group members on every project. Speaking in data terms, it's counting the intersection of a group's associated projects (27) and an artist's associated projects as a group member (44), as long as the group the artist is involved with (8A) matches the group (19), and dividing it by the count of the total number of group members (10) involved in each of the group's projects (27), for the relevant group (8A).

The third layer displays projects that a group has worked on (27). These projects are displayed as small gray squares surrounding a group. The squares are not visible unless the group's picture is clicked. Again, if double clicked, the graph should re-center.

When a small gray square is clicked, it should expand into a small thumbnail of the album art, and the project's guests (13) should be displayed as small colored circles surrounding the thumbnail, with the color corresponding to the guest's color (33).

The music player should be able to connect to Spotify, Bandcamp, and Soundcloud.





Notes:

19. Group # (19) populates graph, connecting to each group member (28) by a thick line the same color as the Artist Color (33). The line extends into a slice of the donut graph around the Group Main Picture (24). The size of the slice is determined by the proportion of projects, as determined by $\frac{\text{[total # Group projects that the member worked on]}}{\text{[intersection of 42 & 27]}} \div \text{[total # Group projects (27)]} \times \text{members for each project (10)} \times 360$ for the degree measure of each artist's slice.

20. Group Name is populated from Project Groups (8). It is displayed in the browser and on the graph, when you mouse-over a group.

21. Bio is filled in manually through the edit link in the browser. It is displayed in the browser when a group is selected.

22. Trivia is filled in manually through the edit link in the browser. It is displayed in the browser when a group is selected.

23. Pics are added manually in the gallery window. When a picture is added, it is added to the Pics database, automatically with # (64) and Data (65). The description is added manually in the same gallery window.

24. One picture is chosen to be the main picture. If nobody selects a main picture, use the most recent one or maybe a random one.

25. YearsActive (25) is determined by the first and last projects' release date (7). If YearsActive is manually updated by a user, then it does not change when a new project is added. This is to avoid broken-up bands or dead artists being mislabeled when a re-release or lost album is released. YearsActive (25) is displayed in the browser window, on the right side of the headline, to the left of Cities.

26. Cities are determined by the Project Cities (18) for projects a group is involved with. Cities are displayed in the browser window on the far right of the headline. Clicking the first city name brings up a window showing the other cities the group is involved with. If there are multiple cities, list in order of frequency.

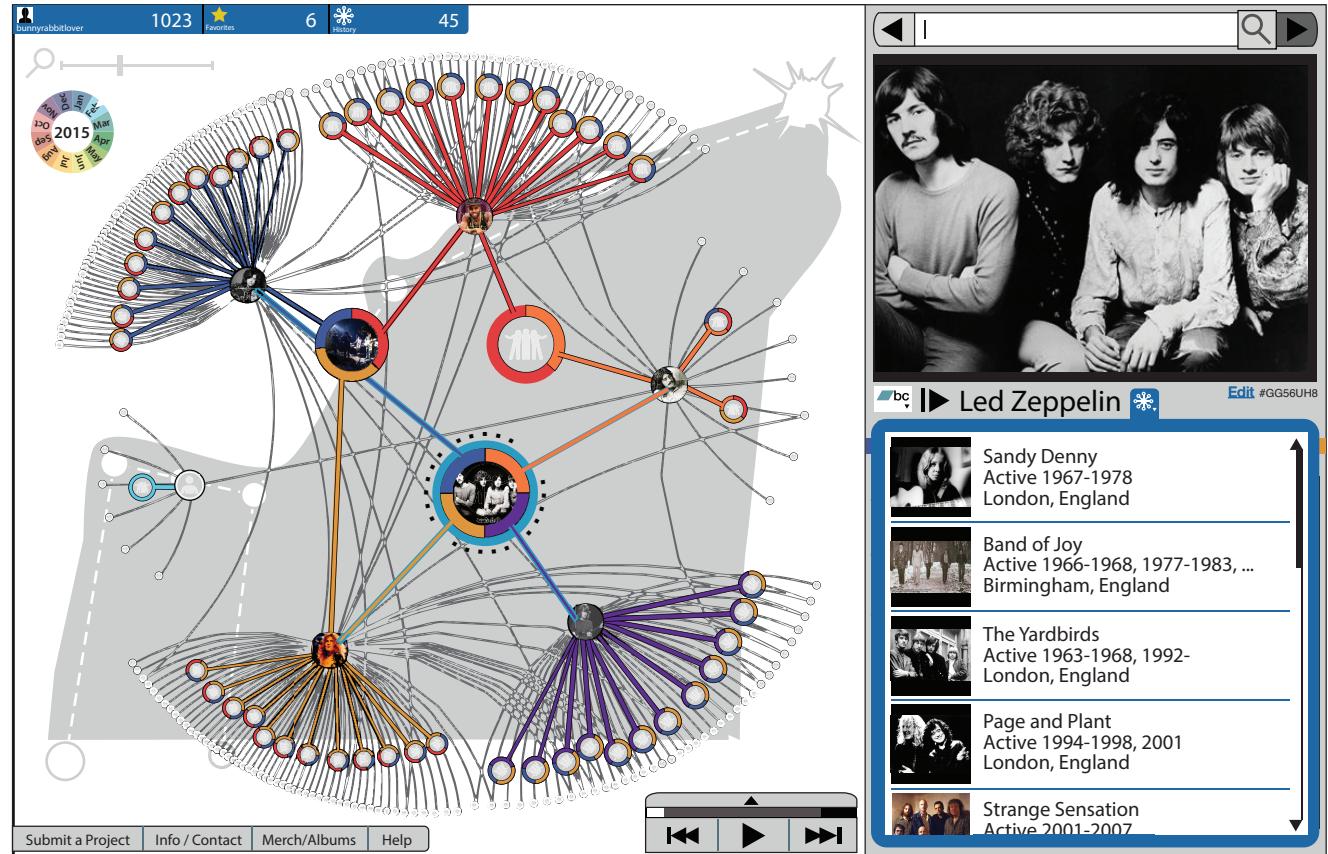
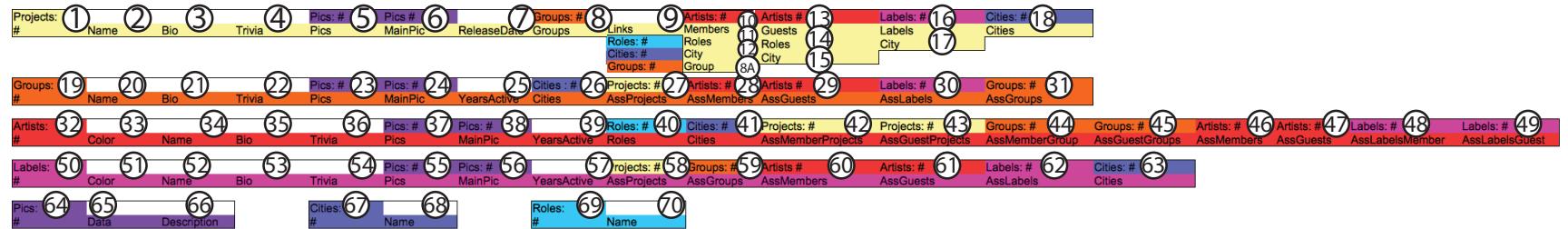
27. Associated Projects (27) links to a project # (1). Associated projects are depicted on the graph as tiny white squares that expand when clicked into a thumbnail of the album cover (6), with the relevant guests (13) surrounding the album cover. They are also displayed in the browser in a drop-down menu.

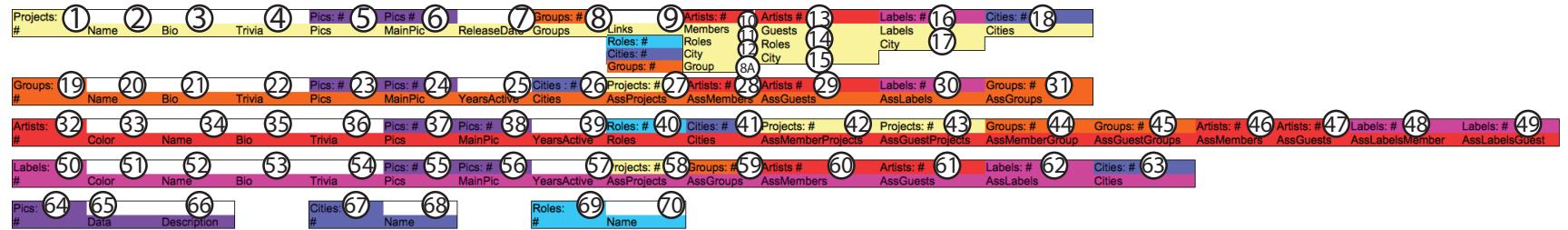
28. Associated Members link to Artist # (32) for all members of a group, as determined by the contributing members (10) to an associated project (27). The member's group (88) must match the selected group's # (19). It is displayed in the browser under the People drop-down menu, at the top in black. It is also used in the graph to determine which artists a particular group connects to.

29. Associated Guests link to artist # (32) for the guests (13) of associated projects (27). They are displayed in the browser under the People drop-down menu, at the bottom in grey.

30. Associated Labels link to Label # (50) for Labels (16) involved in Associated Projects (27). They are displayed in the browser window under the Labels drop-down menu.

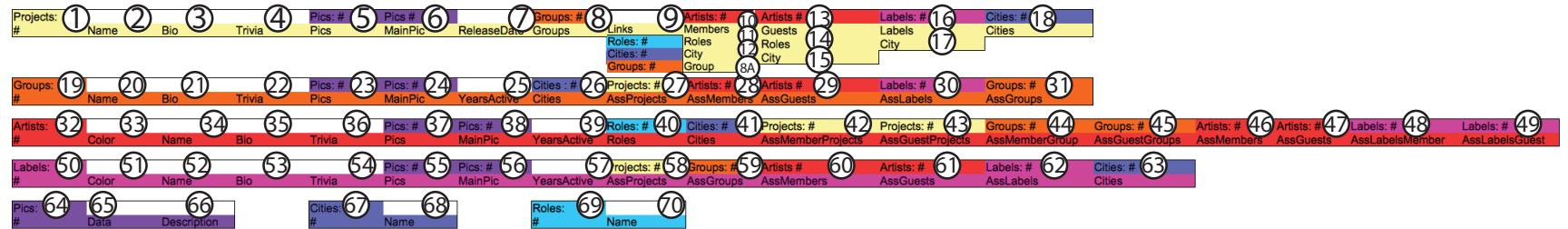
31. Associated Groups link to Group # (19) for both other Groups (8) that have worked on a project (27) with the selected group, as well as Associated Groups as a member (44) for Associated Members (28). They are displayed in the browser under the Groups drop-down menu.





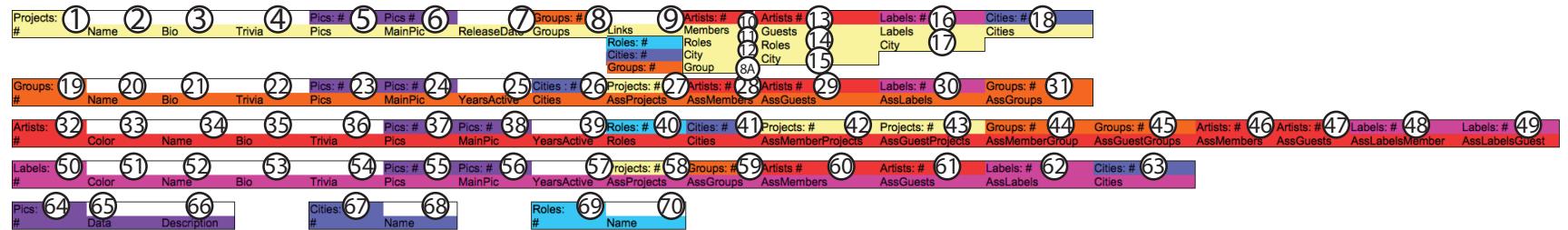
A network visualization interface showing connections between entities:

- User Profile:** dannyrabbitlover (1023 Favorites, 6 History)
- Network Graph:** A complex web of nodes and edges. Nodes include a profile picture, a band logo, and various symbols like a star, a person, and a globe. Edges connect these nodes to form a dense network.
- Album Preview:** A black and white photo of the rock band Led Zeppelin (Jimmie Page, Robert Plant, John Paul Jones, and Jason Bonham).
- Band Information:**
 - bc ► **Led Zeppelin** *
 - Active 1968-1980
 - London, England
- Projects:**
 - Led Zeppelin (1969, Atlantic Records)
 - Led Zeppelin II (1969, Atlantic Records)
 - Led Zeppelin III (1970, Atlantic Records)
 - Untitled (Led Zeppelin IV) (1971, Atlantic Records)



This interface provides a detailed look at the network for the band Led Zeppelin. The main feature is a complex network graph where nodes represent band members and their projects, connected by a dense web of lines. A central node features a photo of the band. On the right side, there's a sidebar with the following information:

- Profile Summary:** 1023 posts, 6 favorites, 45 history.
- Image:** A black and white photo of the band members sitting together.
- Band Information:** Led Zeppelin (Active 1968-1980, London, England).
- Projects:** Led Zeppelin, Led Zeppelin II, Led Zeppelin III, ...
- Members/Guests:**
 - Jimmy Page: Active 1957-, London, England
 - Robert Plant: Active 1965-, Worcestershire, England
 - Sandy Denny (Guest): Active 1967-1978, London, England
 - John Paul Jones



This interface displays a network visualization for the band **Led Zeppelin**.

Header:

- User: dommyrabbitlover
- Projects: 1023
- Favorites: 6
- History: 45

Timeline: A circular timeline for the year 2015, showing months from Jan to Dec.

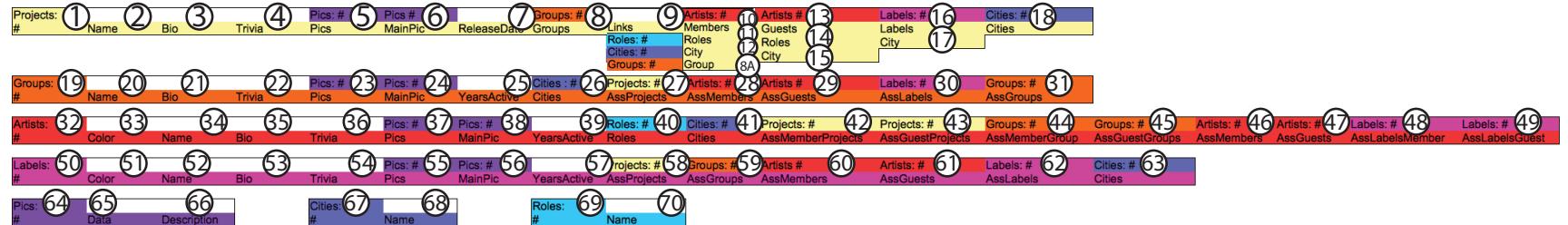
Network Graph: A large central graph showing the relationships between various entities. Nodes include a portrait of Jimmy Page, a group photo of the band, and symbols representing music and records.

Right Sidebar (Band Details):

- Led Zeppelin** (Edit #GG56UJH8)
- Active 1968-1980, London, England
- Projects**: Led Zeppelin, Led Zeppelin II, Led Zeppelin III, ...
- Members/Guests**: Jimmy Page, Robert Plant, John Paul Jones, John Bonham
- Associated Labels**:
 - Atlantic Records (Active 1947-Warner Music Group)
 - Swan Song Records (Active 1974-1983, Warner Music Group)
 - Rhino Entertainment (Active 1978-)

Bottom Navigation:

- Submit a Project | Info / Contact | Merch/Albums | Help
- Navigation icons: back, forward, search, etc.



Notes:

32. Artist # populates the graph with artists. Artists are connected with each other if they are either Associated Members (46) or Associated Guests (47) with each other. They are also connected to Associated Member Groups (44), but not to Associated Guest Groups (45).

33. Color is chosen manually by the user in the Edit window. The Artist's color is displayed in the graph as a line connecting Artist # (32) with their respective Groups (44), and as a portion of the donut graph surrounding the group. The portion of the donut graph reserved to each artist is determined by the process described in (19). The color is also displayed in the top of the browser window, in the upper section of the headline.

34. Artist Name is populated by Project Members (10) and Project Guests (13). It is Displayed on Mouse-over of an Artist's thumbnail in the graph, and in the browser window at the top of the headline.

35. Bio is filled in manually through the edit link in the browser. It is displayed in the browser when a group is selected.

36. Trivia is filled in manually through the edit link in the browser. It is displayed in the browser when a group is selected.

37. Pics are added manually in the gallery window. When a picture is added, it is added to the Pics database, automatically with # (64) and Data (65). The description is added manually in the same gallery window.

38. One picture is chosen to be the main picture. If nobody selects a main picture, use the most recent one or maybe a random one.

39. YearsActive (39) is determined by the first and last projects' (42&43) release date (7). If YearsActive is manually updated by a user, then it does not change when a new project is added. This is to avoid broken-up bands or dead artist being mislabeled when a re-release or lost album is released. YearsActive (39) is displayed in the browser window, on the right side of the headline, to the left of Cities.

40. Roles are determined by the roles that the artist is tagged with (11&14) in each associated project (42&43). Roles are displayed in the main body of the browser window.

41. Cities are determined by the cities that the artist is tagged with (12&15) in each project (42&43). Clicking the first city name brings up a window showing the other cities the group is involved with. If there are multiple cities, list in order of frequency.

42. Associated Projects as a Member (42) links to a project # (1). Associated projects is determined by pushing the project number to each Member (10) of a project. If no member # exists, it is created. Associated projects as a member are displayed in the browser in a drop-down menu, in black.

43. Associated Projects as a Guest (42) links to a project # (1). Associated projects is determined by pushing the project number to each Guest (13) of a project. If no member # exists, it is created. Associated projects as a guest are displayed in the browser in a drop-down menu, in grey.

44. Associated Groups as a member links to a group # (19) as determined by a project pushing the relevant group (88) to the Member in question (10). Associated groups as a member is displayed in the browser in a drop-down menu, in black.

45. Associated Groups as a guest links to a group # (19) as determined by a project pushing all groups (8) other than the artist's group (88) to a relevant Member (10). In addition, it's determined by pushing all groups (8) to a relevant Guest (13) on a project. Associated Groups as a guest is displayed in the browser in a drop-down menu, in grey.

46. Associated Member links to an artist #, as determined by the members (10) of all associated projects (42) who are tagged with the same group (88). Associated Member is displayed in the browser, in a drop-down menu.

47. Associated Guests links to an artist #, as determined by the guests (13) of all associated projects as a member (42), as well as the Members (10) and guests (13) of all associated projects as a guest (43), as well as the Members (10) of groups (8) other than the relevant member's group (88) within a project. Associated Guests is displayed in the browser, in a drop-down menu.

48. Associated Labels as a member links to Label #s (50) for Labels (16) involved in Associated Projects as a Member (42). They are displayed in the browser window under the Labels drop-down menu, in black.

49. Associated Labels as a guest links to Label #s (50) for Labels (16) involved in Associated Projects as a guest (43). They are displayed in the browser window under the Labels drop-down menu, in grey.

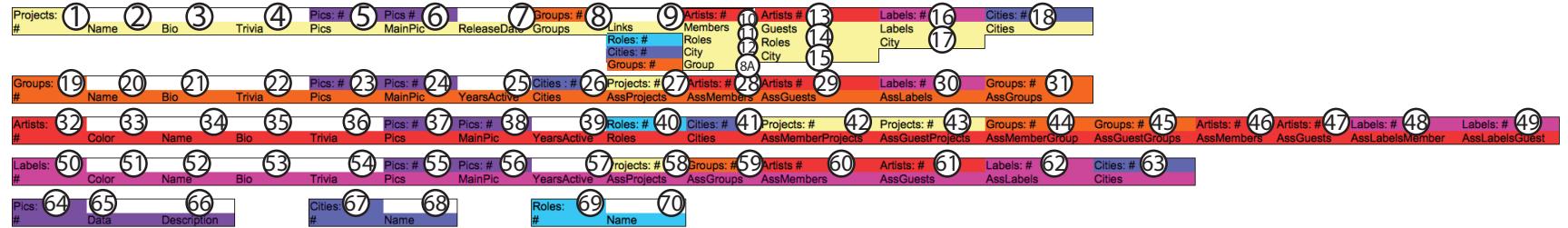
The interface consists of two main panels. The left panel displays a network graph with nodes representing various entities and edges showing their connections. The right panel shows a detailed profile for an artist, specifically John Bonham, with sections for Biography, Trivia, and Trivia details.

Network Graph (Left Panel):

- Top navigation bar: 1023, Favorites, 6, History.
- Search bar: Search icon, a circular progress bar, and a date selector for 2015.
- Graph area: A complex web of nodes (circles) and edges (lines) representing relationships between entities. Nodes are color-coded by category: purple for Projects, red for Artists, blue for Groups, and yellow for Labels.
- Bottom navigation bar: Submit a Project, Info / Contact, Merch/Albums, Help.

Artist Profile (Right Panel):

- Profile picture of John Bonham.
- Headline: "John Bonham" (34), "black" (46), "gray" (47), "London, En" (41).
- Section: "Project" (42).
- Details: "Act 1962-1980", "black" (46), "gray" (47), "London, En" (41).
- Section: "Groups" (44).
- Details: "Led Zeppelin, Band of Joy", "black" (48), "gray" (49).
- Section: "Associated Labels" (45).
- Details: "Alanis Morissette, Alanis Morissette", "black" (48), "gray" (49).
- Section: "Roles" (40).
- Details: "Drums, Percussion".
- Section: "Biography".
- Text: "John Henry Bonham was an English musician and songwriter, best known as the drummer of Led Zeppelin. Bonham was esteemed for his speed, power, fast".
- Section: "Trivia".
- Text: "Bonham initially used Premier drums, but in the late 1960s he was introduced to Ludwig by Carmine Appice. Throughout the remainder of his career, Bonham".



Notes:

50. Label # is the primary key for the label Database. The label is not displayed in the graph, but it is displayed in the browser and referenced by the Artists, Projects, and Groups databases.

51. Color is chosen manually by the user in the Edit window. The color is displayed in the top of the browser window, in the upper section of the headline.

52. Label Name is populated by Project Labels (16). It is displayed in the browser window at the top of the headline.

53. Label Bio is filled in manually through the edit link in the browser. It is displayed in the browser when a label is selected.

54. Label trvia is filled in manually through the edit link in the browser. It is displayed in the browser when a label is selected.

55. Pics are added manually in the gallery window. When a picture is added, it is added to the Pics database, automatically with # (64) and Data (65). The description is added manually in the same gallery window.

56. One picture is chosen to be the main picture. If nobody selects a main picture, use the most recent one or maybe a random one.

57. YearsActive (57) is determined by the first and last associated projects'(58) release date (7). If YearsActive is manually updated by a user, then it does not change when a new project is added. This is to avoid defunct labels being mislabeled when a re-release or lost album is released. YearsActive(39) is displayed in the browser window, on the right side of the headline, to the left of Cities.

58. Associated Projects (58) links to a project # (1). Associated projects is determined by pushing the project number to each Label (16) involved in a project. If no matching Label # exists, it is created. Associated projects are displayed in the browser in a drop-down menu.

59. Associated Groups links to a group # (19) as determined by a project pushing the project's groups (8) to the Label in question (16). Associated groups are displayed in the browser in a drop-down menu.

60. Associated Members links to an artist #, as determined by the members (10) of all associated projects (58). Associated Members are displayed in the browser, in a drop-down menu.

61. Associated Guests links to an artist #, as determined by the guests (13) of all associated projects. Associated Guests are displayed in the browser, in a drop-down menu.

62. Associated Labels links to Label #s (50) for other Labels (16) involved in Associated Projects (58). They are displayed in the browser window under the Labels drop-down menu.

63. Cities are determined by the cities that the label is tagged with (17) in each project (58). Clicking the first city name brings up a window showing the other cities the group is involved with. If there are multiple cities, list in order of frequency.

PICS:

64. Label # is the primary key for the label Database. The pictures are not displayed directly, but each project, group, artist, and label's respective gallery and main picture.

65. Data is where the data for the photo goes. Allow a max size of at least 2000px square.

NOTE: It would probably be good to include a database item for thumbnails.

66. Description is filled in manually in each project, group, artist, and label's photo gallery. It is displayed beneath the picture in its respective gallery.

CITIES:

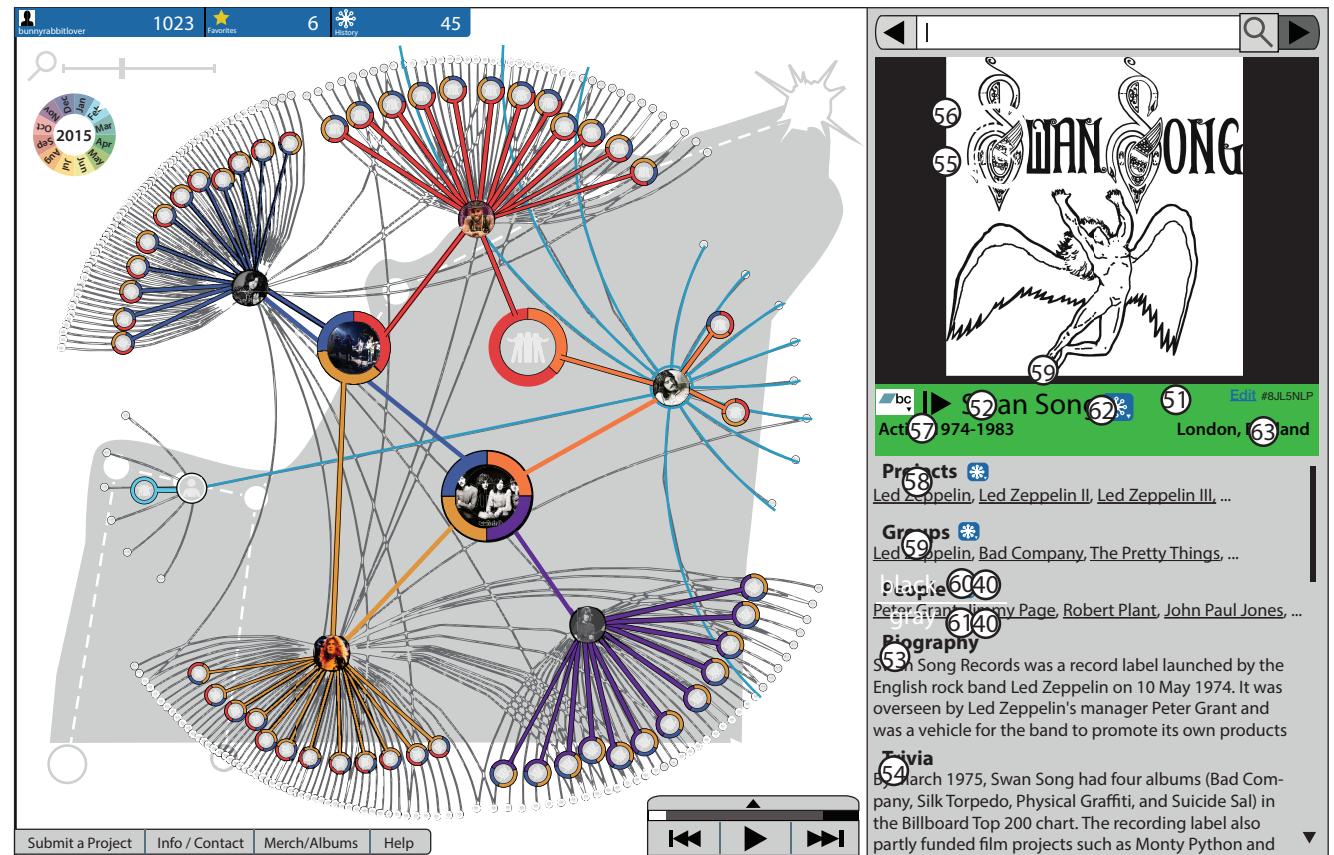
67. City # is the primary key for the city database. Using Zip or Postal codes as the primary key could be possible, or there may be a google maps API that allows bypassing this section of the database altogether.

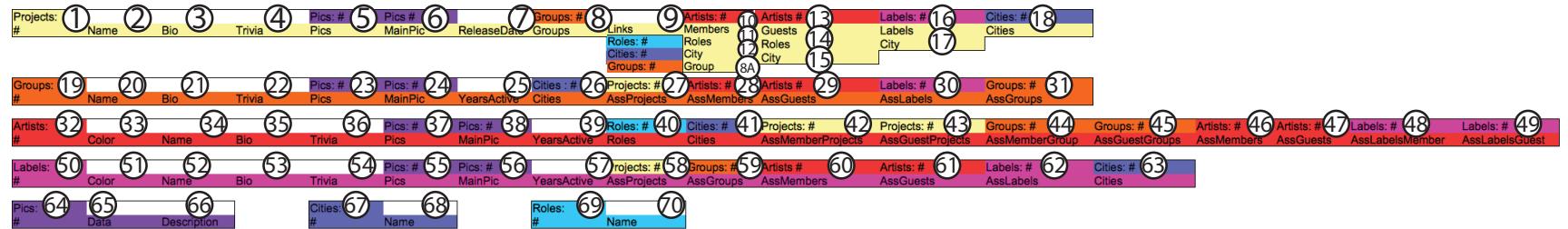
68. The City name is filled in through the project submission window, in the label and artist cities (12,15,17), and is pushed to the city database.

ROLES:

69. Role # is the primary key for the role database. The intention of this database is to provide a tagging system to allow for searching for people who have certain skills, like saxophone skills or recording engineering experience. There may be an easier way to do this, but it would work.

70. Role Name is filled in through the project submission window, for each contributing artist's role (11,14), and is pushed to the city database.

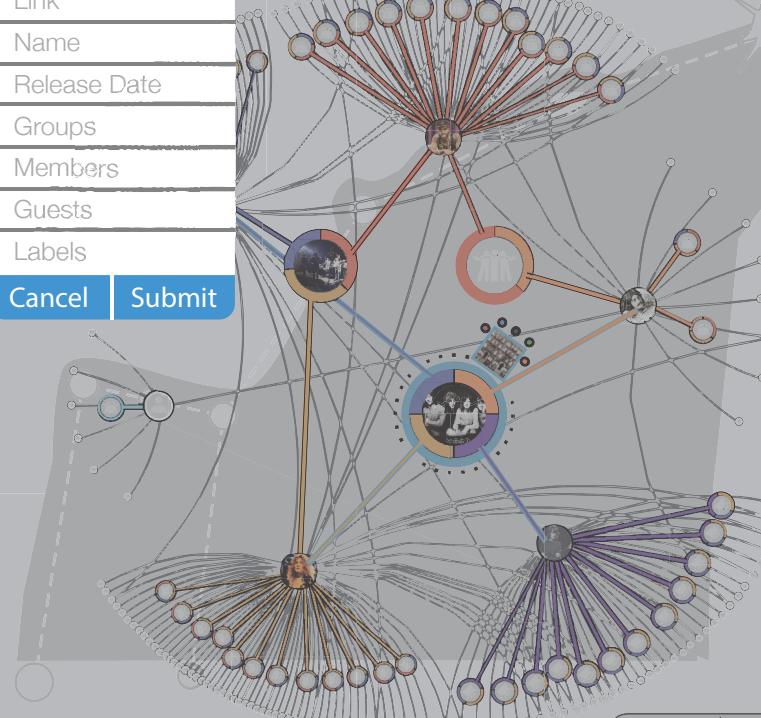




Add Project:

Link
Name
Release Date
Groups
Members
Guests
Labels

[Cancel](#) [Submit](#)



[Submit a Project](#) [Info / Contact](#) [Merch/Albums](#) [Help](#)

 [Edit #A4T7256](#)

Physical Graffiti 

Feb 24 1975 Hampshire, UK

1. Custard Pie
2. The Rover
3. In My Time Of Dying
4. Houses Of The Holy
5. Trampled Underfoot
6. Kashmir
1. In The Light
2. Bron-Yr-Aur

Groups  **Led Zeppelin**

Members/Guests  Jimmy Page, Robert Plant, John Bonham, John Paul Jones

Associated Labels  Atlantic Records

Biography
Physical Graffiti is the sixth studio album by the English

Trivia
The band decided to make Physical Graffiti a double

