

Overview of the Legume Federation project



Legume Federation Project Meeting
Pacific Salon 4

Friday, January 13th, 2017

*The **Legume Federation** is an NSF project to build a federation of legume databases through data standards, distributed development, and comparative analysis, to support research across the legume family, and to support robust agriculture for a world that is significantly "legume-fed".*



Three-year project, started in April of 2015



#1444806



CYVERSE™



NCGR
National Center for Genome Resources



Iowa State University

Lead PI-David Fernandez-Baca

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JCVI

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co PI-Steven Cannon

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Nathan Weeks



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co-PI Andrew Farmer

Sam Hokin

Sudhansu Dash

Alex Rice

Alan Cleary

Joel Berendzen



LegumeFederation.org



Members and collaborators:



Alfalfa Genome



Cool Season Food Legume Database



Feed the Future Climate Resilient Chickpea



KnowPulse



Legume Information System



Medicago truncatula HapMap



Medicago genome/JCVI



PeanutBase



SoyBase



UC Riverside (Cowpea)

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Non-legume friends



GDR (Rosaceae database)



CottonGen (QTL definitions)



TreeGenes (expression module)



MaizeGDB (idea & code exchange)



Araport (Thalemine)



Phytozome (Gene Families, Phytomine)

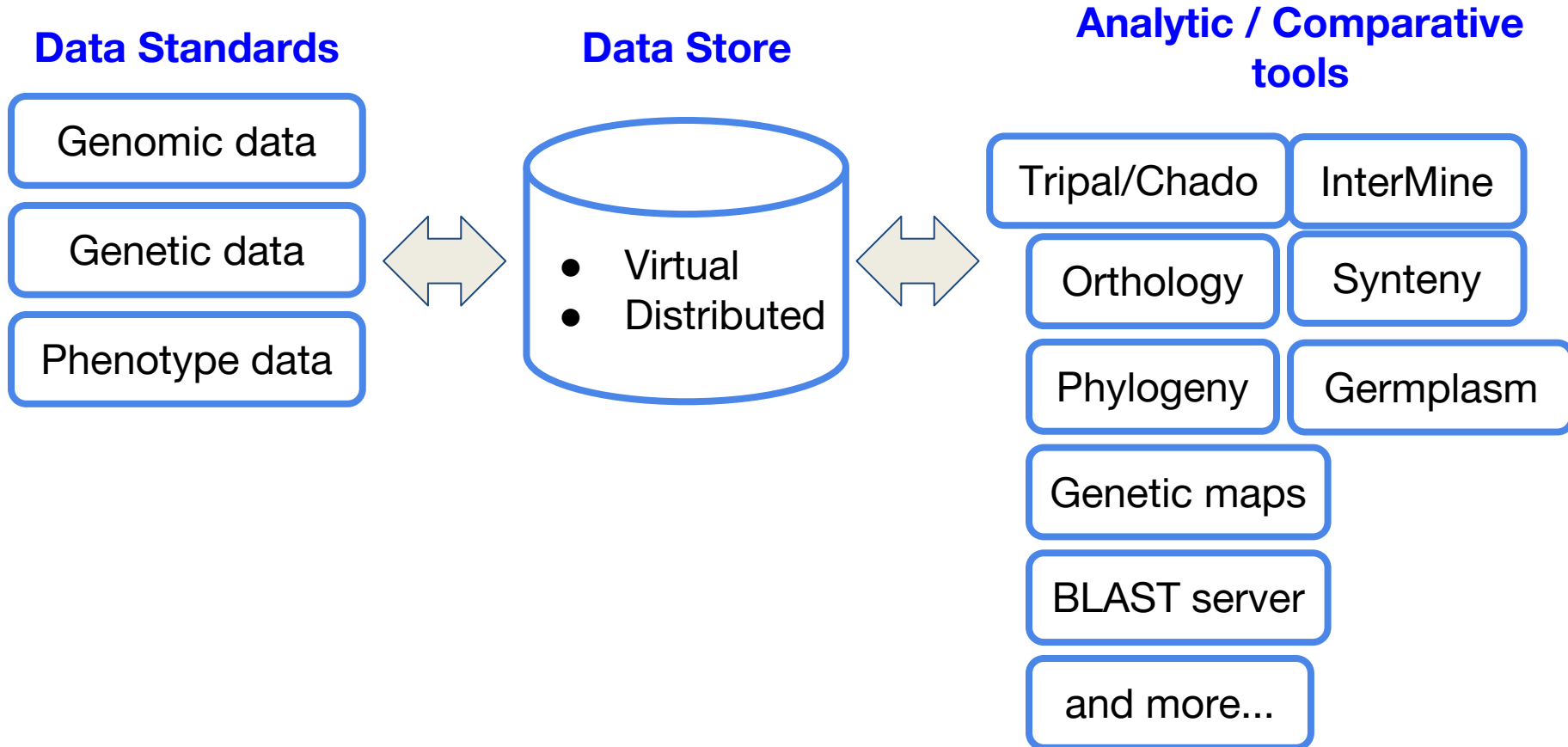
others: InterMine, etc.



Elements of the federation

- Communication, coordination and collaboration
- Data and metadata standardization and exchange
- Shared data repository
- Linking data across species
- Development
- Training

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Related projects

- Standards and Cyberinfrastructure that Enable "Big-Data" Driven Discovery for Tree Crop Research (Doreen Main, Jill Wegrzyn et al.)
- Tripal Gateway, a Platform for Next-Generation Data Analysis and Sharing (Stephen Ficklin et al.)
- Tripal (Workshop: **Sunday, 4:00-6:10**, California Room)
- AgBioData Working Group (Meeting: **Monday, 9:30-12:30**, Garden Salon 1)

Agenda

~12:45 Show and tell. [*Moderator: Chris Town*]

- BLAST UI (with CViT.js etc.) [*Ethy Cannon*]
- Data Store [*Steven Cannon*]
- Phylotree, Context Viewer, GIS, CMap II dev [*Andrew Farmer*]
- InterMines: friendly-synteny mines, genomics, genetics [*Sam Hokin*]
- Cool Season Food Legume db; Tripal Map [*Jodi Humann*]
- Overview of what Tripal provides to a federation [*Lacey Sanderson*]

~2:00 break

~2:15 Round table discussion.

- How can we collaborate better?
- What are the needs of the research communities?
- What's missing?