Cross Platform Application Development with CouchDB and Wallaby
Microscope Software

Cell tool
Celltool

RS232
Cellfool

GigE

RS232
State

```json
{
  "laser": {
    "power": 80.0,
    "on": true,
    "sysTemp": 43.0
  }
...
```
{  
  "camera":  
  {  
    "ccd":  
    {  
      "width": 1024,  
      "height": 1024  
    },  
    "capture": true  
  }  
...}
{  
  "spectrometer":  
  {  
    "exposureTime": 1.0,  
    "cooler": true,  
    "temp": -80.0  
  }  
...  
}
{  
    "microscope":  
    {  
        "leds":  
        {  
            "green": true,  
            "red": false  
        },  
        "stage":  
        {  
            "x": 55.00,  
            "y": 12.3123,  
            "z": 8.554357  
        }  
    }  
}
```json
{
    "microscope": {
        "leds": {
            "green": true,
            "red": false
        },
        "stage": {
            "x": 55.00,
            "y": 12.3123,
            "z": 8.554
        }
    },
    "spectrometer": {
        "exposureTime": 1.0,
        "cooler": true,
        "temp": -80.0,
        ...
    },
    "laser": {
        "power": 80.0,
        "on": true,
        "sysTemp": 43.0,
        ...
    },
    "camera": ...
}
```
```json
{
    "microscope": {
        "leds": {
            "green": true,
            "red": false
        },
        "stage": {
            "x": 1.35,
            "y": 12.3123,
            "z": 8.554357
        }
    }
}
```
- Platform Independent services and deployment
- Configurable Doc-manipulating Widgets (In Qt-Designer)
- Doc wrappers for easy access by path
Cell tool

Product Tracking

JACOB ELOXAI
beep

I

+ scanner ID
QR code
of location
get SCANNER
Ⅱ
LOCATION
DOC

beep

+ SCANNERID
QR CODE
OF LOCATION
beep

+ scanner ID + QR code + location

get scanner + location + doc

embed
beep

get scanner + location

Scanner ID + QR code

get doc

embed

save
tracked article

beep

SCANNER ID + QR CODE of TA
beep

I

SCANNER ID + QR CODE of TA

get SCANNER + TA DOC

III

III

Chair
I. Scanner ID + QR Code of TA
II. Get Scanner + TA Doc
III. Embed sub-doc
IV. beep
1. Get scanner + TA doc
2. Scanner ID + QR code of TA
3. Save
4. Embed sub-doc
5. Save
× generic doc-manipulation methods (clone, embed, merge …)
× backends for CouchDB + Elasticsearch
× experience w/ CouchDB
× inspiration
Cell tool

Widgets + PID

Backends + Generic DMMs
App Logic

LOAD

EDIT

LABEL

SAVE

PILLOW

EDIT ROOM

EDITOR

VIEWER

ACTION

EDIT LOGIC

COUCHDB
Wallaby
Components

Backends | couchdb | elasticsearch <--- from product tracking
Wallaby base

Plugins
- cdll peers
- es peers

Backends
- couchdb
- elasticsearch

Generic peers
Messaging helpers
from CellHoll

front ends
Wallaby base
Plugins
Back ends

widgets  QT  UI

generic peers  messaging  helpers

cdb peers  es peers

couchdb  elasticsearch
Apps: CRM, Wally, Books, fresh brew, ...

Front ends: widgets, Qt, UI helpers

Wallaby base: generic peers, messaging, helpers

Plugins: cdb peers, es peers

Back ends: couchdb, elasticsearch
Apps
  - CRM
  - Wally Books
  - Fresh Brew
  - ... Inspector (IDE)

Front Ends
  - Widgets
  - QT
  - UI
  - Helpers

Wallaby Base
  - Generic
  - Peers
  - Messaging
  - Helpers

Plugins
  - CDB
  - Peers

Backends
  - Couchdb
  - Elasticsearch

Plugins
  - ESB
  - Peers
show time
• [http://wlby.freshx.de](http://wlby.freshx.de) (Tutorials)
• [http://github.com/freshxopensource](http://github.com/freshxopensource)
• `pip install wallaby`
• Follow @FXWallaby on twitter!