Chronology of the GTTN Phase 1 Database Project

Richard Bruskiewich, PhD

Tree Informatics / Delphinai Corporation

15-16 February 2017
BMEL, Bonn, Germany

1st Generation Release (March – November 2013)

- Data model designed, based on sample reference data
- Developed a structured (XML) data input format
- Elaborated initial (Python-based) prototype:
  - Basic database and secured web portal established
  - Basic functionality for reference and sample data uploads
  - Genotype likelihoods sample analysis implemented based on Rannala B and Mountain JL. (PNAS 1997)
  - Statistical plots of reference chemical isotope data
  - Initial “command line” implementation of isotope PCA

Review Workshop
4-5 December 2013, Thünen Institute

- Summary “White paper” report prepared and presented.
- The scope of the desired system significantly debated
  - Proposal made that the system NOT include embedded analysis tools Certified laboratories to simply download raw data for off-line analyses.
- Highlighted the characteristics of two primary end user communities that require distinct system interfaces:
  - ***Certified Testing Laboratories:*** to access data, insofar authorized.
  - ***Authorities:*** to simply query feasibility of sample provenance testing.

December 2014 2nd Generation Release

- New version of the system initiated, based on Java Spring technology.
  - Java was the preferred language for a potential system host like FAO
  - Used the “Spring Roo” development bootstrapping framework.
- A user authentication subsystem developed to provide various constraints of visibility to system features and data.
- Developed rudimentary geographical map display of population data.
- Loaded database with list of target species, annotated with cross references and meta-data (i.e. IUCN ids, CITES status, *etc*)
- Worked to extract and load some public genotype (*Cedrela odorata* haplotype) data from selected published studies.
- Reference data - indexed by species, data types and populations - downloadable by registered laboratories as Excel worksheets.

September 2015 3rd Generation Release

- Project in limbo until summer 2015 request made to make a public release in time for the World Forestry Conference in September.
- Technical issue: the Spring Roo version was unwieldy to extend, so it was refactored the application into a more easily maintained Java Spring/JPA layered application with a Vaadin graphical front end.
- Only the public client interface species-indexed list of technical experts was prioritized for initial transfer into the new (3rd generation) version.
- Added in the TRAFFIC list of species and experts.

October 2015 – December 2016

- The “World Resources Institute” was designated as the interim host of the GTTN secretariat(?).
- A modest amount of funding was (*eventually)* provided to keep the 3rd generation server online until December 2016.
- Funds provided to add the IAWA experts into the “***Service Provider Catalog***” (the new name for the public client interface)
- ***No*** interest expressed at that point for the “laboratory/reference data” portion of the database, so it was not (yet) moved into the 3rd version.

December 2016 – January 2017

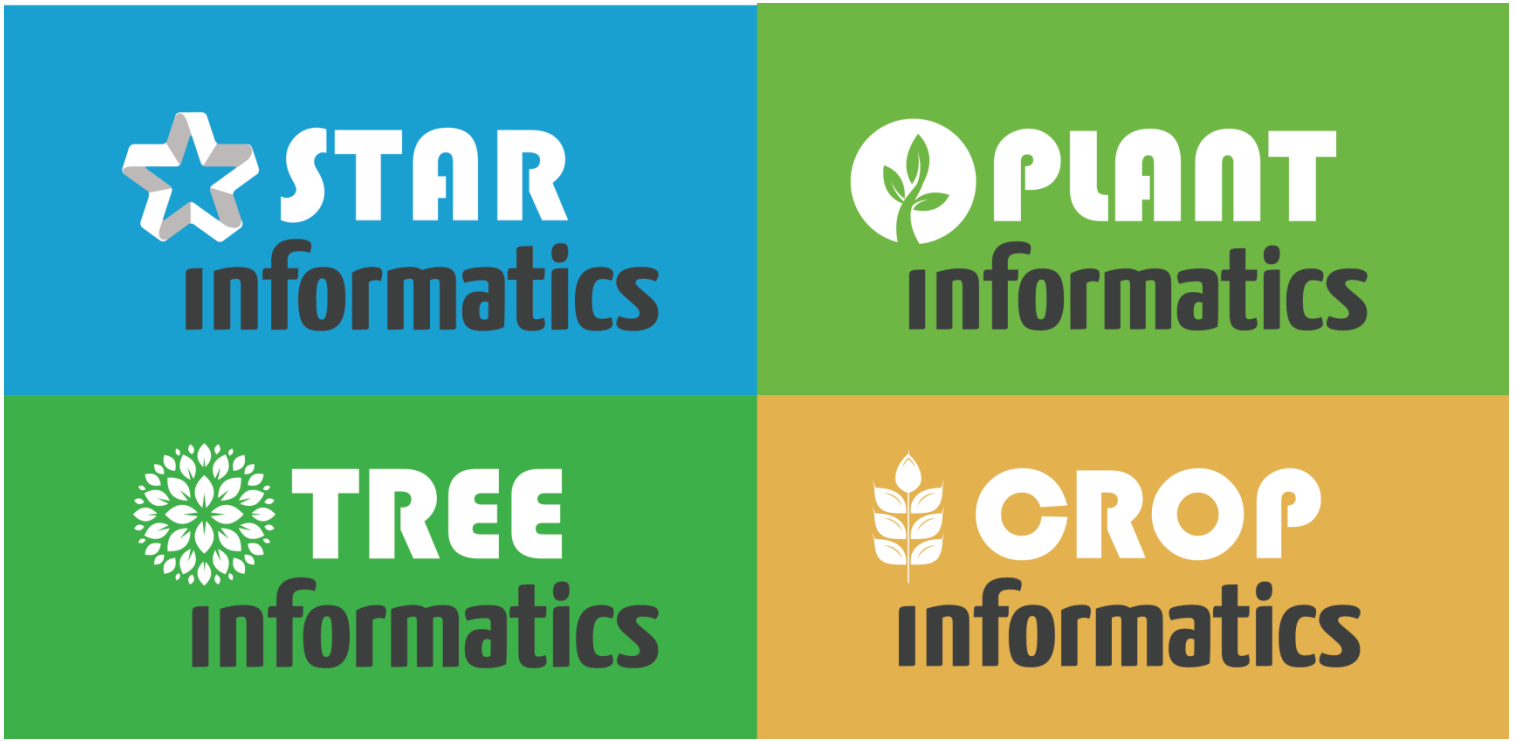
- WRI announced that they would simply take a (MySQL) dump of the expert catalog database and merge it directly into their Drupal **Forest Legality Alliance** web site(?).
- The GTTN project Java software implementation was effectively thrown away... See http://gttn.treeinformatics.net for a live server running this version (reverted branding to GTTN, not FLA)
- Unexpectedly, in January 2017 – an invitation received to attend the Bonn GTTN Phase 2 start up meeting… so here we are! Some project documents posted at:

https://drive.google.com/drive/u/2/folders/0B847rXPFjtz4NDBXTTZUOWhQYlE

Conflicting GTTN Phase 1 Perspectives

1. Noble public sector sense of mission: to leverage science to combat the global criminal problem of illegal logging.
2. "*Science is hard*" but "the *Computer Programming is Easy*".
3. The project should create and share a publicly accessible research database of tree genetic, isotope and related sample data.
4. Others (e.g. Barcode of Life; private sector partners) already have suitable software – give it to them…don't reinvent the wheel.
5. The project is a commercial opportunity for the private sector, which can do it better!
6. We just need a catalog of experts… forget the reference data…
7. Just give us the database and we'll post it on our content management system...

Thank you!



http://www.starinformatics.com