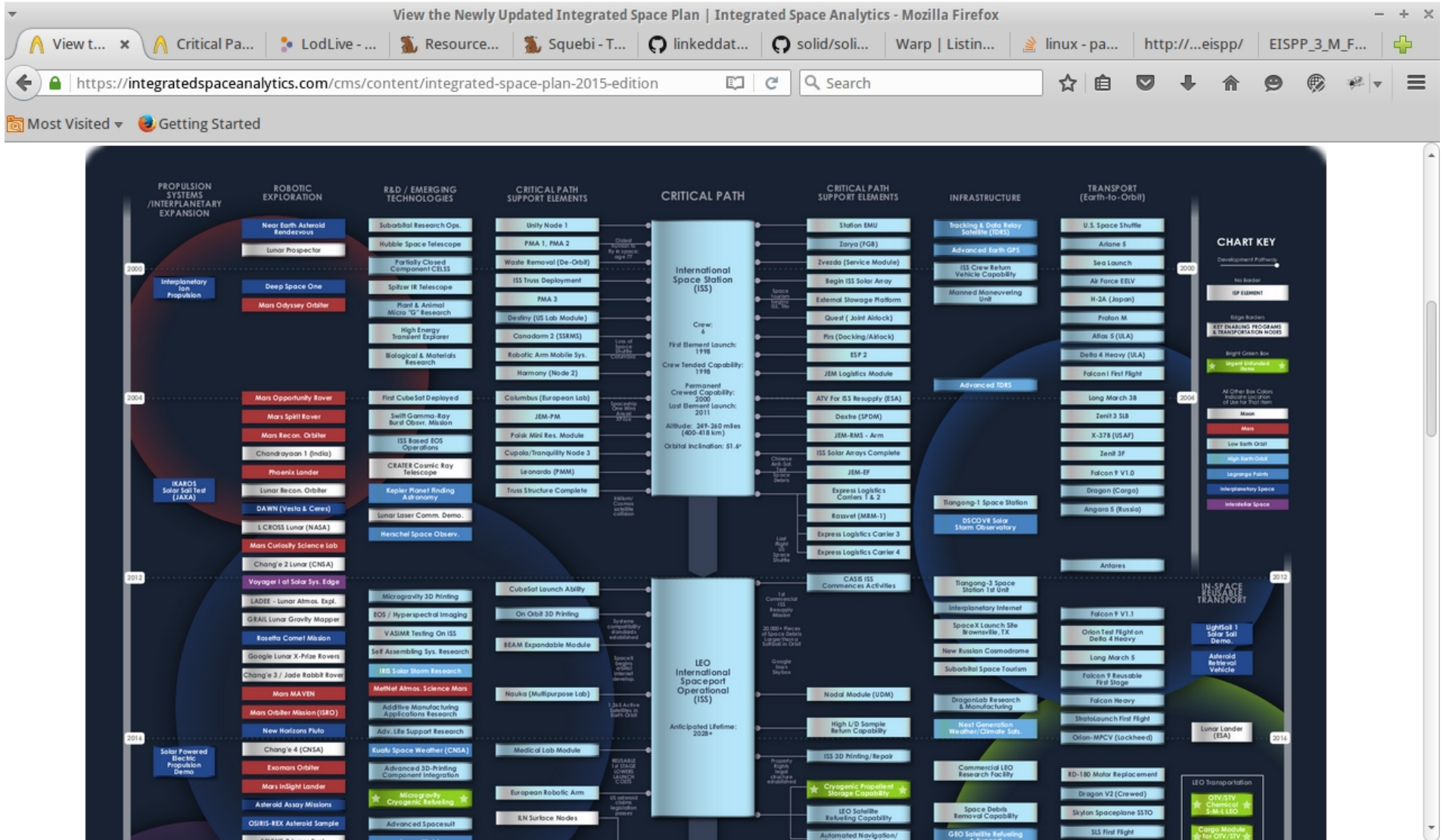


The Architecture of the New Integrated Space Plan Website

2016 International Space Development Conference, San Juan, PR

Brent Shambaugh

Enter Portal Pages from the ISP



Screenshot of Drupal Site (part1)


Applications Places System
PMA 3 | Integrated Space Analytics - Mozilla Firefox
View the Newly Update... x PMA 3 | Integrated Spa... x
192.168.2.11/cms/content/pma-3 Search
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More

PMA 3

Submitted by Mr. Brent Shambaugh on September 3, 2015 - 10:55pm

" PMA 3 was delivered on a Spacelab pallet by STS-92. First docked at the nadir hatch of Node 1, it provided docking for the STS-97 and STS-98. In March 2001 it was moved to the port hatch of Node 1. In August 2007 PMA-3 moved to the nadir hatch of Unity to make room for the temporary docking of the Node 2 module delivered by STS-120. For adding Node 3, it will temporary move to the nadir port of Node 2. Finally it will be docked to the nadir hatch of Node 3 when this will be berthed to Node 1 in 2010. "



- www.nasa.com, PMA 1, 2, 3

guid:
cb70020a-3571-462e-a3ae-5c330ecf4542

row:
318

entity_type:
Task

isp_column:
Critical Path Support Elements

PMA 3 | Integrated Space A... [*(Untitled)]
Untitled 1 - LibreOffice Impr...

Screenshot of Drupal site (part2)

The screenshot shows a Mozilla Firefox browser window displaying a Drupal content page. The browser's address bar shows the URL `192.168.2.11/cms/content/pma-3`. The page title is "PMA 3 | Integrated Space Analytics - Mozilla Firefox".

The page layout includes a sidebar on the left and a main content area on the right. The sidebar contains three sections:

- NASA Seeks Industry Ideas for an Advanced Mars Satellite** (with a "More" link)
- Recent blog posts**
 - It's Time To Take Dogs Into Space - Again
 - We Have Been Mining Asteroids for Years, Just Not in Space - But That Will Have to Change
 - Peering into the Mind of God: Are we built to venture beyond the Heliosphere? With a look at the physics of 0.71c (with a "More" link)
- Recent Space News & Info**
 - The Future of Space Launch is Here! - An illustrated guide to SpaceX's launch vehicle reusability plans
 - Our next target in space? David Brin's thoughts on the subject
 - Venus and Earth orbits have five-fold symmetry - beautiful
 - CNN Interview with Jeff Bezos on Blue Origin's landing of New Shepard, with video

The main content area displays the following metadata for the current page:

- entity_type:** Task
- isp_column:** Critical Path Support Elements
- Wikipedia:** [Pressurized Mating Adapter](#)
- Start Year:** 2 004
- publish:** yes
- Data Source:** The New Integrated Space Plan
- ISPColumn:** [Critical Path Support Elements](#)
- via_reference_tags:** Task
- Query Portal Pages:** [Simple Query Portal for ISP Content](#)
- primary url:** [PMA 1, 2, 3](#)

At the bottom right of the main content area, there is a link: [Log in or register to post comments](#).

The browser's taskbar at the bottom shows several open applications: "PMA 3 | Integrated Space A...", "[*(Untitled)]", and "Untitled 1 - LibreOffice Impr...".

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Simple Query Portal for ISP Content ⚙️

Switch To: [SPARQL Endpoint](#)
 Switch To: [LodLive Linked Data Browser](#)

ISPColumn (field_ispcolumn)

- Any -

Has taxonomy term

Start Year (field_start_year)

Is equal to

| Title | via_reference_tags | primary url | Wikipedia |
|------------------------------------|-------------------------------------|---|-----------|
| Phobos/Deimos Martian Spaceport | Facility, Spaceport, Mars, Human | NASA: The Evolvable Mars Campaign - The Moons of Mars as a Destination, Frontiers and Space Conquest / Frontières et Conquête Spatiale, Phobos First: A Mission to Settle Mars, First International Conference on the Exploration of Phobos and Deimos, 5 - 7 Nov 2007: Summary and Recommendations | |

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Simple Query Portal for ISP Content Settings

Switch To: [SPARQL Endpoint](#)
Switch To: [LodLive Linked Data Browser](#)

ISPColumn (field_ispcolumn)

Has taxonomy term

Start Year (field_start_year)
Is equal to

| Title | via_reference_tags | primary url | Wikipedia |
|------------------------------------|-------------------------------------|---|-----------|
| Phobos/Deimos Martian Spaceport | Facility, Spaceport, Mars, Human | NASA: The Evolvable Mars Campaign - The Moons of Mars as a Destination, Frontiers and Space Conquest / Frontières et Conquête Spatiale, Phobos First: A Mission to Settle Mars, First International Conference on the | |



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- We Have Been Mining Asteroids for Years, Just Not in Space - But That Will Have to Change
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Switch To: [LodLive Linked Data Browser](#)

ISPColumn (field_ispcolumn)
Critical Path

Has taxonomy term
Mars

Start Year (field_start_year)
Is equal to

| Title | vie_reference_tags | primary url | Wikipedia |
|---------------------------------|----------------------------------|--|--------------------------------------|
| Phobos/Deimos Martian Spaceport | Facility, Spaceport, Mars, Human | NASA: The Evolvable Mars Campaign - The Moons of Mars as a Destination , Frontiers and Space Conquest / Frontières et Conquête Spatiale , Phobos First: A Mission to Settle Mars , First International Conference on the Exploration of Phobos and Deimos, 5 - 7 Nov 2007: Summary and Recommendations | |
| Phobos/Deimos Outpost | Habitat, Mars, In-Space | | |
| Near-Self Supporting Mars Base | Facility, Mars, Habitat | The Promise of Mars , The Case for Colonizing Mars , Forget Mars. Here's Where We Should Build Our First Off-World Colonies | Colonization of Mars |

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- We Have Been Mining Asteroids for Years, Just Not in Space - But That

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ISPColumn (field_ispcolumn)

Critical Path

Has taxonomy term

Mars

Start Year (field_start_year)

Is greater than

2050

| Title | via_reference_tags | primary url | Wikipedia |
|---------------------------------|----------------------------------|--|--------------------------------------|
| Phobos/Deimos Martian Spaceport | Facility, Spaceport, Mars, Human | NASA: The Evolvable Mars Campaign - The Moons of Mars as a Destination , Frontiers and Space Conquest / Frontières et Conquête Spatiale , Phobos First: A Mission to Settle Mars , First International Conference on the Exploration of Phobos and Deimos, 5 - 7 Nov 2007: Summary and Recommendations | |
| Near-Self Supporting Mars Base | Facility, Mars, Habitat | The Promise of Mars , The Case for Colonizing Mars , Forget Mars. Here's Where We Should Build Our First Off-World Colonies | Colonization of Mars |

Screenshot of Drupal site (part2)

The screenshot shows a Mozilla Firefox browser window displaying a Drupal content page. The browser's address bar shows the URL `192.168.2.11/cms/content/pma-3`. The page title is "PMA 3 | Integrated Space Analytics - Mozilla Firefox".

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- Start Year:** 2 004
- publish:** yes
- Data Source:** The New Integrated Space Plan
- ISPColumn:** [Critical Path Support Elements](#)
- via_reference_tags:** Task
- Query Portal Pages:** [Simple Query Portal for ISP Content](#)
- primary url:** [PMA 1, 2, 3](#)

At the bottom right of the main content area, there is a link: [Log in or register to post comments](#).

The browser's taskbar at the bottom shows the following open applications: "PMA 3 | Integrated Space A...", "[*(Untitled)]", and "Untitled 1 - LibreOffice Impr...".

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Critical Path


View Edit

Phobos/Deimos Martian Spaceport

Submitted by Mr. Gary Bickford on September 30, 2015 - 6:09pm


Transported alongside the crew of the Phobos Outpost will be the initial set of settlement modules for the Mars Minimum One-Way [14]. The preliminary modules will include a nuclear power plant, water source, fuel-chem module, truck-trailer, green house support, module connections, greenhouse 1, habitat 1, and laboratory modules. All of these modules will land on the Martian surface near the final settlement site.

Read more Add new comment 3 reads



Independent Spacefaring Human Communities

Submitted by Mr. Brent Shambaugh on September 7, 2015 - 2:19am




Applications Places System
Mars | Integrated Space Analytics - Mozilla Firefox
View the Newly Updat... Mars | Integrated Spa... LodLive - browsing th... Resource/s in HTML Squebi - The SPARQL I... SPARQL 1.1 Query La...
192.168.2.11/staging/taxonomy/term/232 Search
Most Visited Getting Started
Dashboard Content Structure Appearance People Modules Configuration Ecwid Store Reports Help ISA Administrator Log out

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Mars

View Edit

URI:
<http://dbpedia.org/resource/Mars>


Phobos/Deimos Martian Spaceport

Submitted by Mr. Gary Bickford on September 30, 2015 - 6:09pm

Transported alongside the crew of the Phobos Outpost will be the initial set of settlement modules for the Mars Minimum One-Way [14]. The preliminary modules will include a nuclear power plant, water source, fuel-chem module, truck-trailer, green house support, module connections, greenhouse 1, habitat 1, and laboratory modules. All of these modules will land on the Martian surface near the final settlement site.

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Phobos Soil Processing Furnace



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ISPColumn (field_ispcolumn)

Critical Path

Has taxonomy term

Mars

Start Year (field_start_year)

Is greater than

2050

| Title | via_reference_tags | primary url | Wikipedia |
|---------------------------------|----------------------------------|--|--------------------------------------|
| Phobos/Deimos Martian Spaceport | Facility, Spaceport, Mars, Human | NASA: The Evolvable Mars Campaign - The Moons of Mars as a Destination , Frontiers and Space Conquest / Frontières et Conquête Spatiale , Phobos First: A Mission to Settle Mars , First International Conference on the Exploration of Phobos and Deimos, 5 - 7 Nov 2007: Summary and Recommendations | |
| Near-Self Supporting Mars Base | Facility, Mars, Habitat | The Promise of Mars , The Case for Colonizing Mars , Forget Mars. Here's Where We Should Build Our First Off-World Colonies | Colonization of Mars |

ARC SPARQL+ Endpoint (v2011-12-01)

[This interface](#) implements [SPARQL](#) and [SPARQL+](#) via [HTTP Bindings](#).

Enabled operations: select, construct, ask, describe

Max. number of results : 33000

```
SELECT * WHERE {  
  GRAPH ?g { ?s ?p ?o . }  
}  
LIMIT 10
```

Change HTTP method: [GET](#) [POST](#)

Options

Output format (if supported by query type):

default

jsonp/callback (for JSON results)

API key (if required)

Show results inline:

ARC SPARQL+ Endpoint - Mozilla Firefox

ARC SPARQL+ Endpoint x WS SPARQL 1.1 Federated ... x Quiet Riot | IKS Conten... x Inbox (10,052) - brent.s... x EasyRdf Basic Sparql Exam... x

localhost/iksce/sparql? Search

| | | |
|--|---|---|
| http://localhost/iksce/node/16 | /sioc/ns#has_creator | http://localhost/iksce/user/1 |
| http://localhost/iksce/node/16 | /sioc/ns#num_replies | 0 |
| http://localhost/iksce/taxonomy/term/1 | http://www.w3.org/1999/02/22-rdf-syntax-ns#type | http://www.w3.org/2004/02/skos/core#Concept |
| http://localhost/iksce/taxonomy/term/1 | http://www.w3.org/2000/01/rdf-schema#label | Quiet Riot |
| http://localhost/iksce/taxonomy/term/1 | http://www.w3.org/2004/02/skos/core#prefLabel | Quiet Riot |
| http://localhost/iksce/taxonomy/term/1 | http://www.w3.org/2004/02/skos/core#definition | |
| http://localhost/iksce/taxonomy/term/1 | http://www.w3.org/2004/02/skos/core#inScheme | http://localhost/iksce/ |
| http://localhost/iksce/taxonomy/term/1 | http://schema.org/Comment | http://dbpedia.org/resource/Quiet_Riot |
| http://localhost/iksce/node/17 | http://www.w3.org/1999/02/22-rdf-syntax-ns#type | http://rdfs.org/sioc/ns#Item |
| http://localhost/iksce/node/17 | http://www.w3.org/1999/02/22-rdf-syntax-ns#type | http://xmlns.com/foaf/0.1/Document |
| http://localhost/iksce/node/17 | http://purl.org/rss/1.0/modules/content/encoded | <p>He is hopping around.</p> |
| http://localhost | | |

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ISPColumn (field_ispcolumn)

Critical Path

Has taxonomy term

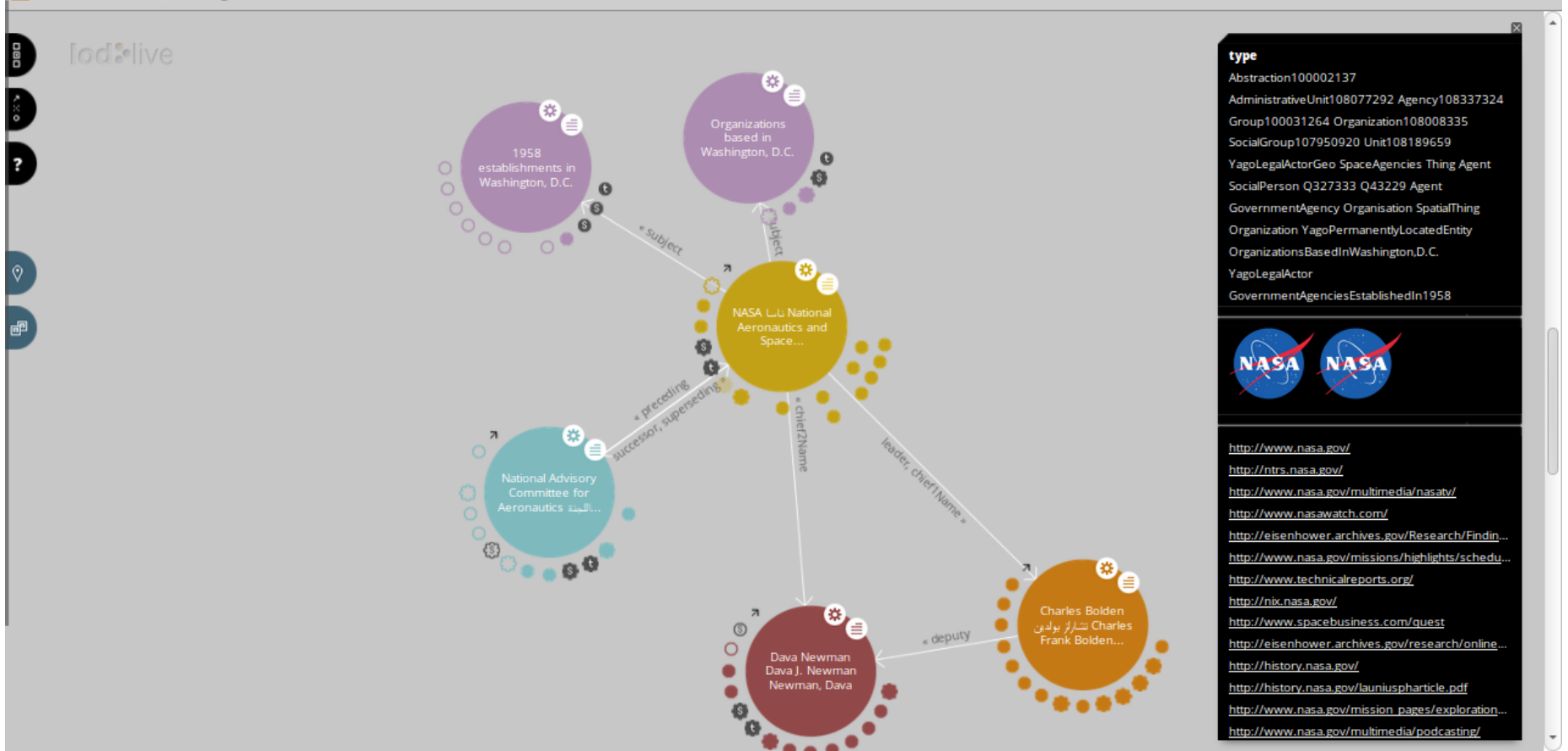
Mars

Start Year (field_start_year)

Is greater than

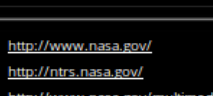

2050

| Title | via_reference_tags | primary url | Wikipedia |
|---------------------------------|----------------------------------|--|--------------------------------------|
| Phobos/Deimos Martian Spaceport | Facility, Spaceport, Mars, Human | NASA: The Evolvable Mars Campaign - The Moons of Mars as a Destination , Frontiers and Space Conquest / Frontières et Conquête Spatiale , Phobos First: A Mission to Settle Mars , First International Conference on the Exploration of Phobos and Deimos, 5 - 7 Nov 2007: Summary and Recommendations | |
| Near-Self Supporting Mars Base | Facility, Mars, Habitat | The Promise of Mars , The Case for Colonizing Mars , Forget Mars. Here's Where We Should Build Our First Off-World Colonies | Colonization of Mars |



type

- Abstraction100002137
- AdministrativeUnit108077292 Agency108337324
- Group100031264 Organization108008335
- SocialGroup107950920 Unit108189659
- YagoLegalActorGeo SpaceAgencies Thing Agent
- SocialPerson Q327333 Q43229 Agent
- GovernmentAgency Organisation SpatialThing
- Organization YagoPermanentlyLocatedEntity
- OrganizationsBasedInWashington,D.C.
- YagoLegalActor
- GovernmentAgenciesEstablishedIn1958



<http://www.nasa.gov/>
<http://ntrs.nasa.gov/>
<http://www.nasa.gov/multimedia/nasatv/>
<http://www.nasawatch.com/>
<http://eisenhower.archives.gov/Research/Findin...>
<http://www.nasa.gov/missions/highlights/schedu...>
<http://www.technicalreports.org/>
<http://nix.nasa.gov/>
<http://www.spacebusiness.com/quest>
<http://eisenhower.archives.gov/research/online...>
<http://history.nasa.gov/>
<http://history.nasa.gov/launiuspharticle.pdf>
http://www.nasa.gov/mission_pages/exploration...
<http://www.nasa.gov/multimedia/podcasting/>

Applications Places System Mon, 25 Apr 18:56 brent

Long March 3B | localhost - Mozilla Firefox

Squeebi - The SPARQL In... Resource/s in HTML Long March 3B | localh... bshambaugh/movedru... localhost / localhost / d...

localhost/drupal-7.42/content/long-march-3b#overlay-context=content/fake-semantic-p Search

Most Visited Getting Started

Dashboard Content Structure Appearance People Modules Configuration Reports Help Hello **username** Log out

Add content Find content Edit shortcuts

currently the most powerful member of the Long March rocket family and the heaviest of the Long March 3 rocket family (link is external), and is mainly used to place communications satellites (link is external) into geosynchronous orbits (link is external). - Wikipedia (link is external)

ISPColumn:
[Critical Path Support Elements](#) [Critical Path Support Elements](#)

core_or_previou_utilized_reference_tags:
[Launch Vehicle](#)

guid:
cb70020a-3571-462e-a3ae-5c330ecf4542

isp_column:
[Critical Path Support Elements](#)

entity_type:
[Launch Vehicle](#)

publish:

Query Portal Pages:
<http://localhost/drupal-7.42/portalpagequery>

ExampleLink:
[View in LodLive](#)

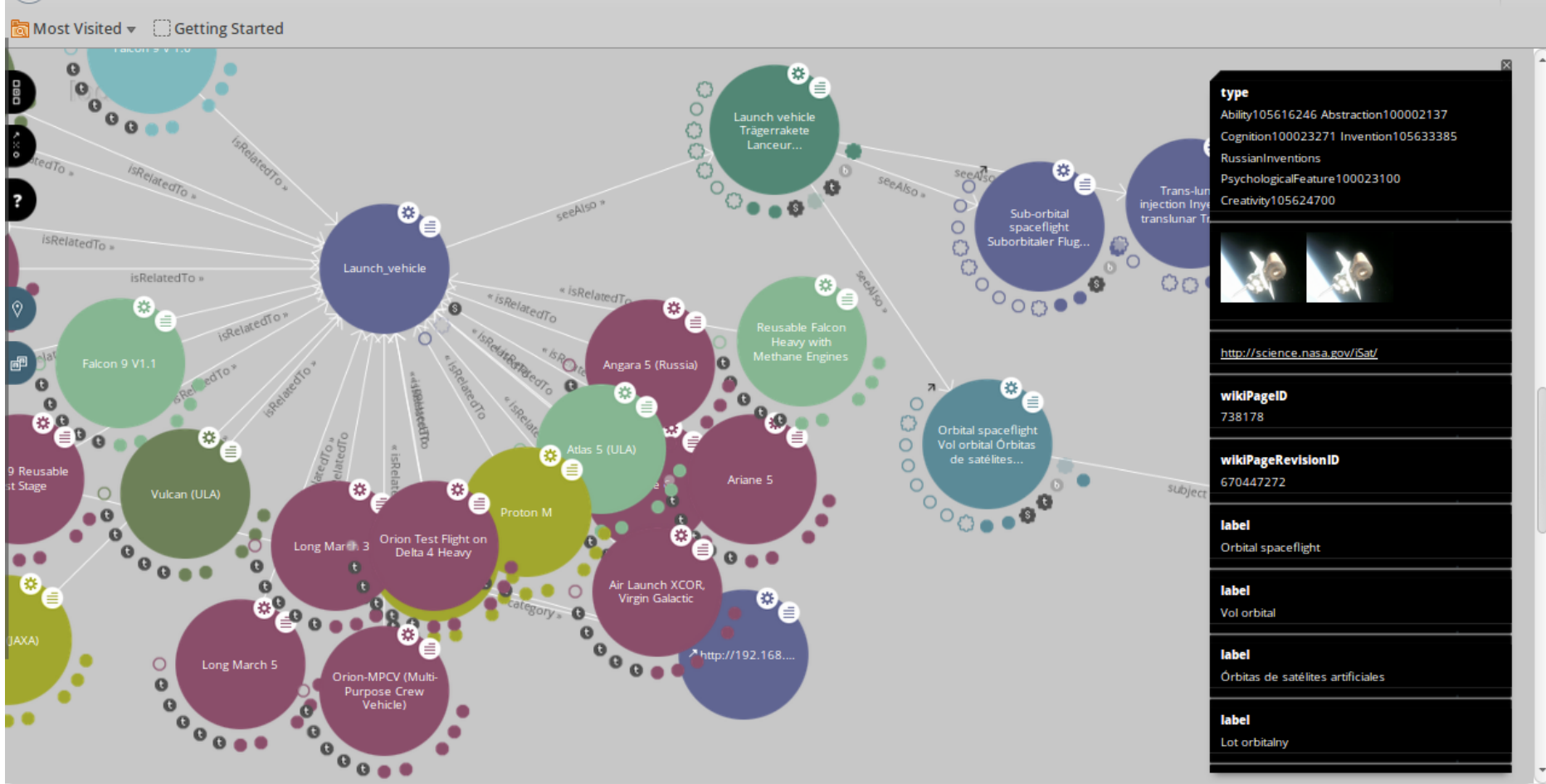
Add new comment

localhost/LodLive/app_en.html?http://localhost:8080/marmotta/ldp/Portal/long-march-3b=ime

Long March 3B | localhost -... [*(Untitled)] Terminal - brent@brent-Ins...


Browse around to see Dbpedia

The screenshot shows a Mozilla Firefox browser window displaying a network graph of Dbpedia resources. The central node is "Launch_vehicle", which is connected to numerous other nodes via "isRelatedTo" relationships. Other prominent nodes include "Falcon 9 V1.1", "Vulcan (ULA)", "Orion Test Flight on Delta 4 Heavy", "Proton M", "Atlas 5 (ULA)", "Ariane 5", "Air Launch XCOR, Virgin Galactic", "Reusable Falcon Heavy with Methane Engines", "Angara 5 (Russia)", "Launch vehicle Trägerrakete Lanceur...", "Sub-orbital spaceflight Suborbitaler Flug...", "Orbital spaceflight VoI orbital Órbitas de satélites...", and "Russian inventions". The graph also shows "seeAlso" and "subject" relationships. A search bar at the top of the browser contains the URL "localhost/LodLive/app_en.html?http://localhost:8080/marmotta/ldp/isaportal3/falcon-9-v1-0". A search results dropdown is visible at the bottom left, showing "http://dbpedia.org/sparql", "Russian inventions", and "http://dbpedia.org/resource/Category:Russian_inventions". The browser's address bar shows "localhost/LodLive/app_en.html?http://localhost:8080/marmotta/ldp/isaportal3/falcon-9-v1-0". The system tray at the bottom shows the time as "Fri, 15 Apr 09:48" and the user name "brent".



type

- Ability105616246 Abstraction100002137
- Cognition100023271 Invention105633385
- RussianInventions
- PsychologicalFeature100023100
- Creativity105624700



<http://science.nasa.gov/ISat/>

wikiPageID

738178

wikiPageRevisionID

670447272

label

Orbital spaceflight

label

Vol orbital

label

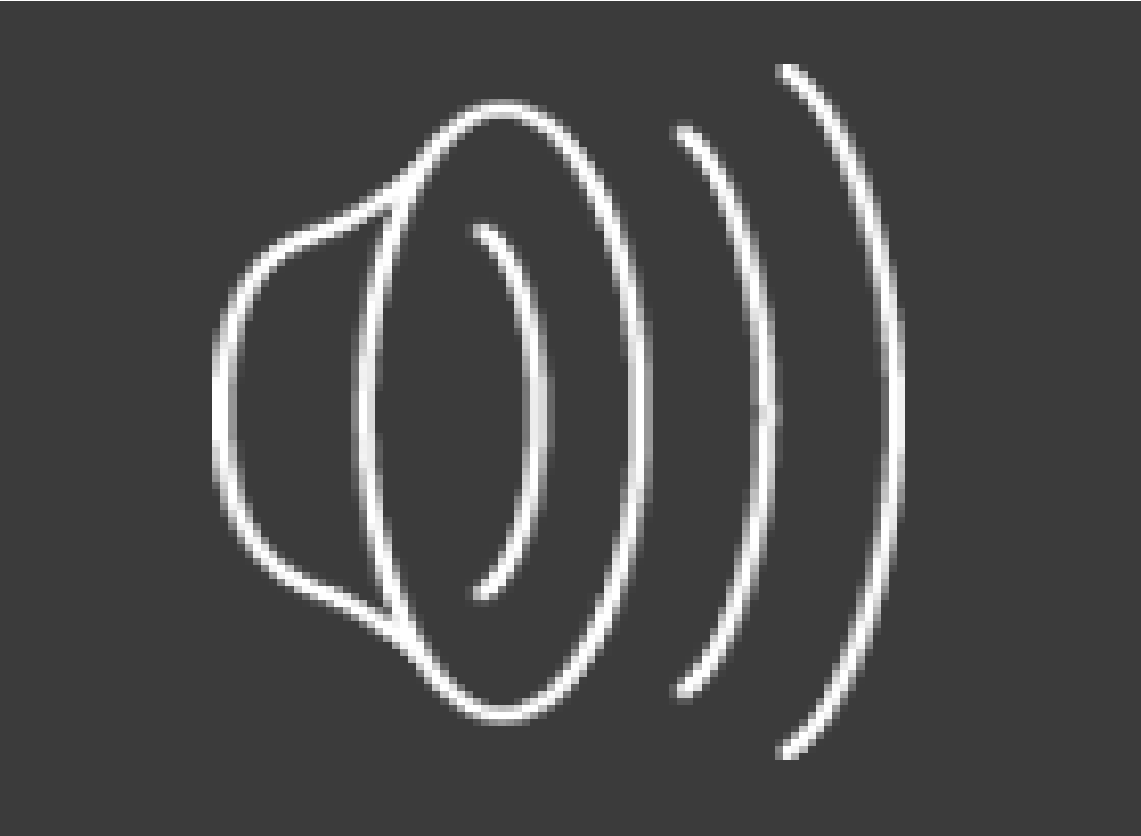
Orbits de satélites artificiales

label

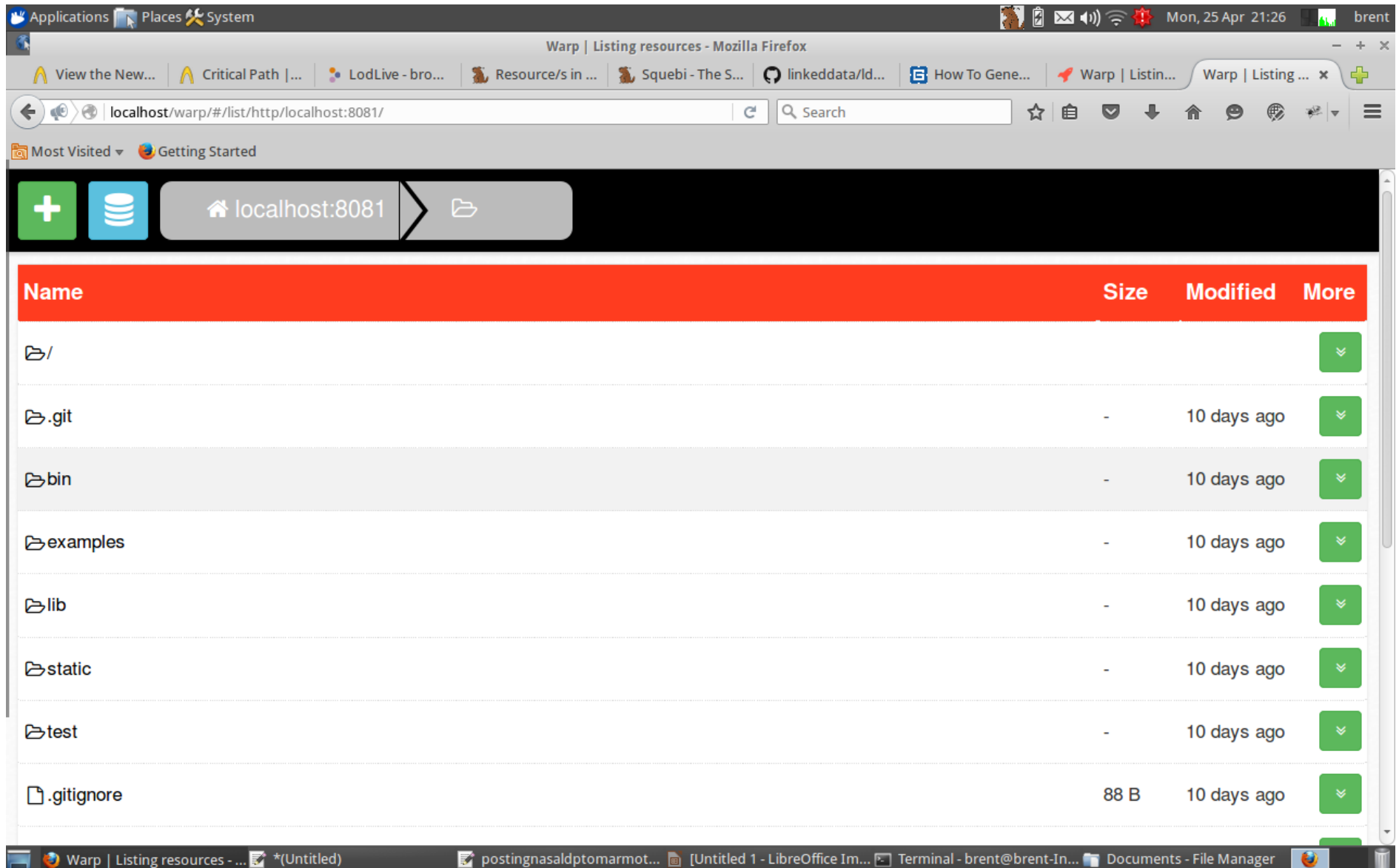
Lot orbitalny

Future Directions

- Hypothesis: Integrating with applications and other people's data promotes sustainability



One Component: SOLiD Platform: A place to store data for access by humans and applications



The screenshot shows a web browser window displaying a file listing for the URL `localhost/warp/#/list/http/localhost:8081/`. The browser's address bar and tabs are visible at the top. Below the browser window, a file manager interface is shown with a navigation bar containing a home icon, a folder icon, and the text `localhost:8081`. The main content area displays a table of files and folders.

| Name | Size | Modified | More |
|------------|------|-------------|------|
| / | | | ⌵ |
| .git | - | 10 days ago | ⌵ |
| bin | - | 10 days ago | ⌵ |
| examples | - | 10 days ago | ⌵ |
| lib | - | 10 days ago | ⌵ |
| static | - | 10 days ago | ⌵ |
| test | - | 10 days ago | ⌵ |
| .gitignore | 88 B | 10 days ago | ⌵ |