

PVSS

Portable Visual Search Service for Researchers

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Organizer:



Motivation of this service

Image retrieval algorithm requires several runs and trials.

Reviewing result is a repetitive process.

Presentation is needed

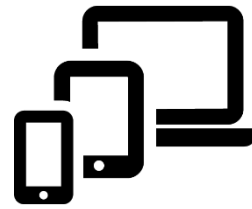
- Flat poster with still images result.
- Interactive demo for audiences.



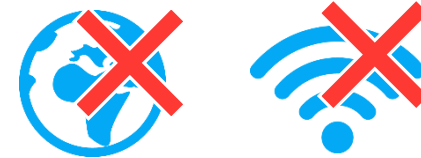
Interactive demo problem



Need an extra
implementation
of UI.



Deploying
system to
different
platforms.



Un-controllable
on-site
environment.

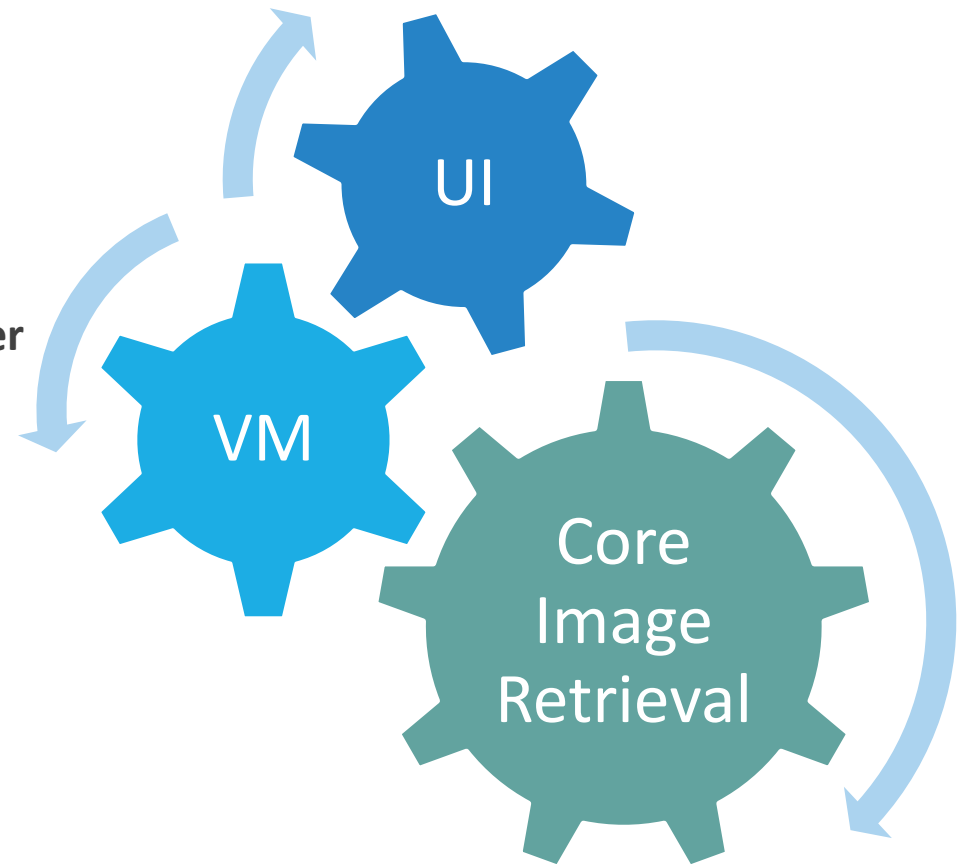
Proposed framework

A portable visual search service (PVSS)

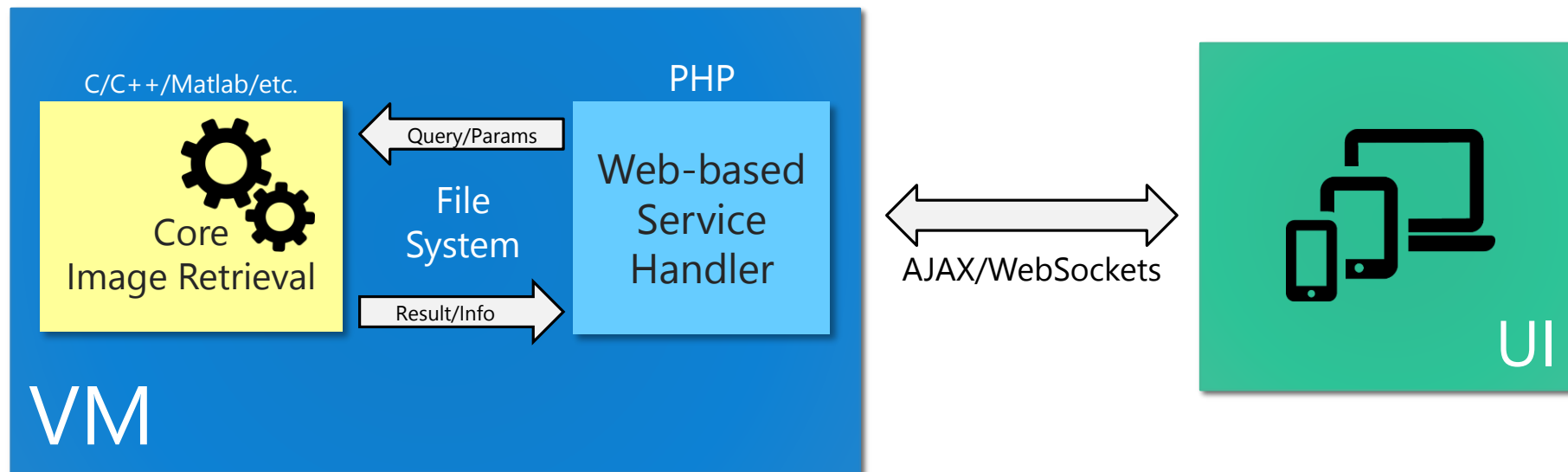
- HTML5 based UI
 - **Client-Server** architecture.
 - **Easy to connect** with standard file system.
 - Heterogeneous client access with standard **web browser**
- Integrated virtual machine
 - **Portability**

Key benefits

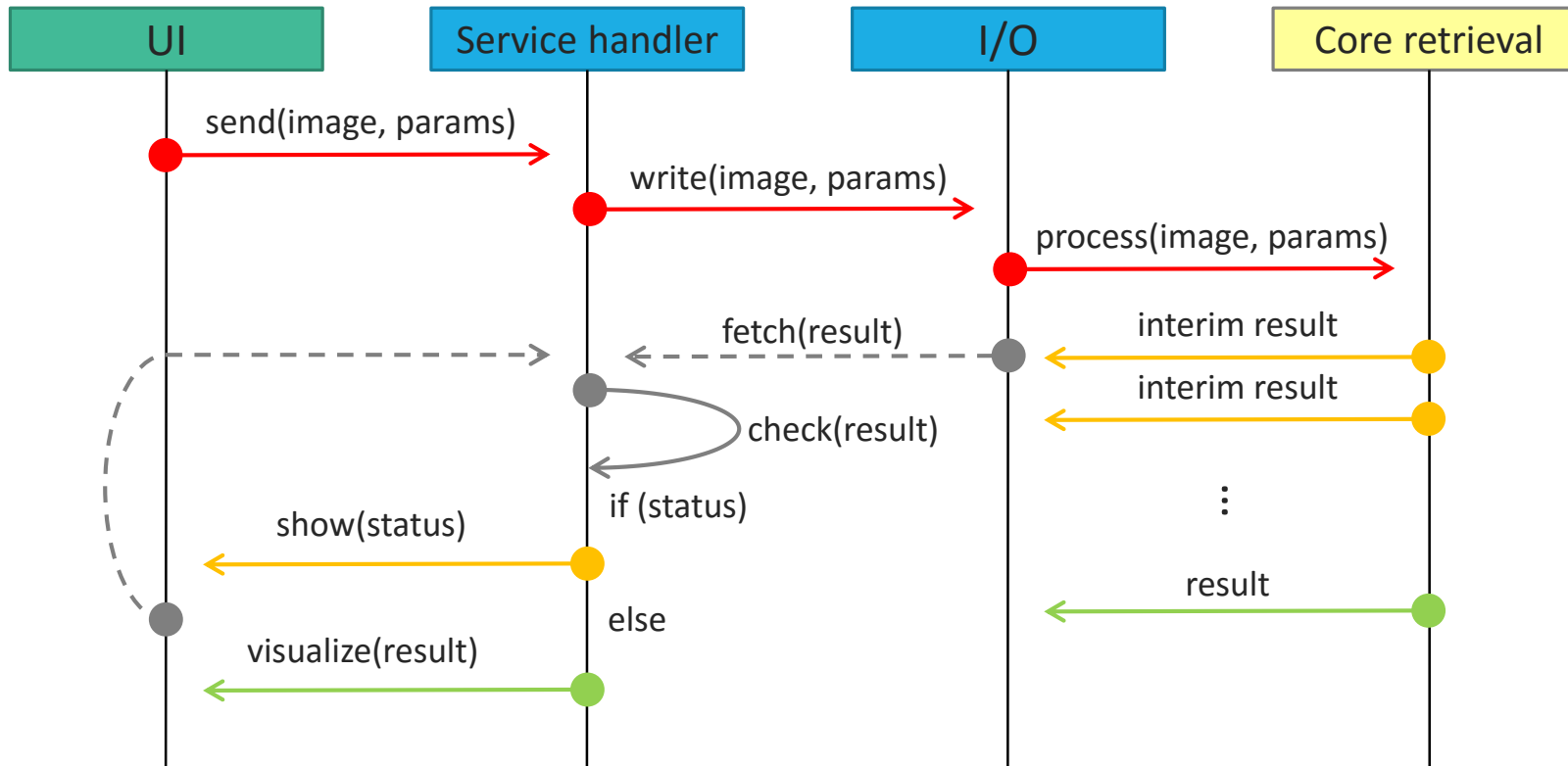
- **Configure less audience experience**
- **Self-online-service system**



Framework architecture



Service sequence

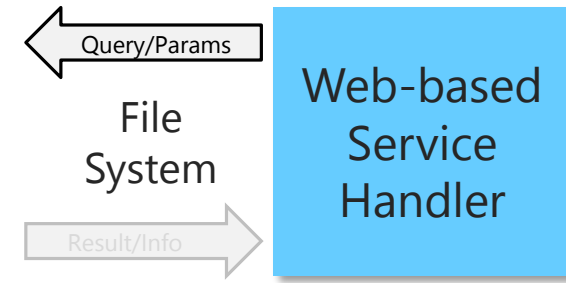


Server side – I/O template (1)

Web-based service handler

- **Result** template file

```
query_image=path1|path2|...|pathN  
result=directory  
option=opt1|opt2|...|optM  
$END$  
query_image=path1|path2|...|pathN  
result_path=directory  
option=opt1|opt2|...|optM  
$END$  
...
```

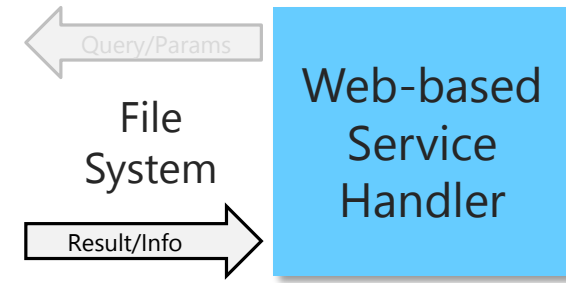


Server side – I/O template (2)

Web-based service handler

- *Query* template file

```
status=message(text),
      success(text),
      error(text)
total_image=X
image=path
score=val
ext_info=info1|info2|...|infoY
image=path
score=val
ext_info=info1|info2|...|infoY
...
```



Client side

HTML5 UI for backend PHP

Current implemented framework

- AJAX
 - For less frequent querying
 - High connection header



Future build

- Support *WebSockets*
 - For more frequent querying
 - Establish only first connection
 - Less latency

Demonstration

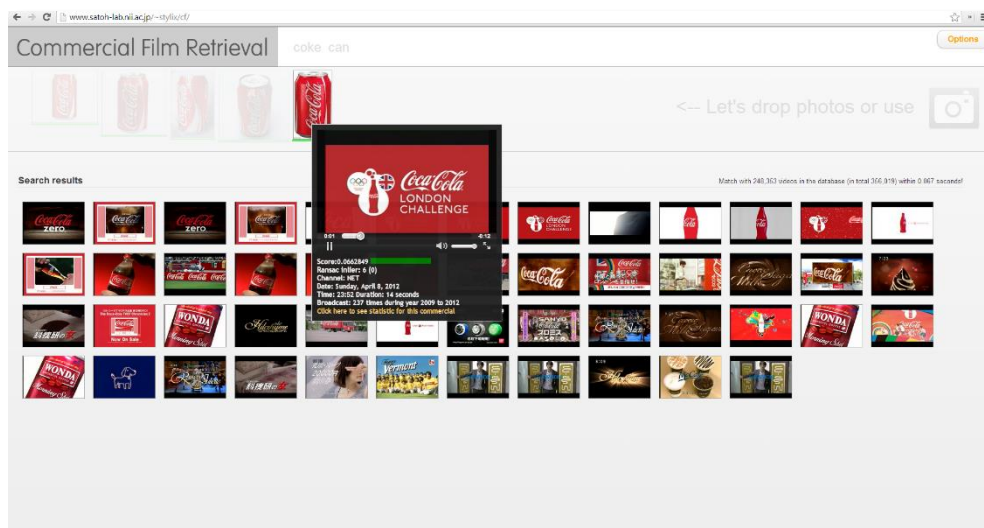


Try our demo with your browser

WiFi SSID: ICIMCS_PVSS_DEMO

WiFi KEY: pvss2015

URL: <http://tppubuntu/users/~stylix/search>



Concluding remark

We proposed PVSS for interchanging data

- Between **web browser** and **core image retrieval**

PVSS is a lightweight framework

Total package size = PVSS + core algorithm + DB + VM

The overall speed and performance depends on

- Host machine
- Core algorithm

Follow us this project* on

- <http://www.satoh-lab.nii.ac.jp/~stylix/>

*we may publish the framework when we got much interest.

