PML | Plymouth Marine Laboratory

Marine Matters

SEVENTH FRAMEWORK PROGRAMME

NETMAR Services

Jorge de Jesus

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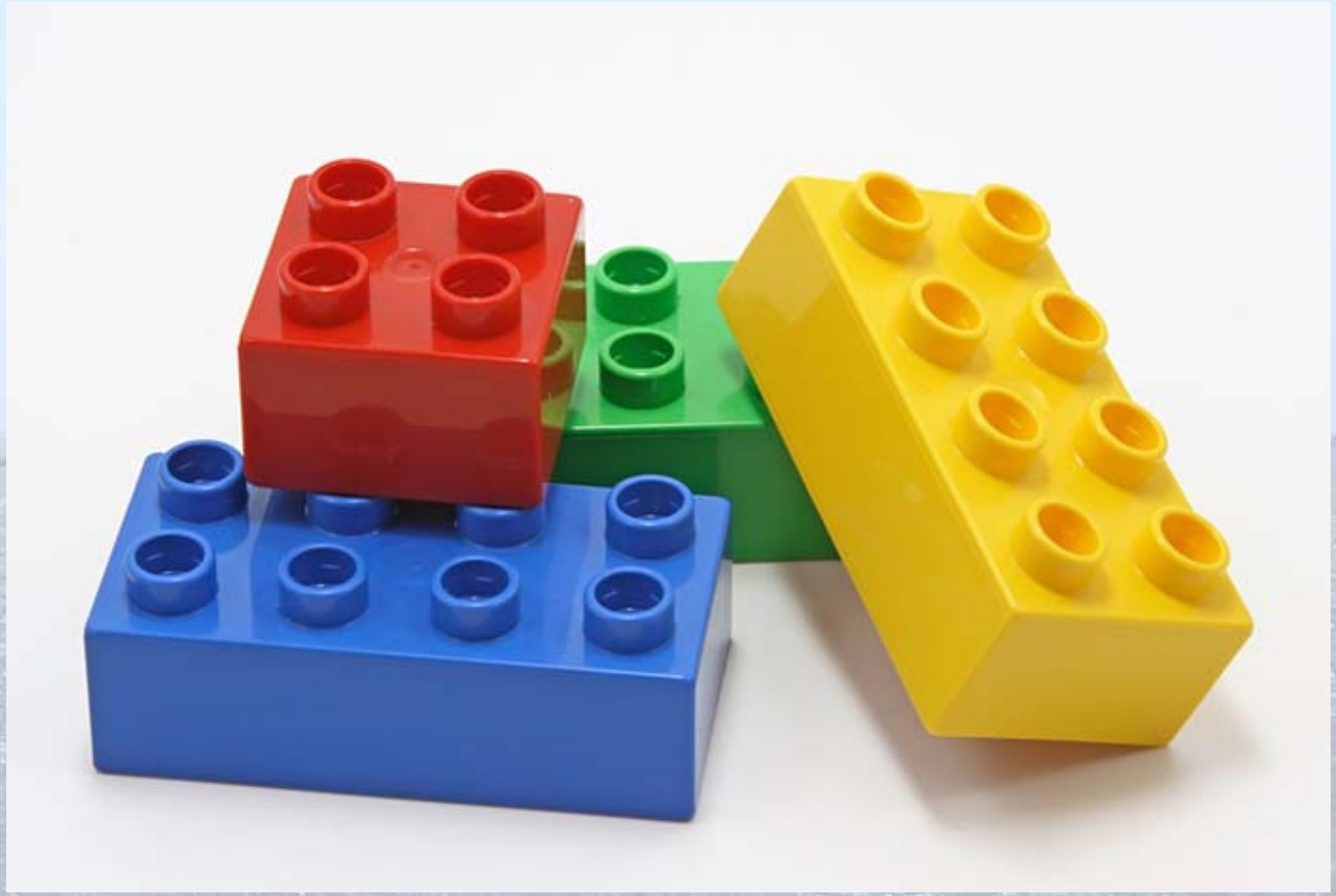
Mike Grant

EGU, Vienna,2012



Service Oriented Architecture – Nice building blocks

EGU, Vienna April 2012

Interoperability

(it can be a problem....)

SEVENTH FRAMEWORK PROGRAMME

PML Plymouth Marine Laboratory — Web Processing Service

http://www.opengeospatial.org/standards/wps

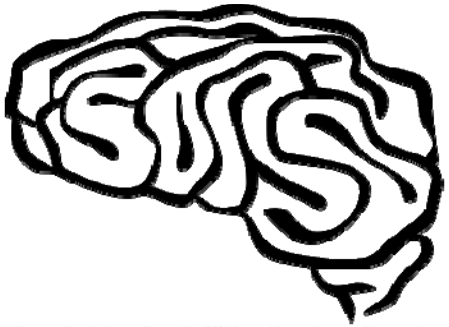
web processing service

Release Notes | Fedora Project | web.input (web.py) | Red Hat | Free Content | Main Page - PyWPS

Home | Standards | Programs | Participate | OGC Blog | Events | About OGC | Member Login | Search

Standards

- **OGC® Standards**
  - Cat: ebRIM App Profile: Earth Observation Products
  - Catalogue Service
  - CityGML
  - Coordinate Transformation
  - Filter Encoding
  - GML in JPEG 2000
  - GeoAPI
  - Geographic Objects
  - Geography Markup Language
  - Geospatial eXtensible Access Control Markup Language (GeoXACML)
  - KML
  - Location Services (OpenLS)
  - NetCDF
  - Observations and Measurements
  - Open GeoSMS
  - Ordering Services Framework for Earth Observation Products
  - PUCK
  - SWE Common Data Model
  - SWE Service Model
  - Sensor Model Language
  - Sensor Observation Service
  - Sensor Planning Service
  - Simple Features
  - Simple Features CORBA
  - Simple Features OLE/COM
  - Simple Features SQL
  - Styled Layer Descriptor
  - Symbology Encoding



Web Processing Service

Web Processing Service

1) Overview
2) Downloads
3) Official Schemas
4) Related News

1) Overview

The OpenGIS® Web Processing Service (WPS) Interface Standard provides rules for standardizing how inputs and outputs (requests and responses) for geospatial processing services, such as polygon overlay. The standard also defines how a client can request the execution of a process, and how the output from the process is handled. It defines an interface that facilitates the publishing of geospatial processes and clients' discovery of and binding to those processes. The data required by the WPS can be delivered across a network or they can be available at the server.

2) Downloads

Version	Document Title (click to download)	Document #	Type
1.0.0	Web Processing Service	05-007r7	IS
	Corrigendum for OpenGIS Implementation Standard Web Processing Service (WPS) 1.0.0 (0.0.8)	08-091r6	ISC
	Web Processing Service Best Practices Discussion Paper	12-029	DP
0.4	Web Processing Service	05-007r4	D-RFC
0.3.0	Web Pro	05-007r2	D-DP
0.2.1	Web Processing Service	05-007	D-DP
0.9.1	Discussions, findings, and use of WPS in OWS-4	06-182r1	DP
	OWS-7 Web Processing Service Profiling Engineering Report	10-059r2	PER

Working Donkey !!!

Submit a Change Request, Requirement, or Comment for this OGC standard.

3) Official Schemas

http://schemas.opengis.net/wps

SEVENTH FRAMEWORK PROGRAMME

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Web Processing Service

Contact:

Author: Jorge S.M. de Jesus

Email: jmdj@pml.ac.uk

Provider: Plymouth Marine Laboratory

Group: Remote Sensing Group

Site: http://rsg.pml.ac.uk

e.g WPS of shortest path example in OpenLayers, using GRASS-GIS's v.net.path

http://rsg.pml.ac.uk/wps/example/index.html

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Orchestration

OGC®
Making location count.

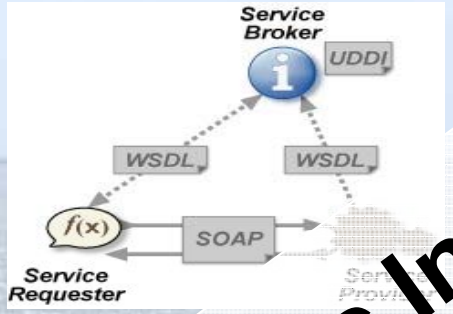
WMS 1.1.1

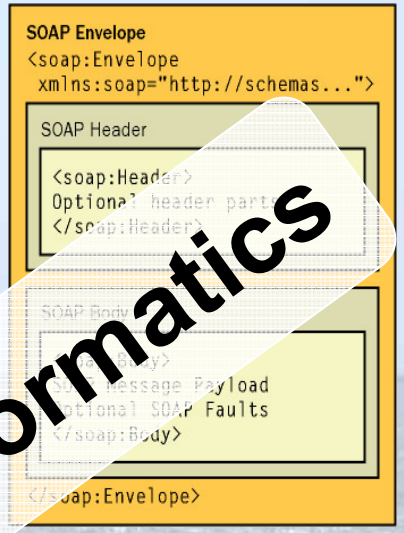
WCS 1.0

<GML>

GeoInformatics

WSDL





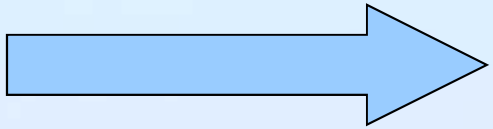
Generic Informatics

Apache ODE

SEVENTH FRAMEWORK PROGRAMME

WPS and WSDL

PyWPS

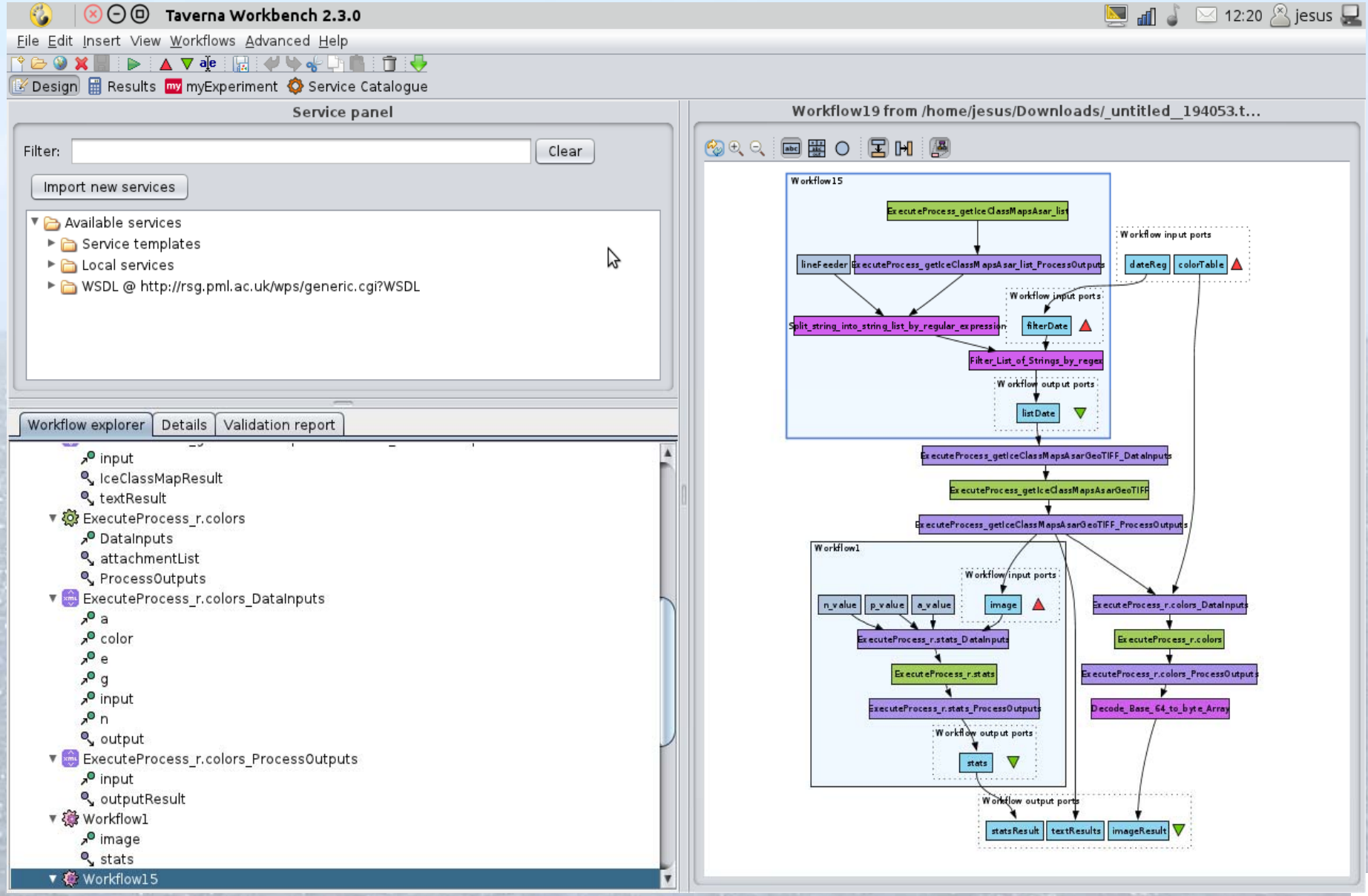


Automatic WPS description (I/O) into WSDL

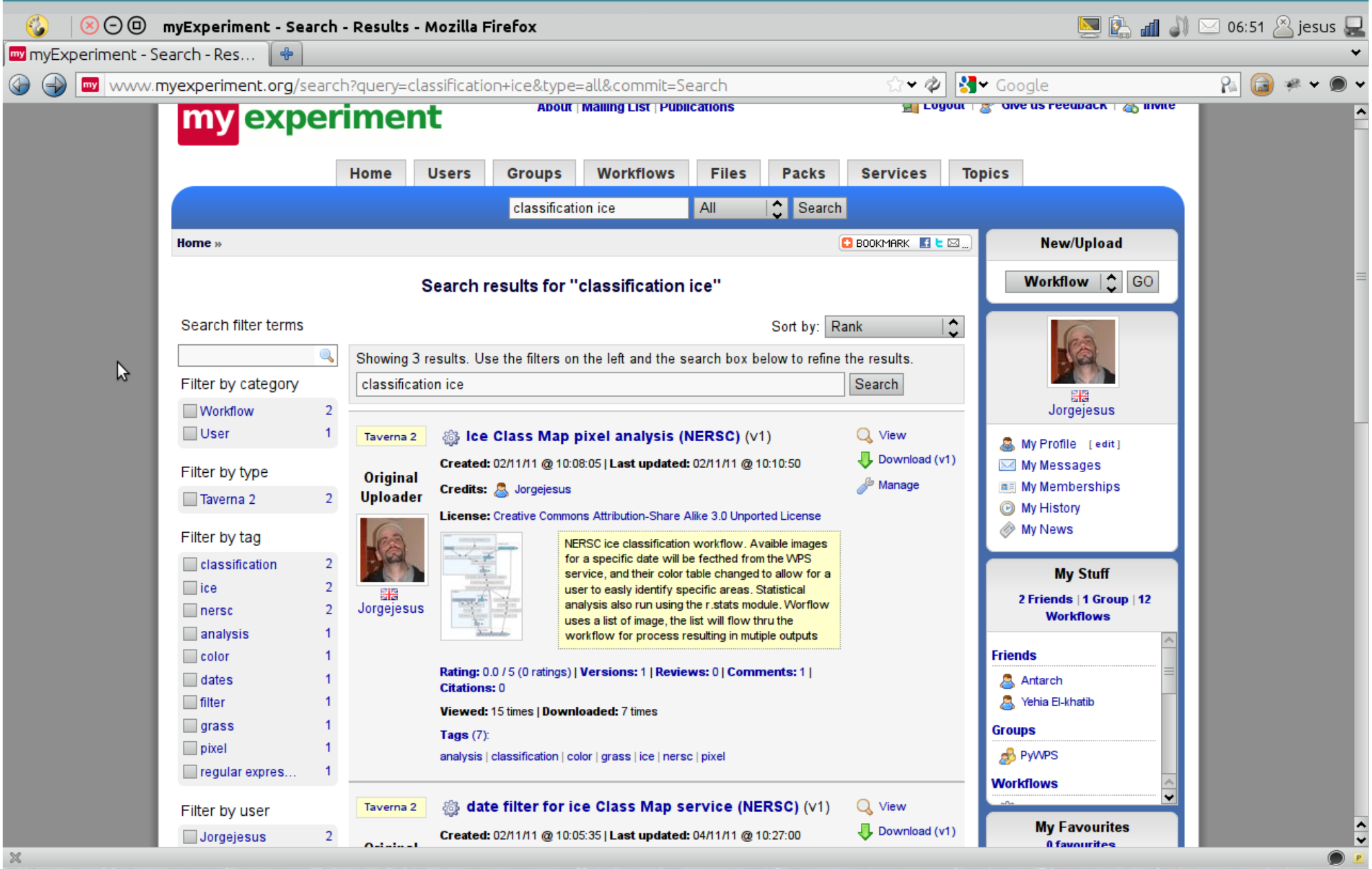
So what happens now ??? We have a generic service description compatible with lots of systems

Now we can use generic orchestration platforms on WPS !!!!

WPS and WSDL

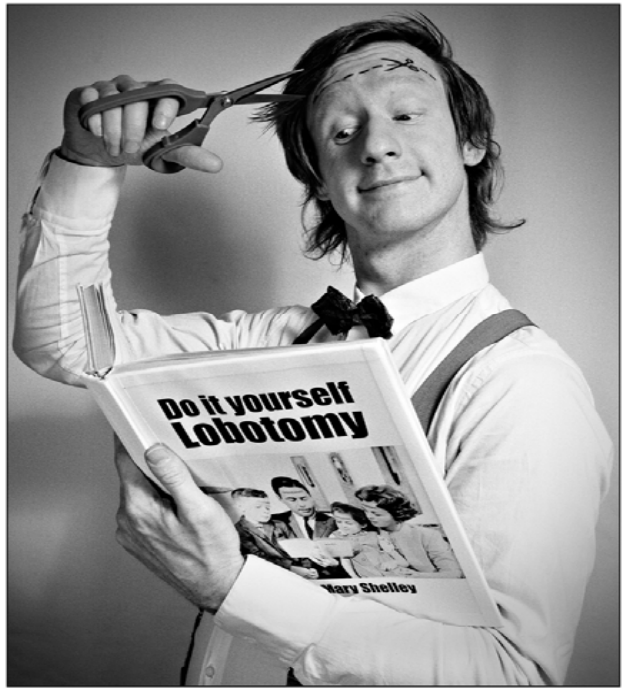

Taverna Workbench 2.3.0
File Edit Insert View Workflows Advanced Help
Design Results myExperiment Service Catalogue
Service panel
Filter:
Clear
Import new services
Available services
Service templates
Local services
WSDL @ http://rsg.pml.ac.uk/wps/generic.cgi?WSDL
Workflow explorer
Details
Validation report
input
IceClassMapResult
textResult
ExecuteProcess_r.colors
DataInputs
attachmentList
ProcessOutputs
ExecuteProcess_r.colors_DataInputs
a
color
e
g
input
n
output
ExecuteProcess_r.colors_ProcessOutputs
input
outputResult
Workflow1
image
stats
Workflow15
Workflow19 from /home/jesus/Downloads/_untitled_194053.t...
Workflow15
ExecuteProcess_getIceClassMapsAsar_list
lineFeeder
ExecuteProcess_getIceClassMapsAsar_list_ProcessOutputs
Workflow input ports
dateReg
colorTable
Split_string_into_string_list_by_regular_expression
filterDate
Filter_List_of_Strings_by_regex
Workflow output ports
listDate
ExecuteProcess_getIceClassMapsAsarGeoTIFF_DataInputs
ExecuteProcess_getIceClassMapsAsarGeoTIFF
ExecuteProcess_getIceClassMapsAsarGeoTIFF_ProcessOutputs
Workflow1
n_value
p_value
a_value
image
ExecuteProcess_r.stats_DataInputs
ExecuteProcess_r.stats
ExecuteProcess_r.stats_ProcessOutputs
stats
ExecuteProcess_r.colors_DataInputs
ExecuteProcess_r.colors
ExecuteProcess_r.colors_ProcessOutputs
Decode_Base_64_to_byte_Array
statsResult
textResults
imageResult

WPS and WSDL


myExperiment - Search - Results - Mozilla Firefox
www.myexperiment.org/search?query=classification+ice&type=all&commit=Search
my experiment
About | Mailing List | Publications
Home
Users
Groups
Workflows
Files
Packs
Services
Topics
classification ice
All
Search
Home »
BOOKMARK
Search results for "classification ice"
Search filter terms
Sort by: Rank
Showing 3 results. Use the filters on the left and the search box below to refine the results.
classification ice
Search
Filter by category
Workflow 2
User 1
Filter by type
Taverna 2 2
Filter by tag
classification 2
ice 2
nersc 2
analysis 1
color 1
dates 1
filter 1
grass 1
pixel 1
regular expres... 1
Filter by user
Jorgejesus 2
Taverna 2
Ice Class Map pixel analysis (NERSC) (v1)
Created: 02/11/11 @ 10:08:05 | Last updated: 02/11/11 @ 10:10:50
Credits: Jorgejesus
License: Creative Commons Attribution-Share Alike 3.0 Unported License
Original Uploader
Jorgejesus
NERSC ice classification workflow. Avaible images for a specific date will be fecthed from the WPS service, and their color table changed to allow for a user to easly identify specific areas. Statistical analysis also run using the r.stats module. Worflow uses a list of image, the list will flow thru the workflow for process resulting in mutiple outputs
Rating: 0.0 / 5 (0 ratings) | Versions: 1 | Reviews: 0 | Comments: 1 | Citations: 0
Viewed: 15 times | Downloaded: 7 times
Tags (7):
analysis | classification | color | grass | ice | nersc | pixel
View
Download (v1)
Manage
Taverna 2
date filter for ice Class Map service (NERSC) (v1)
Created: 02/11/11 @ 10:05:35 | Last updated: 04/11/11 @ 10:27:00
View
Download (v1)
New/Upload
Workflow
GO
Jorgejesus
My Profile [edit]
My Messages
My Memberships
My History
My News
My Stuff
2 Friends | 1 Group | 12 Workflows
Friends
Antarch
Yehia El-khatib
Groups
PyWPS
Workflows
My Favourites

Web and WSDL

The WPS tool box looks empty, where are the processes ?!!??!



DYI

http://wiki.rsg.pml.ac.uk/pywps/Main_Page

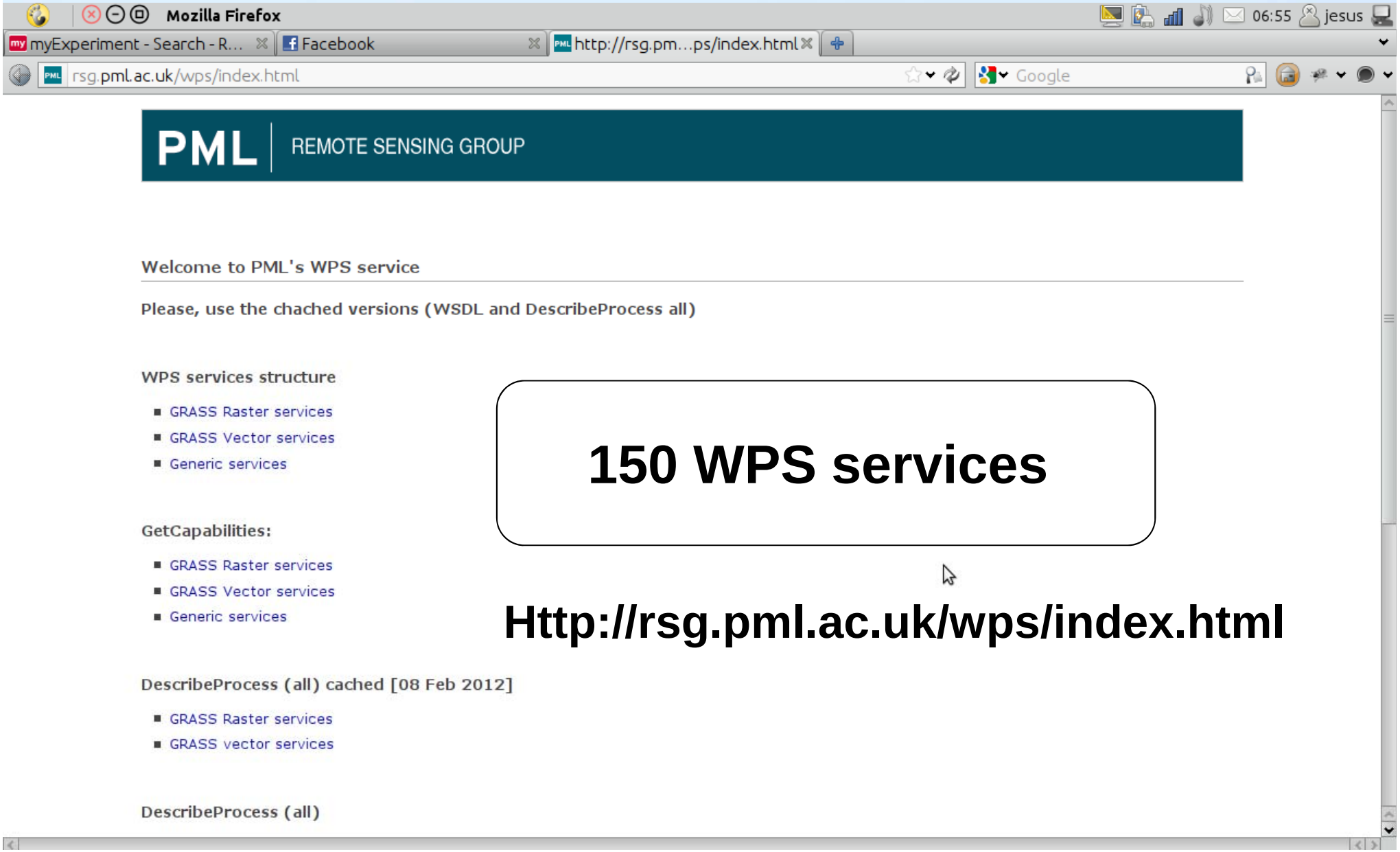
Web and WSDL

Get GIS and algorithms from other projects !!!

GRASS GIS

http://code.google.com/p/wps-grass-bridge/

PML | Plymouth Marine Laboratory WPS and WSDL

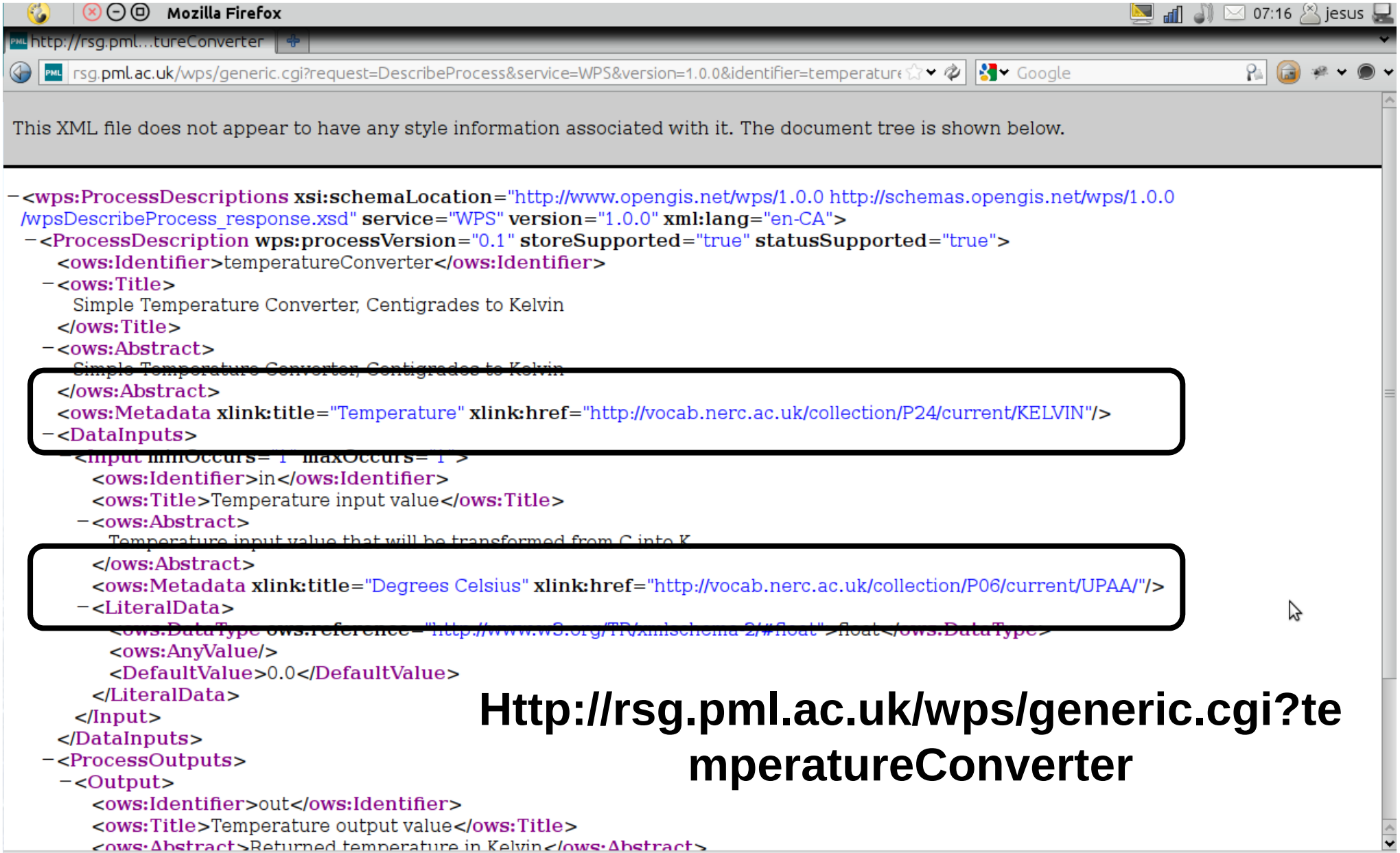


150 WPS services

Http://rsg.pml.ac.uk/wps/index.html

Semantics

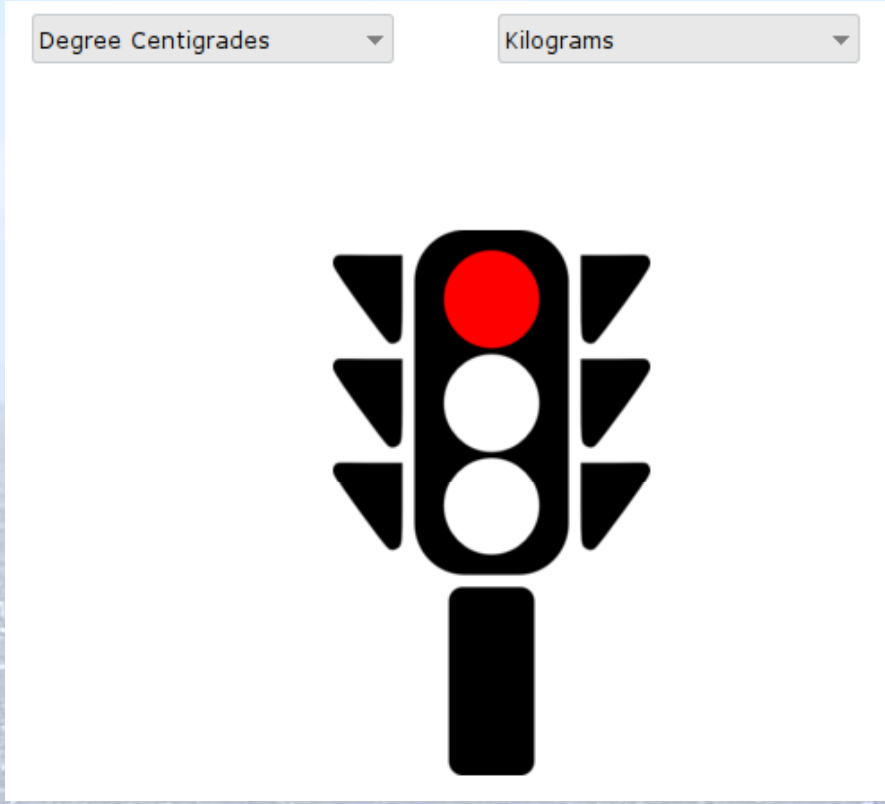
Ohhh the blocks don' fit!!! 0_O

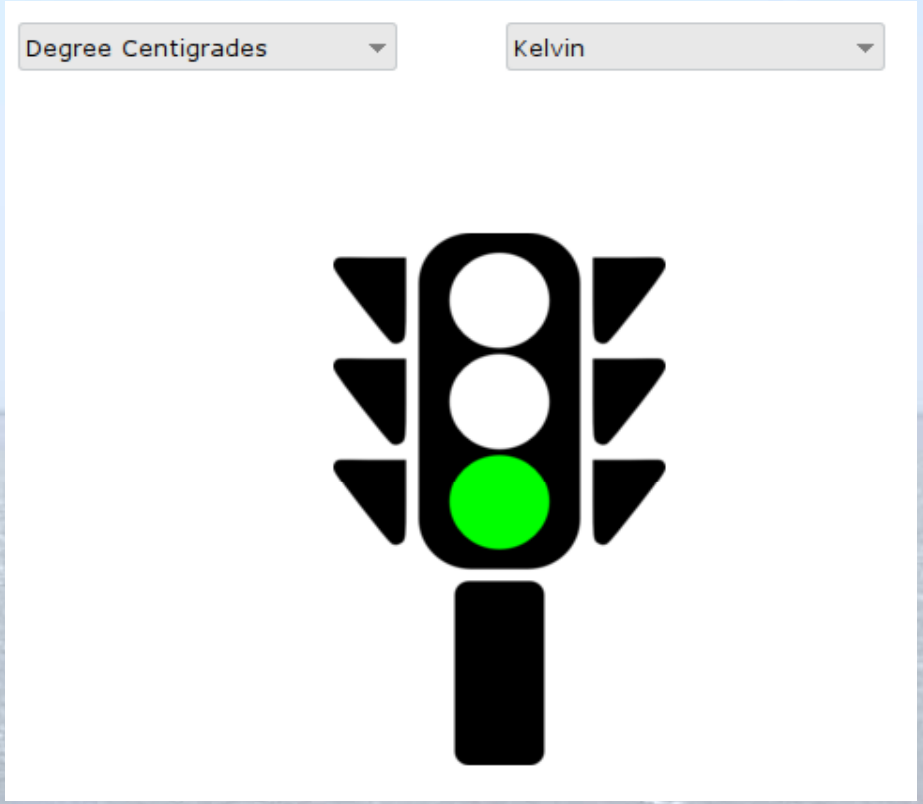


Http://rsg.pml.ac.uk/wps/generic.cgi?temperatureConverter

Semantics may help !!!

Semantics





http://rsg.pml.ac.uk/rest/test.html

http://rsg.pml.ac.uk/rest/index.html

Questions ?!

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