



# WOWODC '012

MONTREAL JUNE 30, JULY 1ST AND 2ND 2012



## ERRest : The Next Steps

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# Our agenda

- HTML views
- Alias, non-EO and fake primary keys
- Handling redirections
- Handling headers
- Other stuff

# HTML views

# Automatic HTML routing

- In your controller:

```
protected boolean isAutomaticHtmlRoutingEnabled() {  
    return true;  
}
```

- Component name: <EntityName><Action>Page.wo
- Component must implement IERXRouteComponent

# Automatic HTML handling

- /blogEntries.html -> BlogEntryIndexPage
- /blogEntries/show.html -> BlogEntryShowPage
- /blogEntries/update.html -> BlogEntryUpdatePage
- ...

# Non automatic

- Same as with direct actions
- You use `pageWithName/return nextPage`



# Statefulness

- Have HTML components and want statefulness? Use Ajax components
  - D2W components won't work
- For other formats, can use sessions
  - Store session ID in cookies

# HTML views demo



# Security

- We need to protect creation of users and blog posts
- `checkAccess()` is not what we need
- We need to modify the login method

# Security Demo

# Alias

- Can remap entity names to something else

```
ERXRestNameRegistry.registry().setExternalNameForInternalName("Post", BlogEntry.ENTITY_NAME);
```

- For attributes, use cover methods and ERXKey

# Alias demo

# Faking primary keys

- Might need more useful value for primary key, or hiding it
  - Example: blog title instead of primary key
- Can redefine "id" for REST context
- Need a delegate
  - Need to override default routes if id not numeric

# Fake ids demo

# Date formats

- Default patterns:
  - NSTimestamp: `%Y-%m-%dT%H:%M:%SZ`
  - Java Date and JodaTime LocalDate: `yyyy-MM-dd'T'HH:mm:ssZ`
- Can change the pattern for all controllers, by controller or action
- Won't apply to WO components (HTML views)



# Date formatting

- Different formatters for NSTimestamp, Java dates and Joda Time
  - `er.rest.(timestamp|date|joda)Formatter` (java.text.Format object)
  - `er.rest.(timestamp|date|joda)Format` (String)
  - `er.rest.(timestamp|date|joda)Format.primary` (String)
  - `er.rest.(timestamp|date|joda)Format.secondary` (String)

# Date formatting

- Cascade:
  - `er.rest.(timestamp|date|joda)Formatter` (from context)
  - `er.rest. (timestamp|date|joda) Format` (from context)
  - `er.rest. (timestamp|date|joda) Format` (from properties)
  - If value contains a space:
    - `er.rest. (timestamp|date|joda) Format.secondary`
  - If value don't contains a space:
    - `er.rest.(timestamp|date|joda) Format.primary`

# Date formats demo

# Advanced stuff

# Transactions

# Transactions

- Was built to support Dojo
- Allow queuing transactions, commit later
- Client send transaction state, client id and sequence id
- Set `ERXRest.transactionsEnabled` to true
- Need to store session ID in cookies

```
public Session() {  
    setStoresIDsInCookies(true);  
}
```

# Transactions demo



# Redirections

- Title of blog is different? Need to send old URLs to new one
- Must keep track of older title...
- EOF and changes notifications to the rescue!

# Adding caching

- Why send the same data if it doesn't change?
- Browsers have cache
- Client APIs could cache too
- Again, changes notifications to the rescue!

# What we need

- Unique ID
  - `title() + "_" + primaryKey()`
- Entity to keep track of current state
  - Etag value
  - Last modified timestamp
  - Primary key value
  - State (inserted, updated, deleted)
- Entity to keep track of history
- Using change notifications to populate state and history

# The model

Outline
BlogModel
Author
BlogEntry
Category
CategoryBlogEntry
DelegatePKHistory
SyncInfo
delegatedPrimaryKeyValue
etag
id
lastModified
state
token
delegatePKHistories

BlogModel
Name
Column Name
External Width
delegatedPrimaryKeyValue
delegatedPrimaryKeyValue
255
etag
etag
255
id
id
id
lastModified
lastModified
state
state
50
token
token
255
Name
Destination
Source Attribute
Destination Attribute
delegatePKHistories
DelegatePKHistory
id
syncInfoID

Outline
BlogModel
Author
BlogEntry
Category
CategoryBlogEntry
DelegatePKHistory
delegatedPrimaryKeyValue
id
syncInfoID
syncInfo

BlogModel
Name
Column Name
External Width
delegatedPrimaryKeyValue
delegatedPrimaryKeyValue
255
id
id
id
syncInfoID
syncInfoID
Name
Destination
Source Attribute
Destination Attribute
syncInfo
SyncInfo
syncInfoID
id

# Redirections and caching demo

# Adding non-EO support

- Needs delegate for non-EO
- Can use strings instead of **ERXKey**
- Extends from **ERXAbstractRestDelegate**
- Implements logic that finds objects and “primary keys”

# JSON Schema

- Was added for Dojo JsonRestStore
- But also useful for documenting your REST services
- Add this to the URL:

`?schema=true`

- Add this to your action:

```
if (isSchemaRequest()) {  
    return schemaResponse(showFilter());  
}
```



# JSON Schema example

GET <http://127.0.0.1/cgi-bin/WebObjects/Movies.woa/-6100/ra/movies?schema=true>

```
{
  "name": "Movie",
  "properties": {
    "title": {
      "optional": false,
      "type": "string",
      "minLength": 1,
      "maxLength": 255
    },
    "dateReleased": {
      "optional": true,
      "type": "string",
      "format": "date-time"
    },
    "category": {
      "optional": true,
      "type": "string",
      "maxLength": 20
    }
  }
}
```



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## Q&A