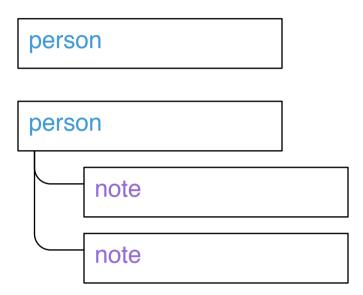
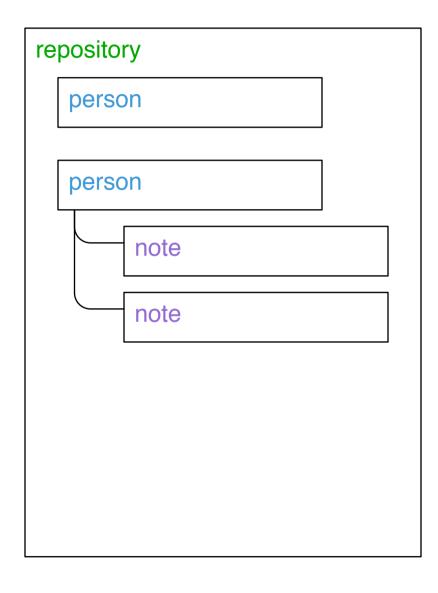
## PFIF registry exchange model

Ka-Ping Yee kpy@google.com http://zesty.ca/pfif

## There are person records and note records

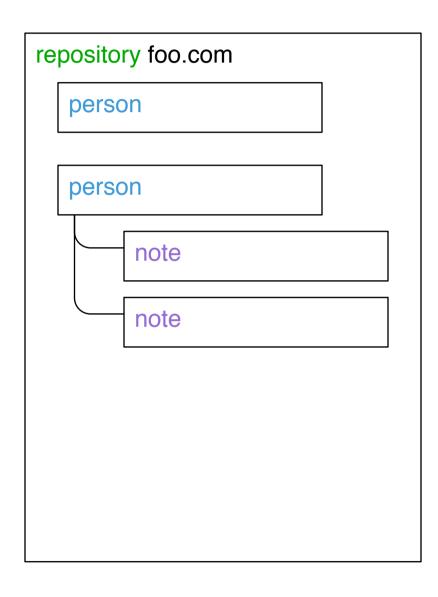


## Every record belongs to a repository



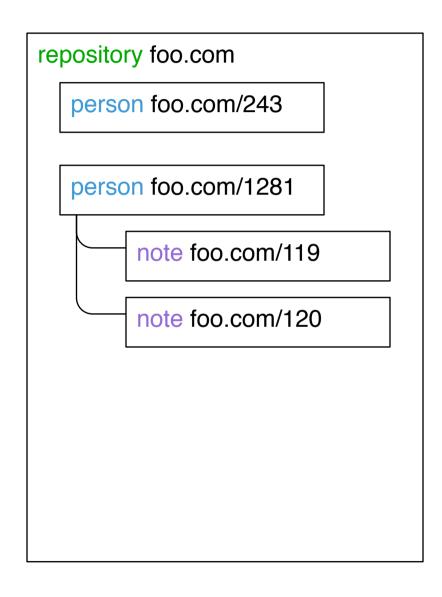
re	pository	
	person	
	note	
	person	

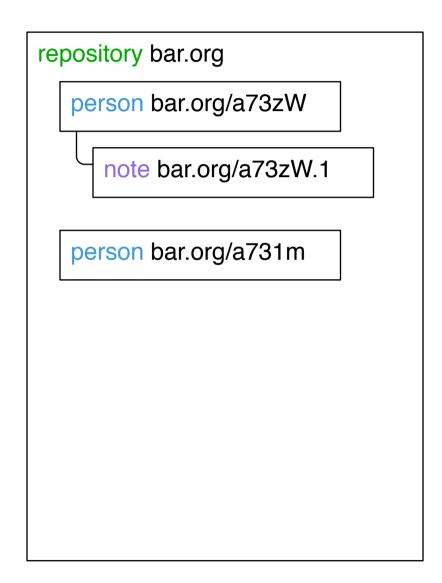
## Repositories are identified by domain name



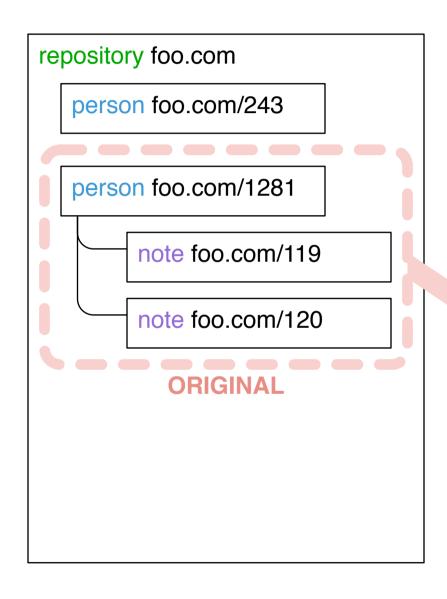
repository bar.org	
person	
note	
person	

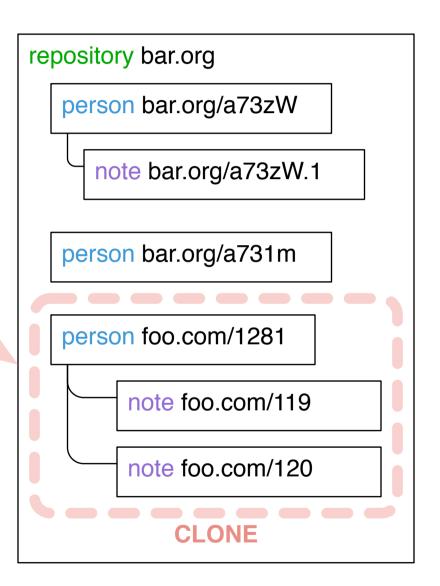
### Repositories choose their record identifiers



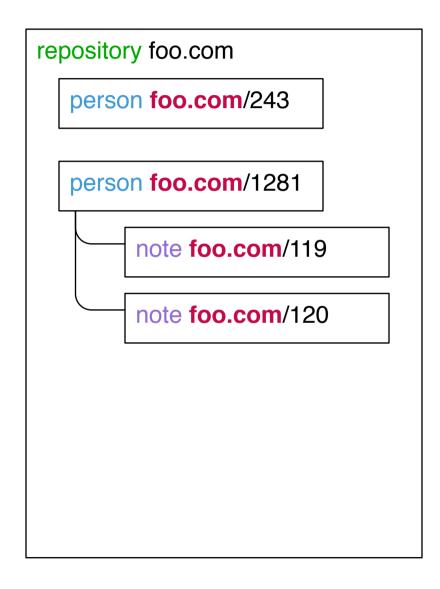


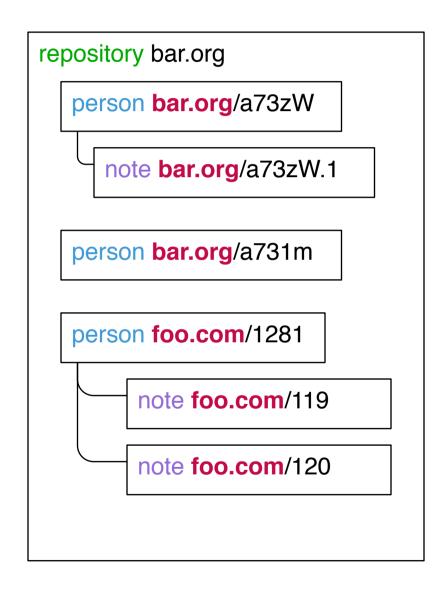
## Records can be copied to other repositories





## Record identifier prefix is home repository

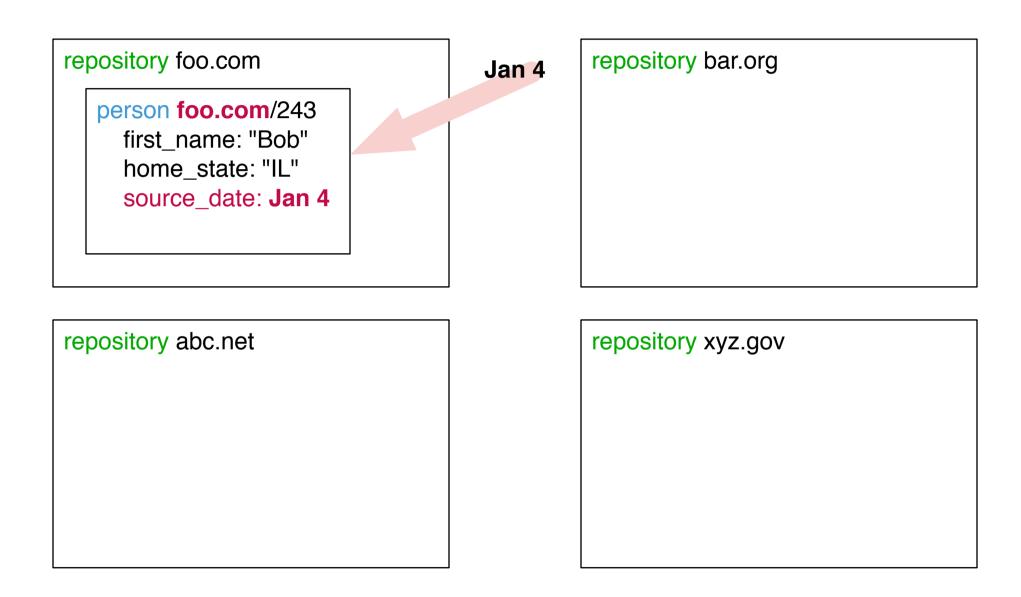




## Imagine four repositories

repository foo.com	repository bar.org
repository abc.net	repository xyz.gov

## Source date = date of original source data



## Entry date = date of entry into a repository

Jan 5

## 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

Jan 6

# repository foo.com person foo.com/243 first\_name: "Bob" home\_state: "MN" source\_date: Jan 6 entry\_date: Jan 6

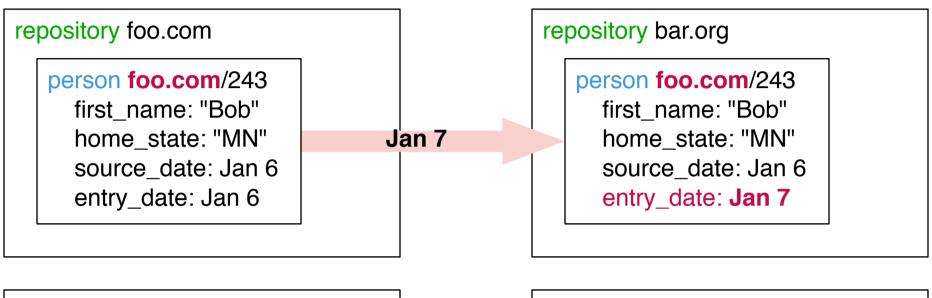
repository bar.org

```
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 abc.net

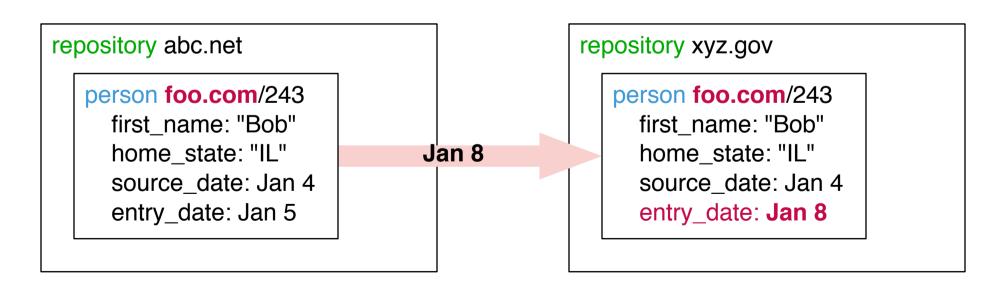
person foo.com/243
first\_name: "Bob"
home\_state: "IL"
source\_date: Jan 4
entry\_date: Jan 5

repository xyz.gov

## Cloning sets the entry date

# repository foo.com/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



## 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 abc.net

#### person foo.com/243

first\_name: "Bob" home\_state: "IL" source\_date: Jan 4 entry\_date: Jan 5

#### repository bar.org

#### person foo.com/243

first\_name: "Bob" home\_state: "MN" source\_date: Jan 6 entry\_date: Jan 7

### ?

#### repository xyz.gov

#### person foo.com/243

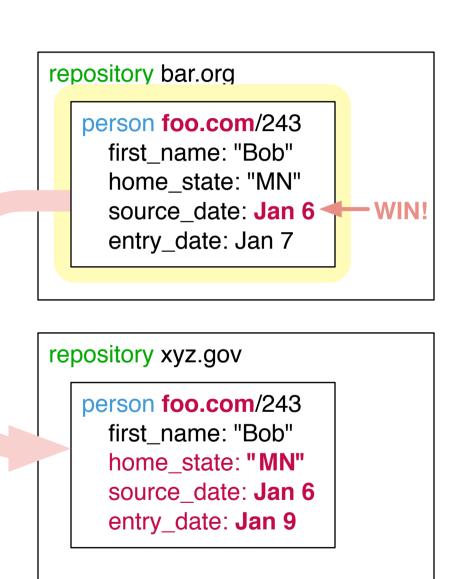
first\_name: "Bob" home\_state: "IL" source\_date: Jan 4 entry\_date: Jan 8

## Compare source\_date to resolve conflicts

Jan 9

## person foo.com/243 first\_name: "Bob" home\_state: "MN" source\_date: Jan 6 entry\_date: Jan 6

# repository abc.net person foo.com/243 first\_name: "Bob" home\_state: "IL" source\_date: Jan 4 entry\_date: Jan 5



## 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

Jan 9

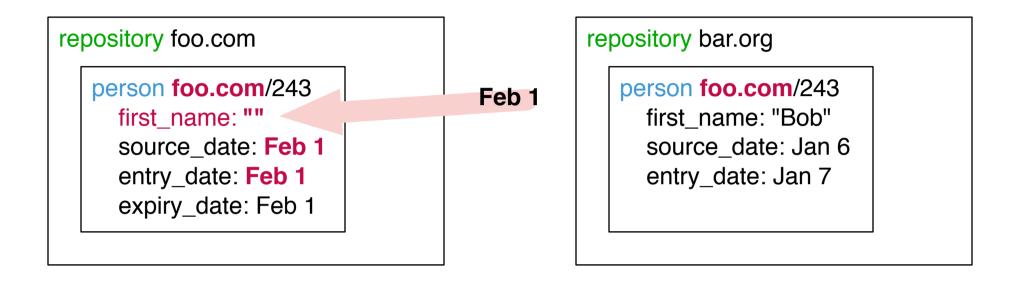
```
repository foo.com

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

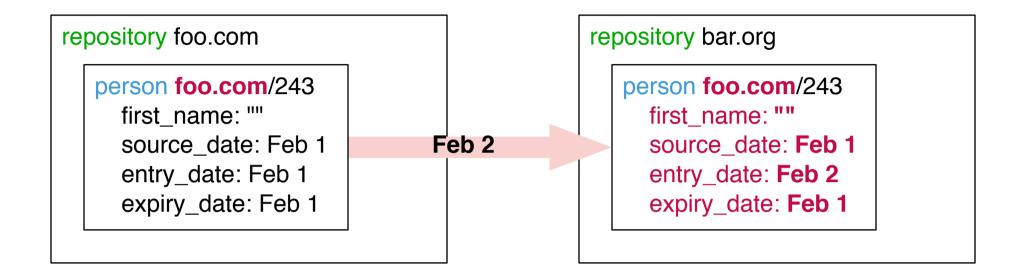
repository bar.org

person foo.com/243
first\_name: "Bob"
source\_date: Jan 6
entry\_date: Jan 7

## On expiry, other date fields are kept



## Other repositories receive the placeholder



## 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

entry\_date tracks when a clone record arrived into a repository
entry\_date is used to enable efficient incremental update

expiry\_date specifies a date for voluntary deletion by conforming repositories

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