Japanese Virtual Observatory and NaReGi

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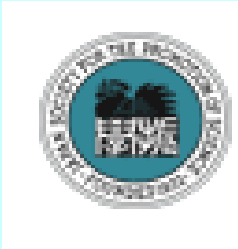
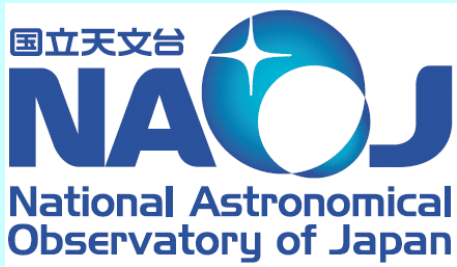
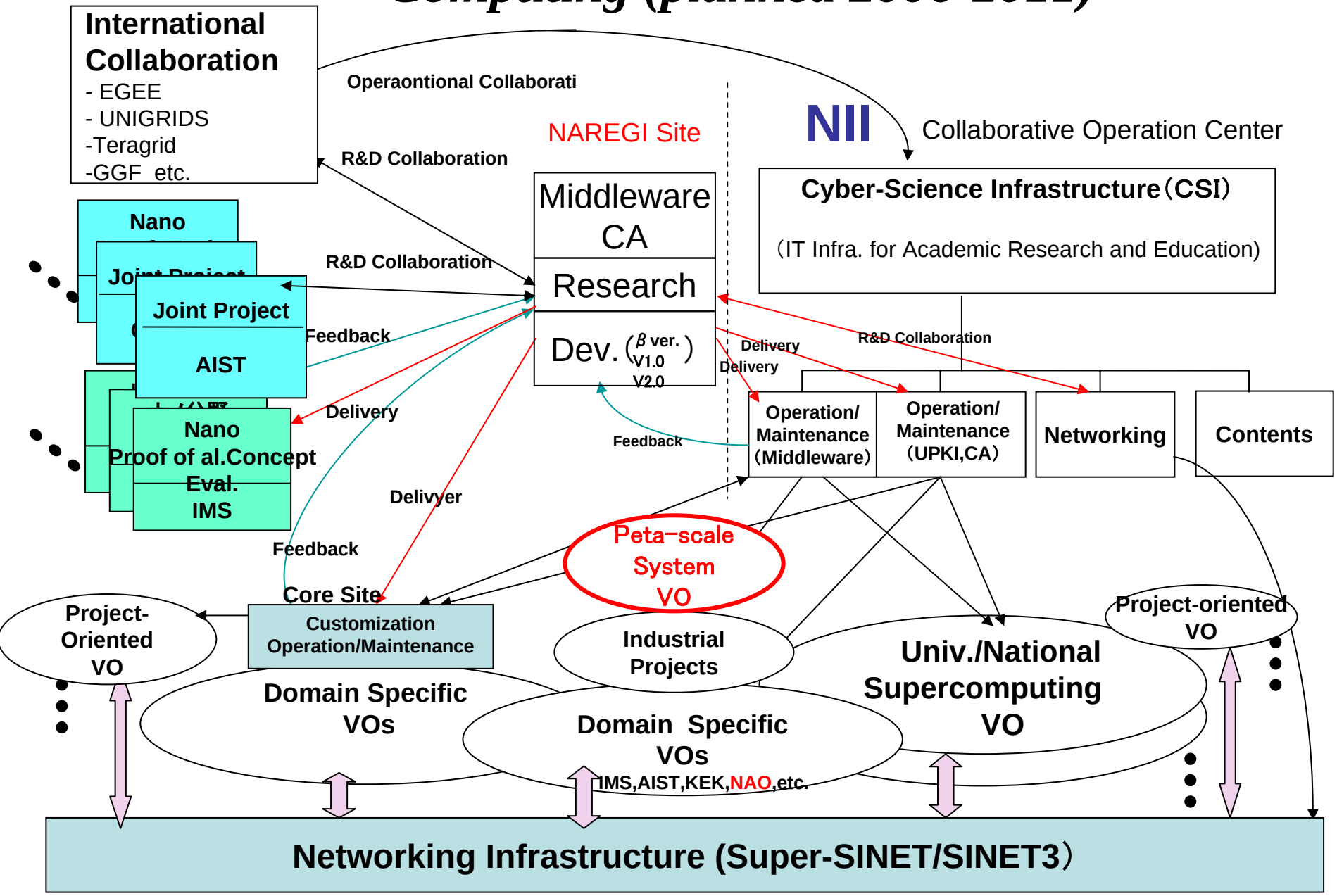
Supported by

- JSPS, Core to Core Program
- MEXT, Kakenhi
- NII, CSI project
- NAOJ





Cyber Science Infrastructure toward Petascale Computing (planned 2006-2011)



Note: names of VO are tentative）

Overview of the JVO Portal Service

LDAP

Auth.

Grid System

解析 解析 Analysis Servers

MDS

Invoke

JVO

User Request

Invoke

SDSS QSO SkyNode 1.0 Subaru ... 2MASS

Data Service

Service Discovery

User Storage

Invoke

Web Service

HTTP Get

FTP

LDAP

S. Reg.

P. Reg.

Metadata Harvesting

Registry

Other VOs

SIAP/SSAP

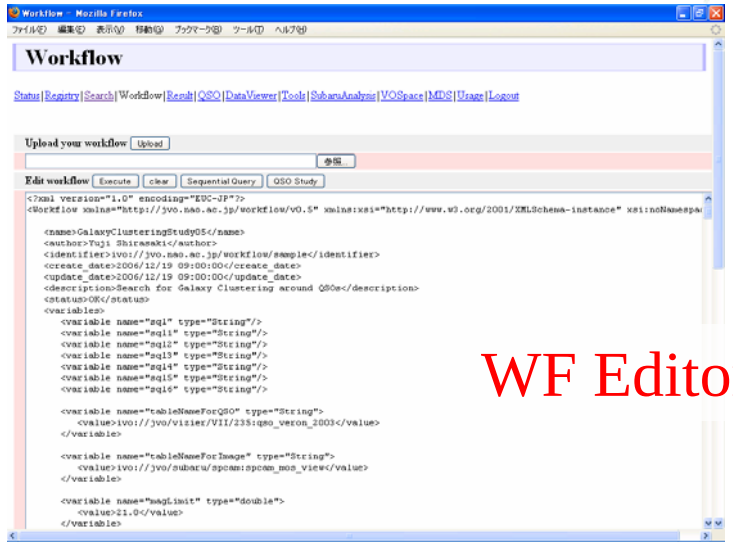
P. Reg.

SkyNode 0.7.4

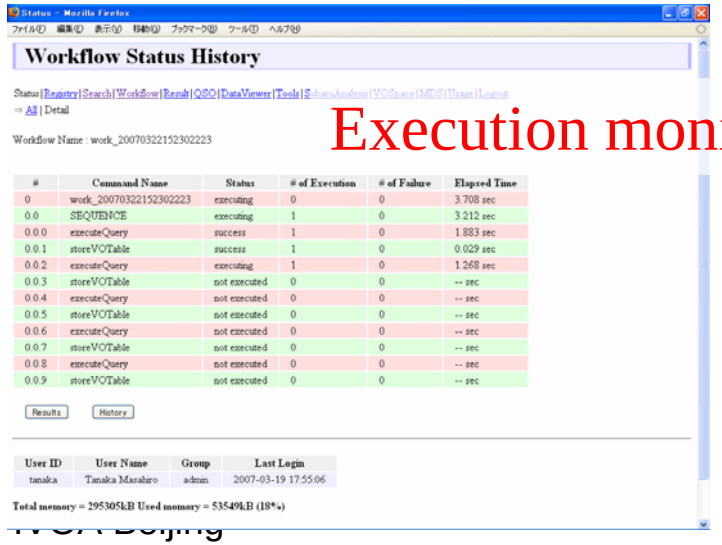
Improvement of Work Flow system

Items in FY2006

- Improvement of WFDL
  - Shorten the volume of DL
  - Array definition
  - Awk-like description (loop description in a single line)
  - and so on
- Built-in functions
  - Available to register and use built-in functions
- Status and Log system



WF Editor

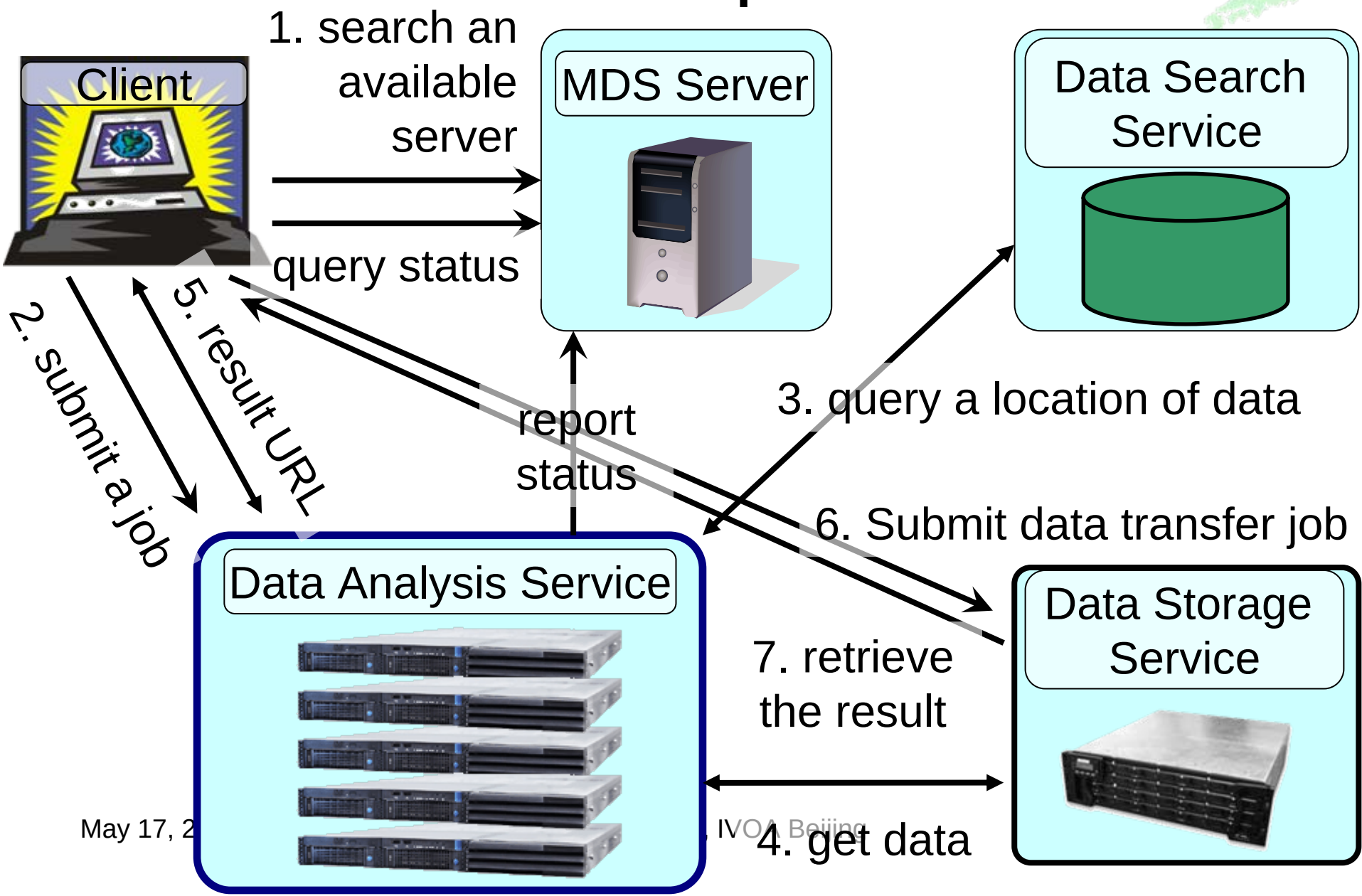


Execution monitor

Grid Service on VO

- Subaru data reduction pipeline system
  - Web service based GRID
  - Generates calibration data (Super-Flat) for all the SuprimeCam data in a week
  - On-the-fly data reduction with the pre-prepared Super-Flat
  - Users can access to the data reduced with the most recent algorithm
  - Also support the older version of pipeline
- Backend computing system of the JVO
  - catalog generation
  - photo-z calculation
  - Image arithmetic
  - …

Subaru Grid Pipeline Arch.



– Reduction 10s
(Bias+Flat+Distortion+
Astrometory)

– Transfer 30s

votable-viewer – Mozilla Firefox

ファイル(F) 編集(E) 表示(V) 移動(G) ブックマーク(B) ツール(T) ヘルプ(H)

VOTable Viewer

Status | Registry | Search | Workflow | Result | QSO | DataViewer | Usage | Logout

Metadata: Display

MESSAGE: OK
FROM: 0 MAX: 20 SCROLL: 1
SELECT: c31,c32,c1,c2,c3,c4,c5,c6,c7,c8,c9,c10,c11,c1
FILTER:
ORDER:

Update << < ↓ ↑ > >> Clear Order
data viewer JVOPlot Aladin VOPlot VOTable download

1000records,
1 2 3 4 5 6 7 8 9 10

#	check	download	Alias Name	C31	C32	C1	C2	C3	C4	C5
				_T0.ACCESS_REF_REF	_T0.ACCESS_REF_RAW	_T0.RAWID	_T0.U_START	_T0.EXPTIME	_T0.FILTER_ID	_T0.DETECTOR_ID
0	☐	Download	Link	Link		SUPA00134470	2002-09-30 11:11:47.326	900.0	W-J-B	w67c1
1	☐	Download	Link	Link		SUPA00134480	2002-09-30 11:27:47.082	900.0	W-J-B	w67c1
2	☐	Download	Link	Link		SUPA00134490	2002-09-30 11:43:44.412	900.0	W-J-B	w67c1

Aladin v3.7 multiview

Load... Save... Tools... Print... Help... Quit

Position J2000 02:19:05.43 -04:55:01.9 Pixel 8 bits 027 / 255

SUPA00130730.fits

SUPA00130730+SUPR0607291038430727.fits

select dist draw tag text filter rgb assoc rsamp cont zoom mglss pixel prop del

SUPA001307

6.85' x 13.47'

6.84' x 13.66'

[New B1] - SUPA00130730+SUPR0607291038430727.fits - Local file [C:\DOCUME~1\ysh Zoom 1/8x

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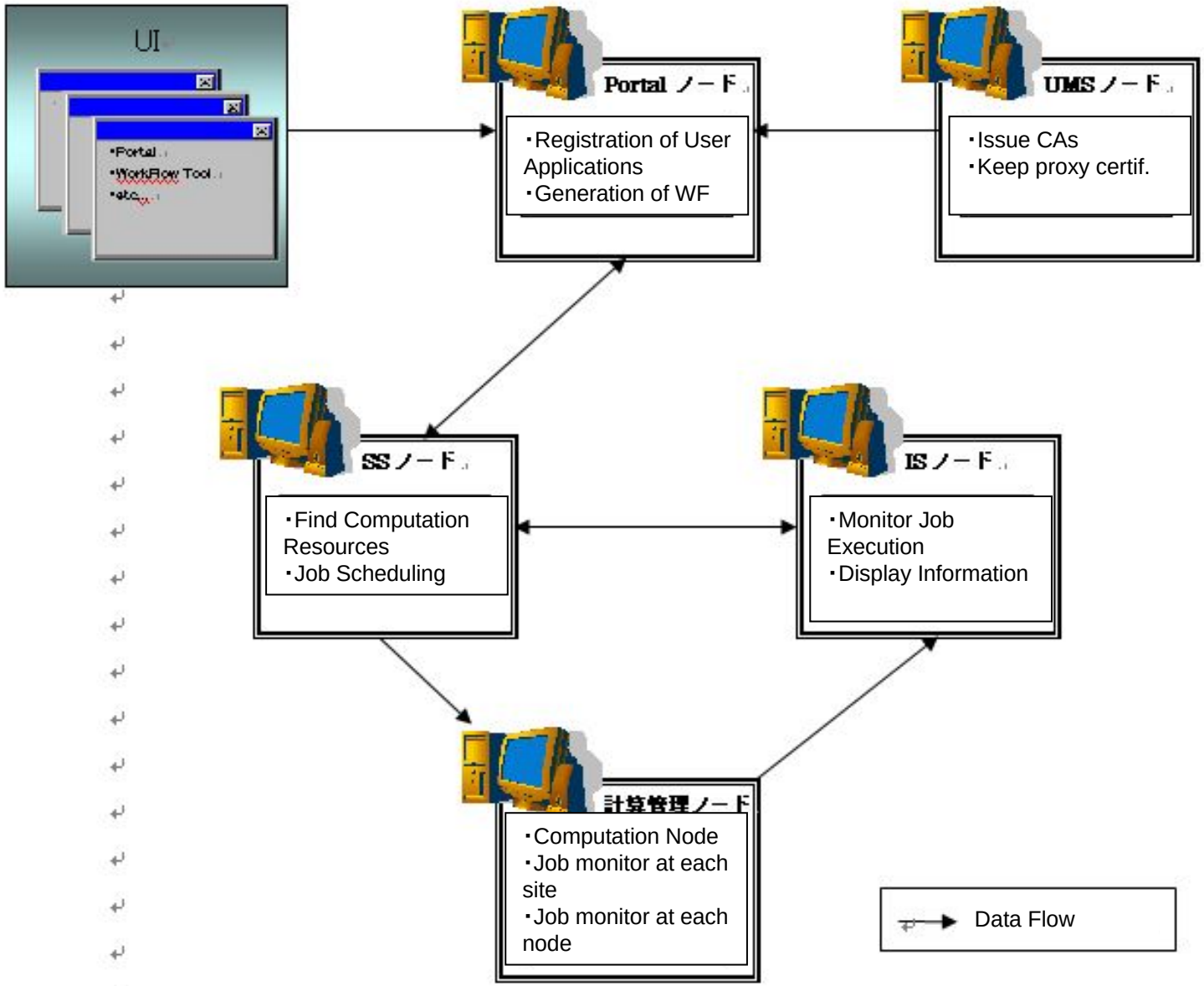
2 planes, 2 views, 28Mb

Data Reduction:
~24 hours → ~1 hour

Introduction of the NaReGi middleware into JVO

- NaReGi middleware version β1.0.2
- Trial introduction into the Subaru Grid pipeline
  - A part of middleware deployment program by the NII
- To evaluate how easy it is to use the middleware
- To find which components may be used for Virtual Observatories
  - SSO, Apps interface, and so on

NAREGI Grid environment



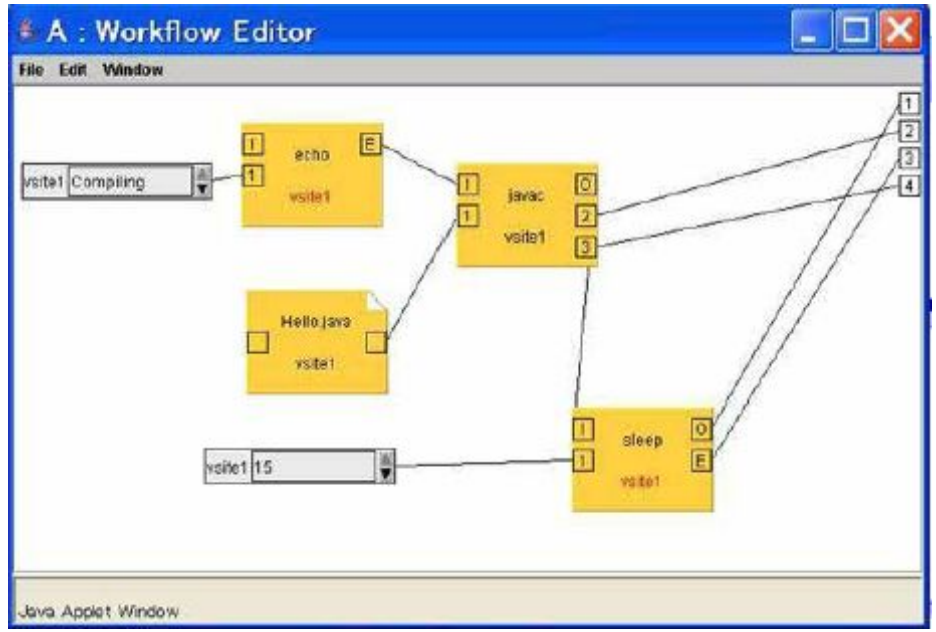
Requests to Improve

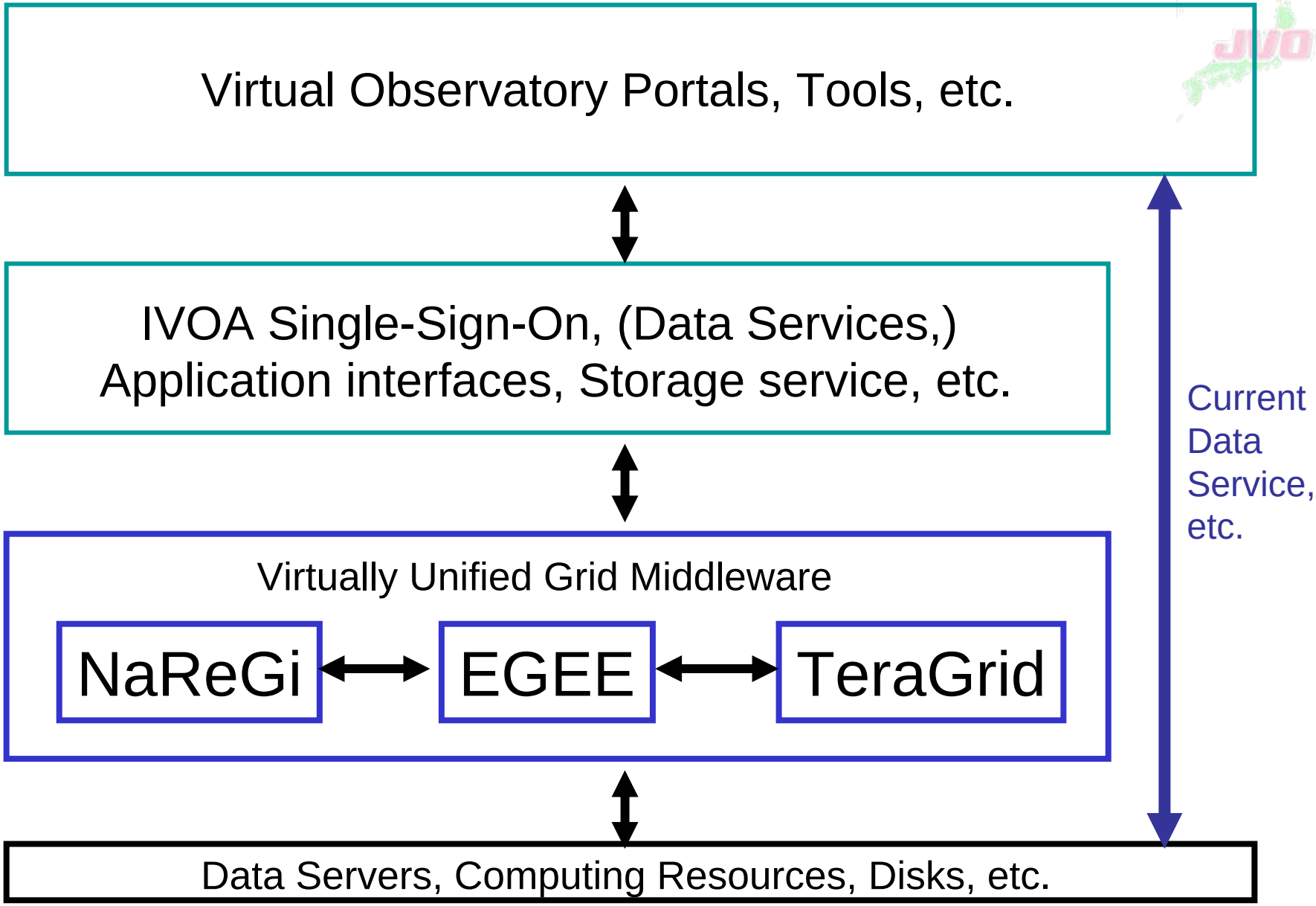
- Items to be improved toward version 1.0
  - Make it easier to install
  - Make it much faster to install
  - Need to support OSs other than RHEL
  - and so on
- These requests were reflected to the modified road map of NaReGi.

DONE ! May 16,through Telecon

Good Findings

- Good Graphical WF builder
  - Plan to import to the JVO system
  - Maybe referred to by the IVOA




Virtual Observatory Portals, Tools, etc.
IVOA Single-Sign-On, (Data Services,)
Application interfaces, Storage service, etc.
Virtually Unified Grid Middleware
NaReGi
EGEE
TeraGrid
Data Servers, Computing Resources, Disks, etc.
Current Data Service, etc.