PFIF registry exchange model

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There are person records and note records
Every record belongs to a **repository**
Repositories are identified by domain name
Repositories choose their record identifiers

**repository** foo.com

- **person** foo.com/243
- **person** foo.com/1281
  - **note** foo.com/119
  - **note** foo.com/120

**repository** bar.org

- **person** bar.org/a73zW
  - **note** bar.org/a73zW.1
- **person** bar.org/a731m
Records can be copied to other repositories.
Record identifier prefix is **home repository**

<table>
<thead>
<tr>
<th>Repository</th>
<th>Person</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>foo.com</td>
<td>foo.com/243</td>
<td>foo.com/119</td>
</tr>
<tr>
<td></td>
<td>foo.com/1281</td>
<td>foo.com/120</td>
</tr>
<tr>
<td></td>
<td>bar.org/a73zW</td>
<td>bar.org/a73zW.1</td>
</tr>
<tr>
<td></td>
<td>bar.org/a731m</td>
<td>bar.com/1281</td>
</tr>
<tr>
<td></td>
<td>bar.com/119</td>
<td>bar.com/120</td>
</tr>
</tbody>
</table>
Imagine four repositories

- repository foo.com
- repository bar.org
- repository abc.net
- repository xyz.gov
Source date = date of original source data

repository foo.com

person foo.com/243
  first_name: "Bob"
  home_state: "IL"
  source_date: **Jan 4**

repository bar.org

repository abc.net

repository xyz.gov
Entry date = date of entry into a repository

repository foo.com

person foo.com/243
  first_name: "Bob"
  home_state: "IL"
  source_date: Jan 4
  entry_date: Jan 4

repository bar.org

repository abc.net

person foo.com/243
  first_name: "Bob"
  home_state: "IL"
  source_date: Jan 4
  entry_date: Jan 5

repository xyz.gov
Modification also sets source and entry date

Repository: foo.com

Person: foo.com/243

- first_name: "Bob"
- home_state: "MN"
- source_date: Jan 6
- entry_date: Jan 6

Repository: bar.org

Repository: abc.net

Person: foo.com/243

- first_name: "Bob"
- home_state: "IL"
- source_date: Jan 4
- entry_date: Jan 5

Repository: xyz.gov
Cloning sets the entry date

repository foo.com
person foo.com/243
  first_name: "Bob"
  home_state: "MN"
  source_date: Jan 6
  entry_date: Jan 6

repository bar.org
person foo.com/243
  first_name: "Bob"
  home_state: "MN"
  source_date: Jan 6
  entry_date: Jan 7

repository abc.net
person foo.com/243
  first_name: "Bob"
  home_state: "IL"
  source_date: Jan 4
  entry_date: Jan 5

repository xyz.gov
Cloning sets the entry date

repository foo.com

person foo.com/243
  first_name: "Bob"
  home_state: "MN"
  source_date: Jan 6
  entry_date: Jan 6

repository bar.org

person foo.com/243
  first_name: "Bob"
  home_state: "MN"
  source_date: Jan 6
  entry_date: Jan 7

repository abc.net

person foo.com/243
  first_name: "Bob"
  home_state: "IL"
  source_date: Jan 4
  entry_date: Jan 5

repository xyz.gov

person foo.com/243
  first_name: "Bob"
  home_state: "IL"
  source_date: Jan 4
  entry_date: Jan 8
Merging requires a decision

repository foo.com

person foo.com/243
  first_name: "Bob"
  home_state: "MN"
  source_date: Jan 6
  entry_date: Jan 6

repository bar.org

person foo.com/243
  first_name: "Bob"
  home_state: "MN"
  source_date: Jan 6
  entry_date: Jan 7

repository abc.net

person foo.com/243
  first_name: "Bob"
  home_state: "IL"
  source_date: Jan 4
  entry_date: Jan 5

repository xyz.gov

person foo.com/243
  first_name: "Bob"
  home_state: "IL"
  source_date: Jan 4
  entry_date: Jan 8
Compare source_date to resolve conflicts

Repository: foo.com

Person: foo.com/243
  First Name: "Bob"
  Home State: "MN"
  Source Date: Jan 6
  Entry Date: Jan 6

Repository: bar.org

Person: foo.com/243
  First Name: "Bob"
  Home State: "MN"
  Source Date: Jan 6
  Entry Date: Jan 7
  WIN!

Repository: abc.net

Person: foo.com/243
  First Name: "Bob"
  Home State: "IL"
  Source Date: Jan 4
  Entry Date: Jan 5

Repository: xyz.gov

Person: foo.com/243
  First Name: "Bob"
  Home State: "MN"
  Source Date: Jan 6
  Entry Date: Jan 9

Jan 9
Use entry_date to synchronize efficiently

(repository) foo.com

(person) foo.com/243
  first_name: "Bob"
  home_state: "MN"
  source_date: Jan 6
  entry_date: Jan 4

"Anything new since Jan 9?"

"I got nothin'."

(repository) xyz.gov

(person) foo.com/243
  first_name: "Bob"
  home_state: "MN"
  source_date: Jan 6
  entry_date: Jan 9
expiry_date says when to delete the record

repository foo.com

person foo.com/243
  first_name: "Bob"
  source_date: **Jan 9**
  entry_date: Jan 4
  expiry_date: **Feb 1**

repository bar.org

person foo.com/243
  first_name: "Bob"
  source_date: Jan 6
  entry_date: Jan 7
On expiry, other date fields are kept

repository foo.com

person foo.com/243
  first_name:"
  source_date: Feb 1
  entry_date: Feb 1
  expiry_date: Feb 1

repository bar.org

person foo.com/243
  first_name: "Bob"
  source_date: Jan 6
  entry_date: Jan 7
Other repositories receive the placeholder
epository foo.com

person foo.com/243
  first_name:"
  source_date: Feb 1
  entry_date: Feb 1
  expiry_date: Feb 1

repository bar.org

person foo.com/243
  first_name:"
  source_date: Feb 1
  entry_date: Feb 2
  expiry_date: Feb 1

Feb 2
Recap

There are person records and note records
Note records are attached to person records

Records belong to repositories
Each repository manages its own identifier namespace
Record identifiers are prefixed with the home repository
Record identifiers are preserved when records travel to a different repository

source_date tracks when the original record was created or modified
source_date is used to resolve merge conflicts

date tracks when a clone record arrived into a repository
date is used to enable efficient incremental update

date specifies a date for voluntary deletion by conforming repositories

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