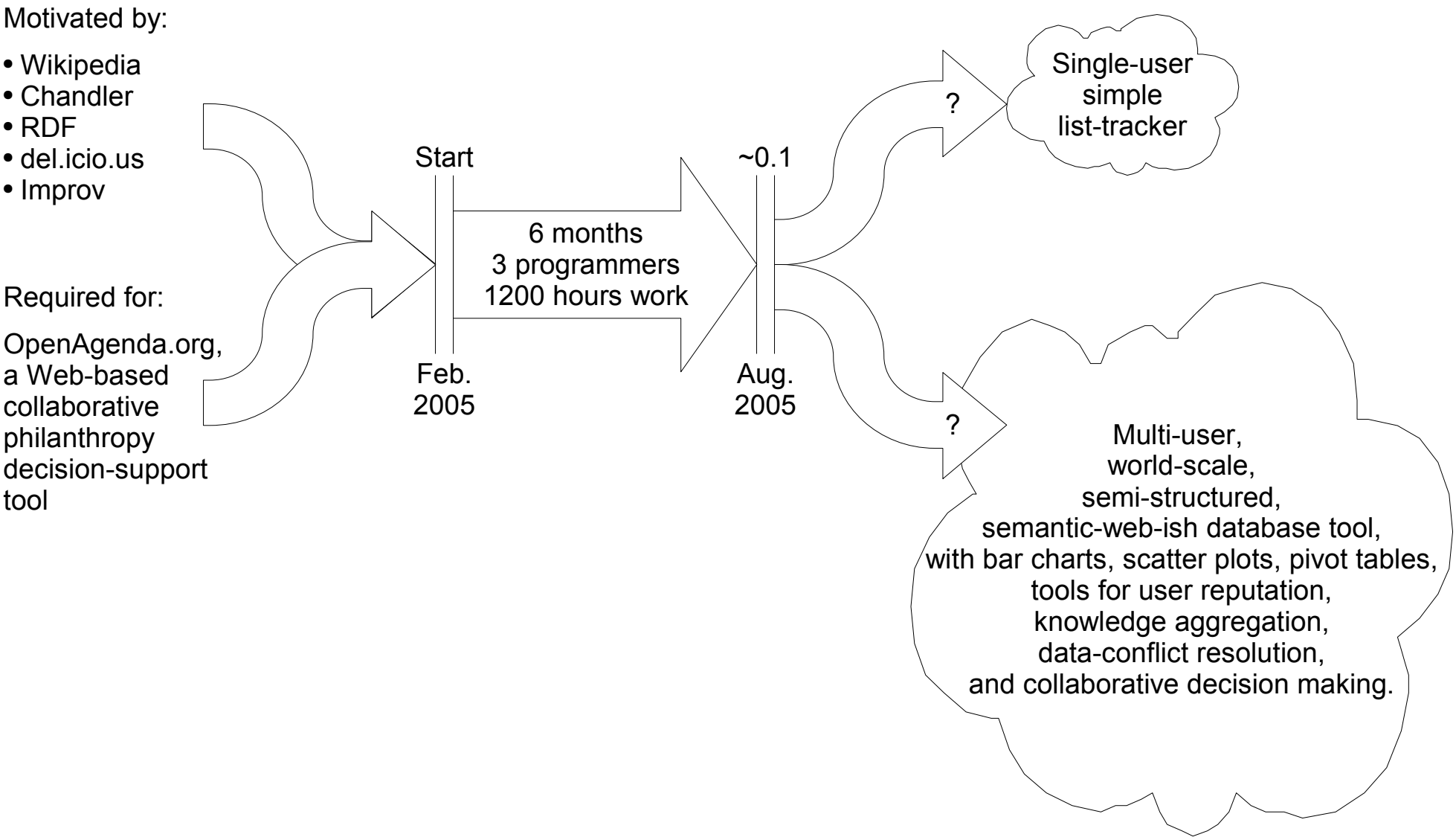
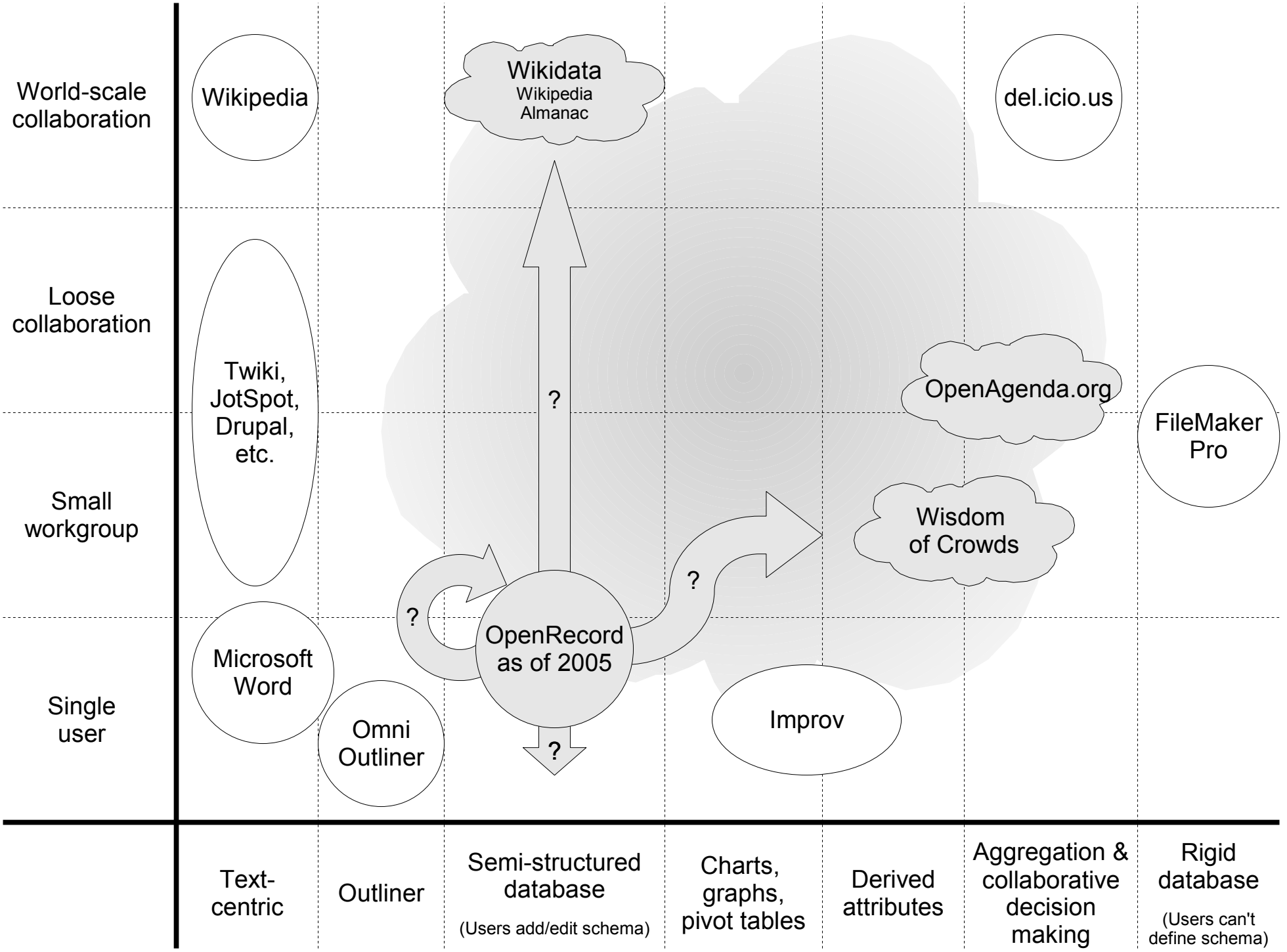
OpenRecord 0.1

toward a tool for web-based peer production

august 2005

Project History




World-scale collaboration
Loose collaboration
Small workgroup
Single user
Wikipedia
Wikidata
Wikipedia Almanac
del.icio.us
Twiki, JotSpot, Drupal, etc.
OpenAgenda.org
FileMaker Pro
Wisdom of Crowds
Microsoft Word
Omni Outliner
OpenRecord as of 2005
Improv
?
?
?
?
Text-centric
Outliner
Semi-structured database
(Users add/edit schema)
Charts, graphs, pivot tables
Derived attributes
Aggregation & collaborative decision making
Rigid database
(Users can't define schema)

Potential Applications

Museum Inventory

- small town museum
- 6 volunteers
- no paid staff
- no software budget
- no database experience

Set up to keep track of:

- objects on exhibit
- rooms and displays
- donors

OpenAgenda.org

- collaborative philanthropy
- collect quantitative metrics
- do cost-benefit comparisons

Set up to keep track of:

- poverty, disease, death
- available interventions
- non-profit organizations
- budgets and outcomes
- openness: survey results
- cost effectiveness metrics

Stamp Collecting

- single user
- thousands of items
- simple structured database

Set up to keep track of:

- postage stamps
- coins, currency
- folders, drawers, and albums

Wikidata Almanac

- could be a Wikimedia project?
- “world-scale collaboration”

Set up to keep track of:

- cities, countries, populations
- chemicals & compounds
- schools & universities
- corporations & products
- elected officials & political parties
- poverty, employment, wealth
- ships, planes, trains, cars
- lifespan, health, education
- births, deaths, migration
- etc.

Tobacco Control

- Globalink is a network of tobacco control advocates
- thousands of people
- “loose collaboration”

Set up to keep track of:

- violations of smoke-free laws
- violations of the 1998 Master Settlement Agreement (MSA)
- tobacco industry funded research and researchers
- organizations that accept funds from tobacco firms
- compliance with WHO FCTC (Framework Convention on Tobacco Control)

Book Club

- small workgroup
- books, reviews, meetings

Investment Club

- small workgroup
- stocks, ratings, industries

Family Genealogy

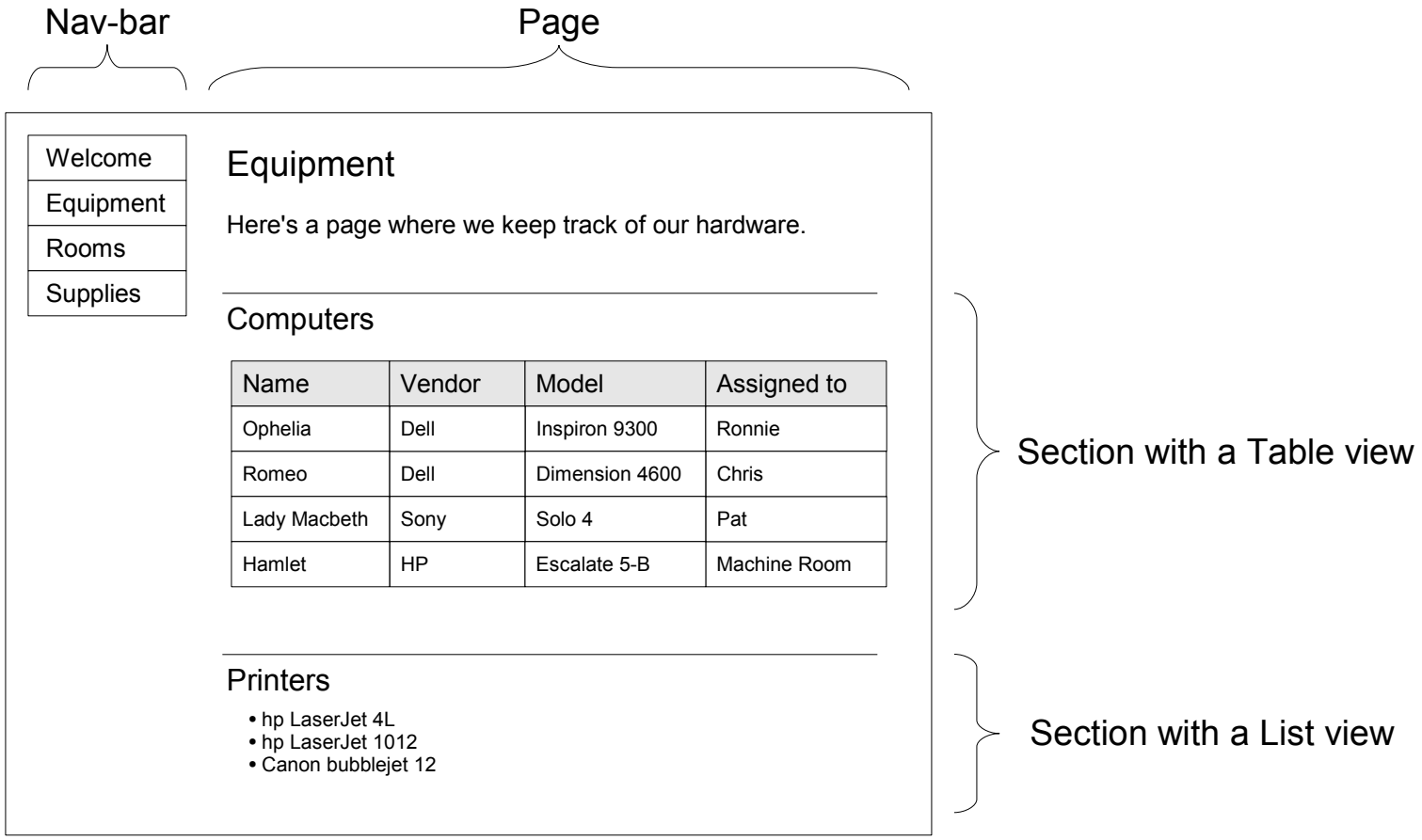
- extended family as workgroup
- people, places, cemeteries

etc.

Content

Items
Attributes
Categories
Tags
Entries
Types
Connections
etc.

Presentation



Layout

- a repository has a set of pages
- a page can have sections
- a section has a query
- users can edit queries using a query editor
- a query returns a list of content items
- sections use different types of views to display results
- users can pick what view to use to display the result list
- different sections can show different views of the same content items

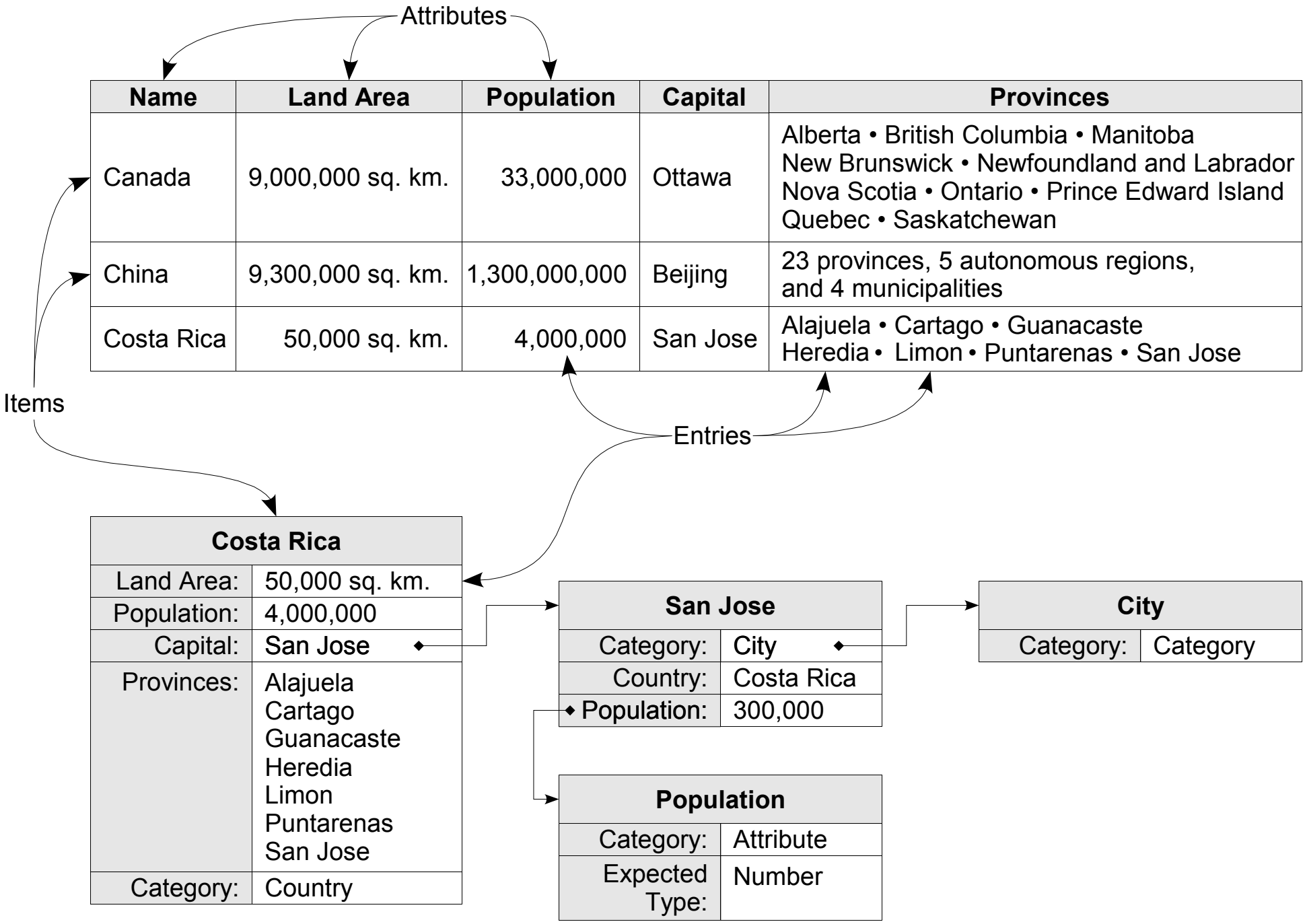
Views today

- Table view
- List view
- Detail view
- Master-detail (soon) (like an e-mail reader)

Views someday

- Outliner
- Bar chart
- Scatterplot
- Pivot table
- Gantt chart
- Rollback history
- Diff version
- etc.

Data model


Attributes
Name
Land Area
Population
Capital
Provinces
Canada
9,000,000 sq. km.
33,000,000
Ottawa
Alberta • British Columbia • Manitoba
New Brunswick • Newfoundland and Labrador
Nova Scotia • Ontario • Prince Edward Island
Quebec • Saskatchewan
China
9,300,000 sq. km.
1,300,000,000
Beijing
23 provinces, 5 autonomous regions,
and 4 municipalities
Costa Rica
50,000 sq. km.
4,000,000
San Jose
Alajuela • Cartago • Guanacaste
Heredia • Limon • Puntarenas • San Jose
Items
Entries
Costa Rica
Land Area: 50,000 sq. km.
Population: 4,000,000
Capital: San Jose
Provinces: Alajuela
Cartago
Guanacaste
Heredia
Limon
Puntarenas
San Jose
Category: Country
San Jose
Category: City
Country: Costa Rica
Population: 300,000
City
Category: Category
Population
Category: Attribute
Expected Type: Number

Data model

Categories

- items can be assigned to categories
- a category is a little bit like the Chandler notion of a Kind
- you can search for all items in a category
- an item can belong to more than one category (kind) – San Francisco can be both a City and a County
- an item does not need to belong to any category – “kind-less items”
- you can switch an item from one category to another
- a category is really just an item itself, so a category can have a description and other attributes
- any item can serve as a category

Items

- an item can have entries for attributes
- an item can use any attributes, regardless of what categories it's in
- an item can have an attribute that no other item has, or that isn't typical of items in this category

Attributes

- all attributes are really “ad-hoc” attributes
- we are “attribute-centric”, in the sense that all schema is associated with attributes
- two unrelated items can have the same attribute
- an attribute can have an “expected type”
- an attribute can have an “inverse attribute”
- an attribute is really just an item, so you can add ad-hoc attributes to the attribute
- any item can serve as an attribute

Entries

- an item can have one or more entries for each attribute
- each entry holds one data value
- an entry can hold a literal value or an item reference
- an entry knows what type of value it holds
- an entry's type does not need to match the “expected type” of the attribute

Types

- literals: Text, Number, Date, URL, etc.
- bi-directional item connections
- one-way item references
- dates can be “fuzzy” – users can enter dates like: 8/18/2005, August 1944, 1944, Today, or Tomorrow

Tags

- items can have tags
- tags are like the tags in del.icio.us or flikr
- you can search for all items with some tag
- the tags are items themselves, so a tag can have a description as well as other attributes

Names and Identifiers

- every item has its own URL
- any item can have a name
- names never need to be unique – any two items can have the same name
- an item can have more than one name
- names are never used as unique ids
- unique ids are never used as names
- unique ids never appear in the UI*

*(except in URLs)

Forking and Merging

- a repository can be forked
- any two repositories can be merged, including two forks of a repository

History

- we keep a complete transaction log
- a repository can be rolled back to any point in its history

Attribution

- an item knows who created it, and when
- an entry knows who created it, and when

No Kinds

- there is no real notion of kinds

No Collections

- there is no real notion of collections
- however, a query result set is like a collection, and the list of entries for an attribute is like a collection

No Cardinality

- there is no real notion of cardinality
- all attributes can be multi-valued

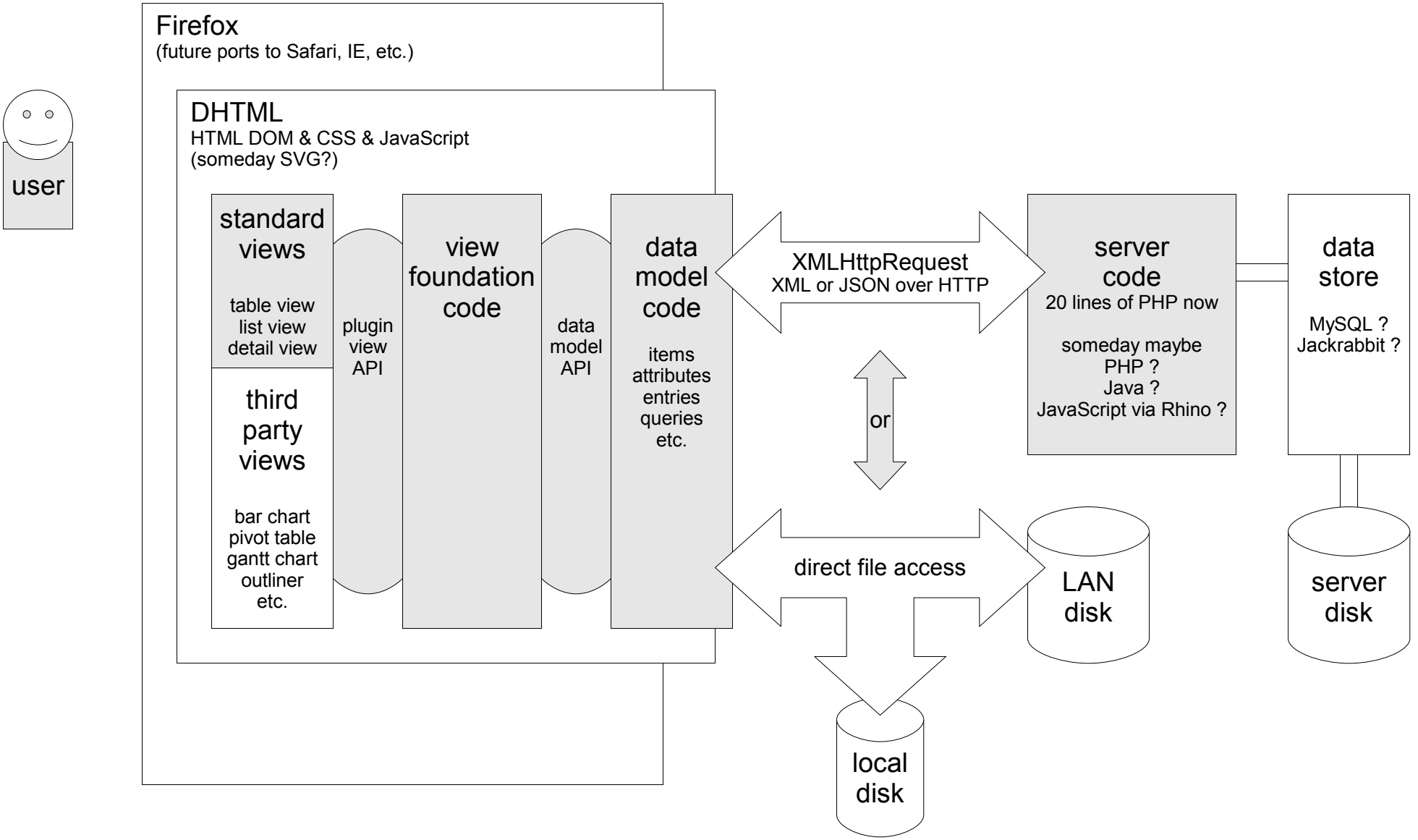
No Permissions

- all content is readable by anyone
- anyone with an account can add content

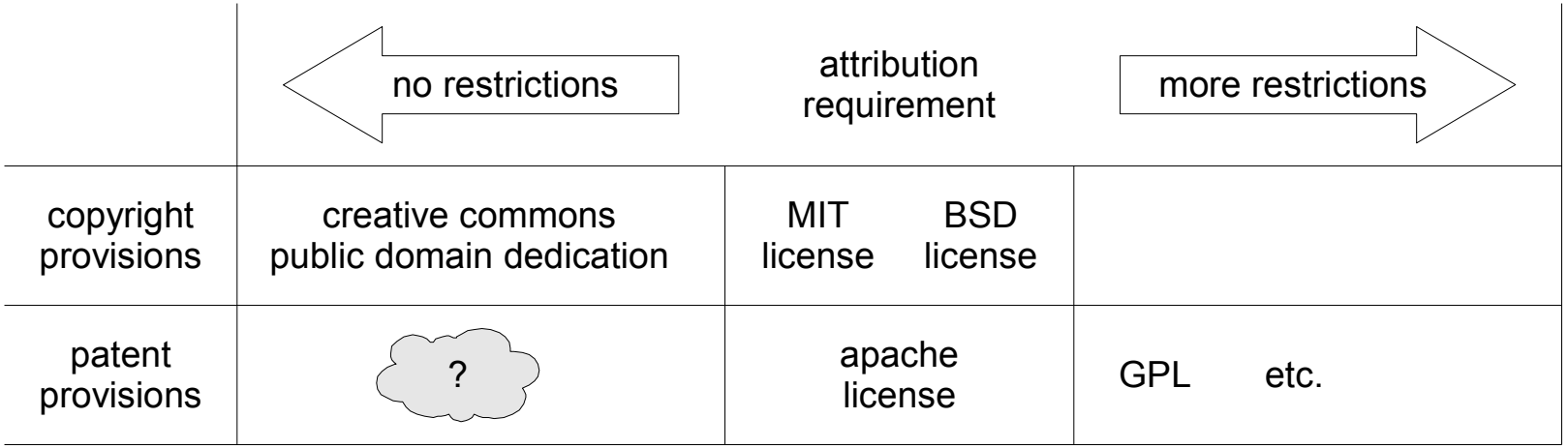
No Anonymity

- all content can be attributed to someone

Architecture



Open source licenses



Contributor license agreement (CLA)

Option 1:
A peer-to-peer CLA agreement between a group of contributors, “executed in counterparts”.

Option 2:
Create a non-profit foundation. CLA is between the contributor and the foundation.

Option 3:
Operate as an autonomous project of an established foundation. CLA is between the contributor and the foundation. Candidates might include:

- Tides Foundation ?
- Dojo Foundation ?
- OSAF ?