Grid Summer School'05: Group 4

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Alberto
Andrew
Gianluca
Massimo
Simone
Songkrant
Wansin
Xoan
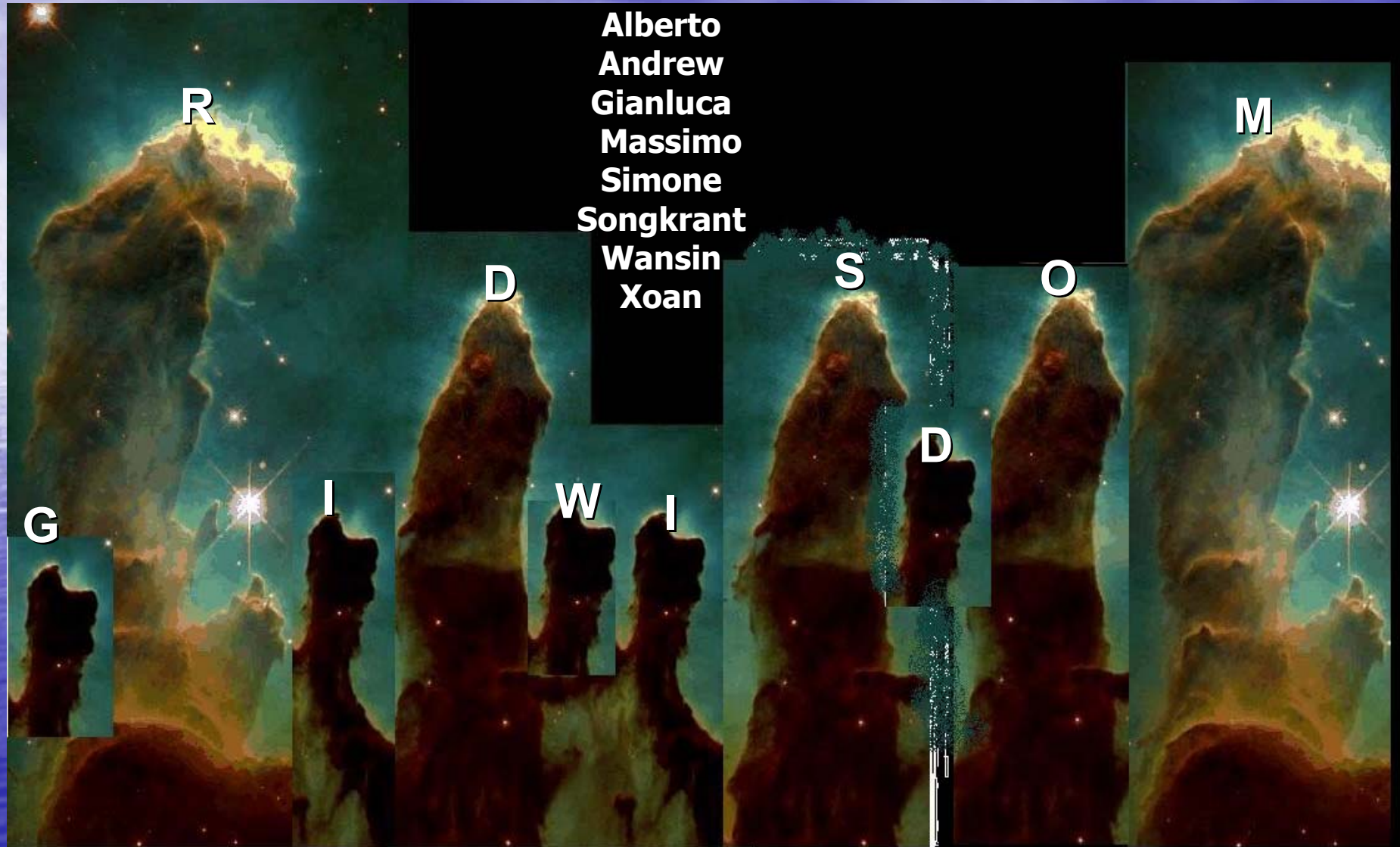
Content

- Our Scenario

- Our Solution :
  - Intra Department
  - Inter Department

- Our Efforts In "Search For Knowledge"

- Feedback

- The Ultimate Spirit

- About Group 4 Grid People…..

Our Scenario :

Collaboration In A Virtual Organisation

Scenario 1 : Intra-Organisation

- The resources are used only by the members of the organization.

- The resource usage policies are well defined.

- Individual users decrease compute time

- Group as a whole increases resource use.

- Load balancing is becoming an issue.

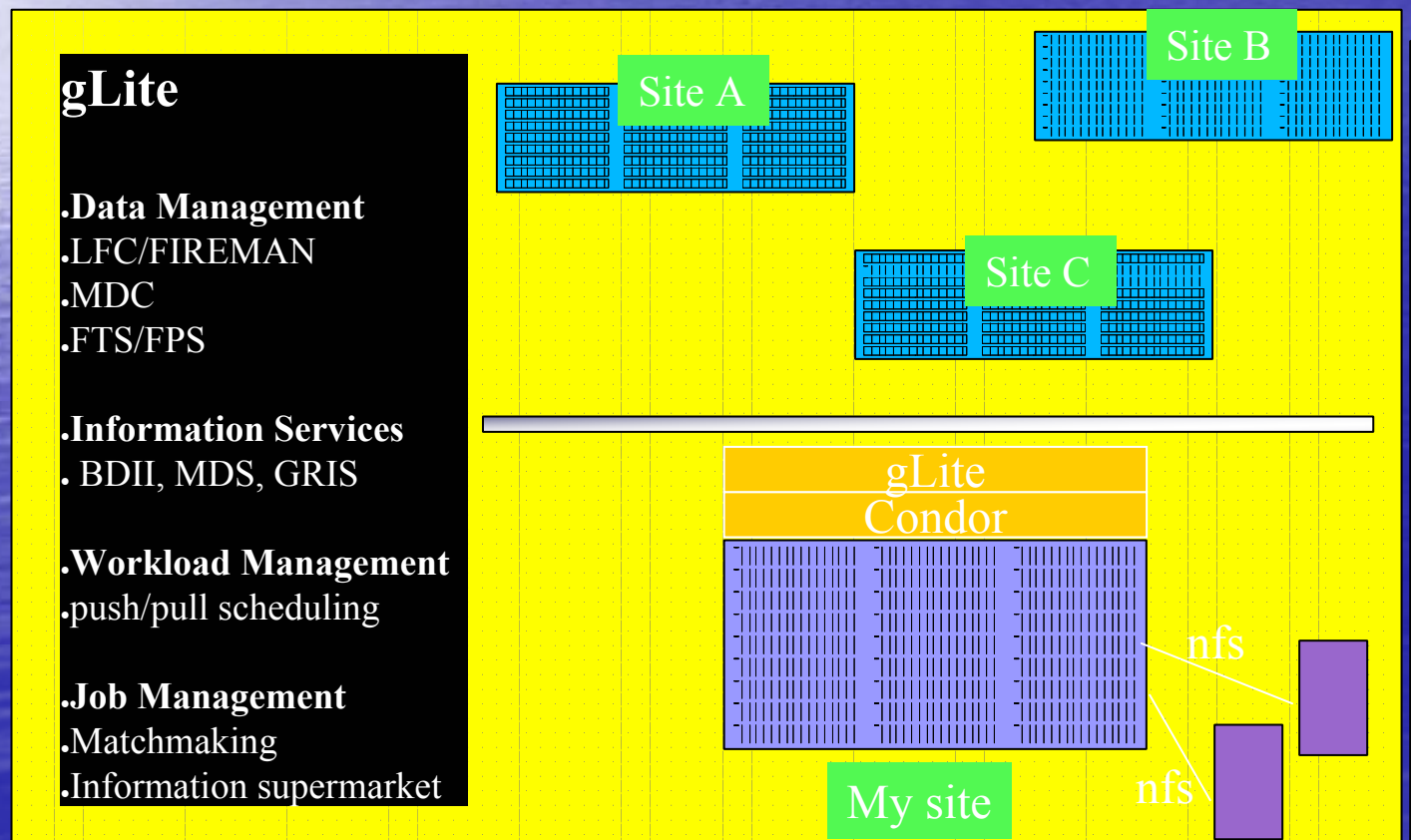- We need an intra-organisation scheduling system

Solution :

CONDOR
.Matchmaking
.ClassAds
.Scheduling
.job management

Condor

My site

nfs

nfs
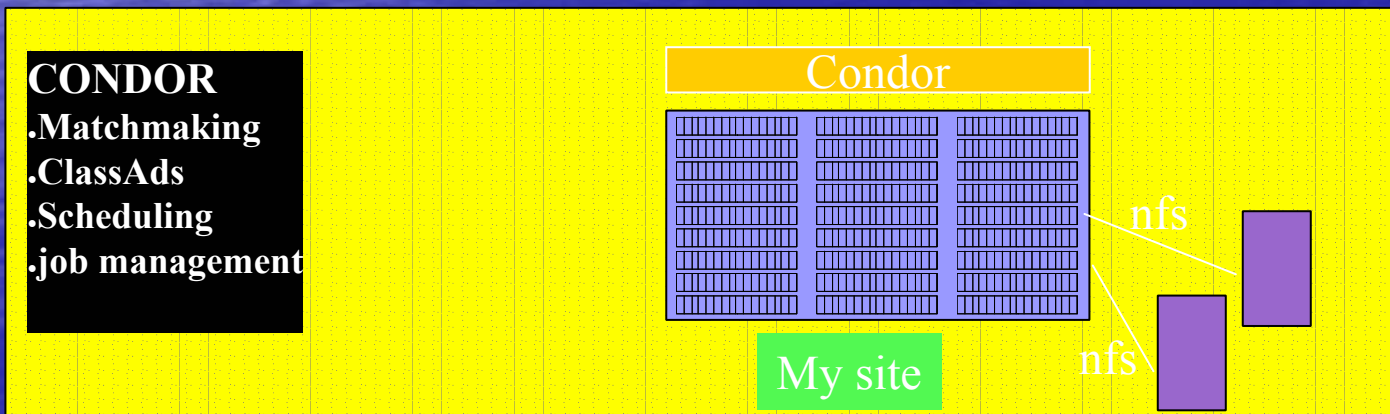
Scenario 2 : Inter-Organisation

- Sharing both technological and human resources.
- The security policies need to be strengthened.
- Need for a broker to route the job to the best available resources
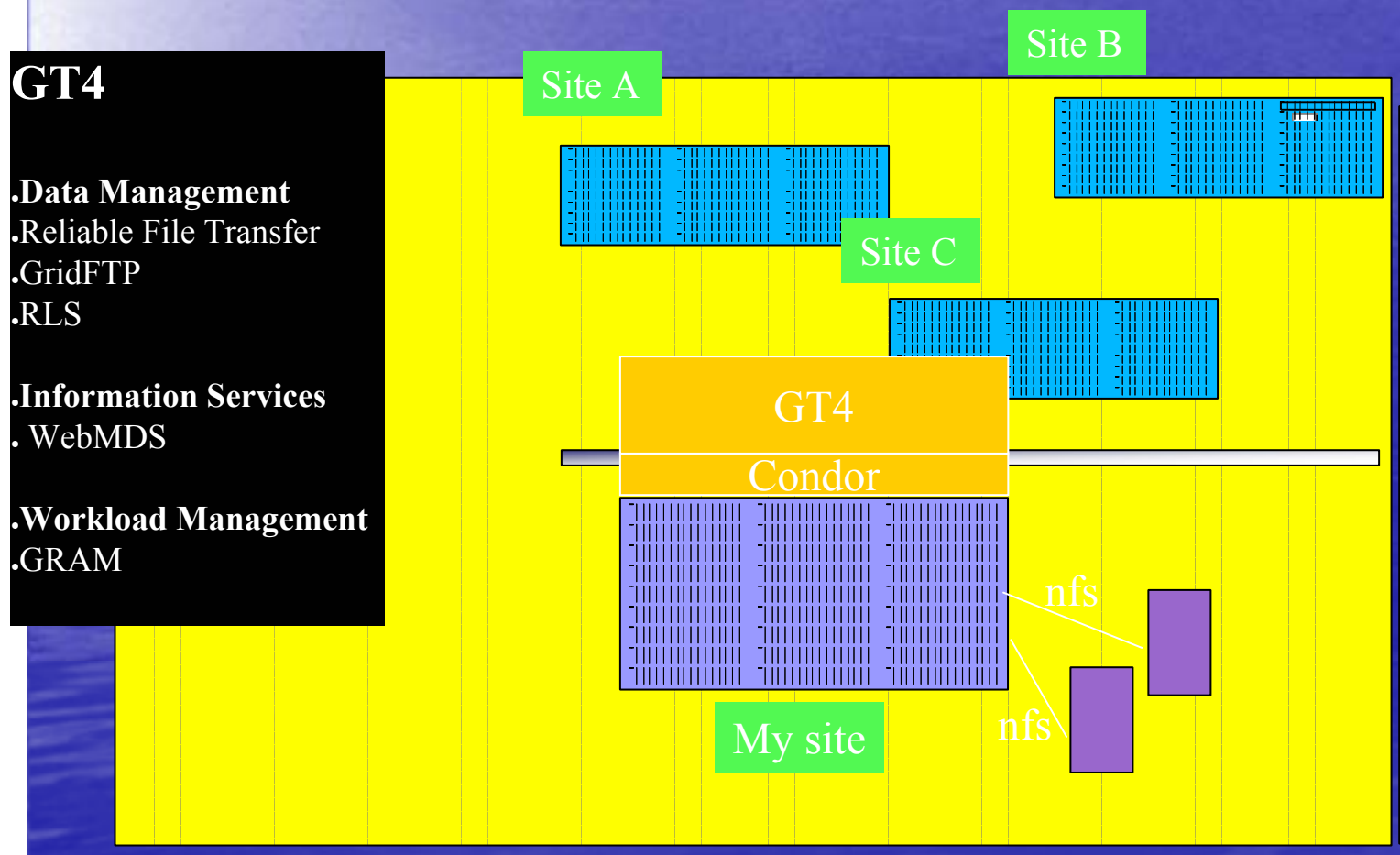
Solution:

gLite

.**Data Management**
.LFC/FIREMAN
.MDC
.FTS/FPS

.**Information Services**
. BDII, MDS, GRIS

.**Workload Management**
.push/pull scheduling

.**Job Management**
.Matchmaking
.Information supermarket

Site A

Site B

Site C

gLite
Condor

nfs

nfs

My site

Scenario 3 : Inter-Organisation

- We want to expose computational and storage resources as web services
- We are focused on data-management issues
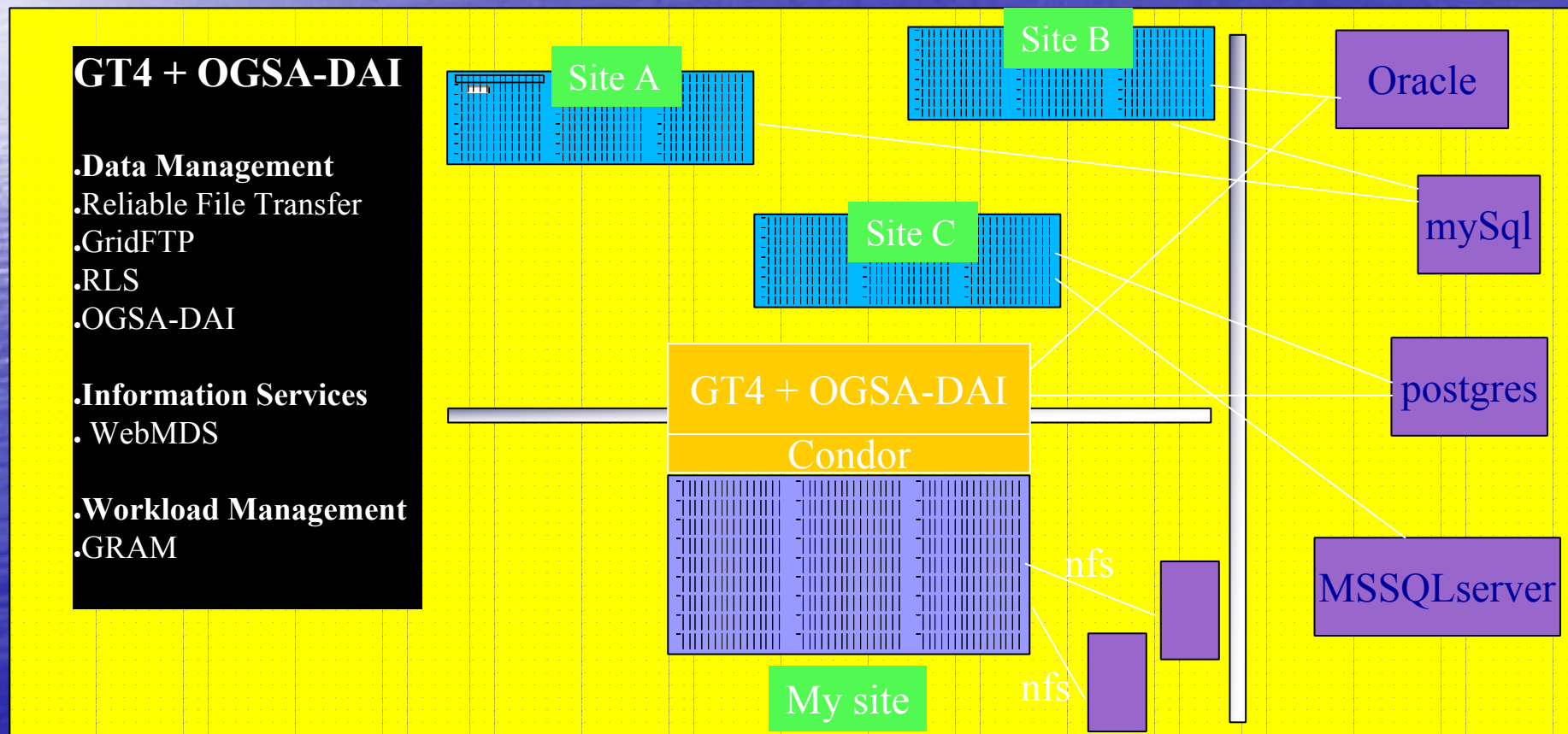- Need to transfer huge amounts of data among different organizations

Solution:

GT4

.**Data Management**
.Reliable File Transfer
.GridFTP
.RLS

.**Information Services**
. WebMDS

.**Workload Management**
.GRAM

Site A

Site B

Site C

GT4

Condor

nfs

nfs

My site

Scenario 4 : Virtual Organisation

....our data management requirements are getting more complex
- not only transfers of huge amounts of data among different organizations
- also want to query external, heterogeneous data sources
- Final aim is to achieve a system of hetereogenous distributed resources for users
to access and use

GT4 + OGSA-DAI

.**Data Management**
.Reliable File Transfer
.GridFTP
.RLS
.OGSA-DAI

.**Information Services**
. WebMDS

.**Workload Management**
.GRAM

Site A

Site B

Site C

GT4 + OGSA-DAI

Condor

My site

nfs

nfs

Oracle

mySql

postgres

MSSQLserver

Our Efforts In "Search For Knowledge"

Day	Exercise	Stages	Status	Comments

Our Results for Pillar of Wisdom

Our Results for Pillar of Wisdom

X Center	Y Center	X Width	Y Width
9135.4359374	3464.9812499	~0.831	~0.850
-2878.7812500	5977.0937500	~1.250	~1.250
-9410.8750000	-7677.0499999	~0.625	~0.700
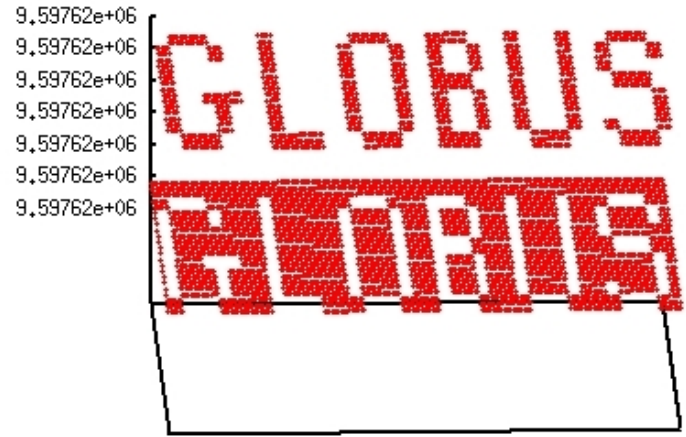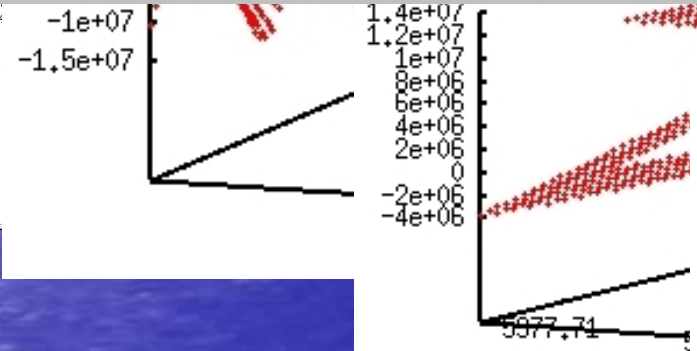
Our Results for Pillar of Wisdom
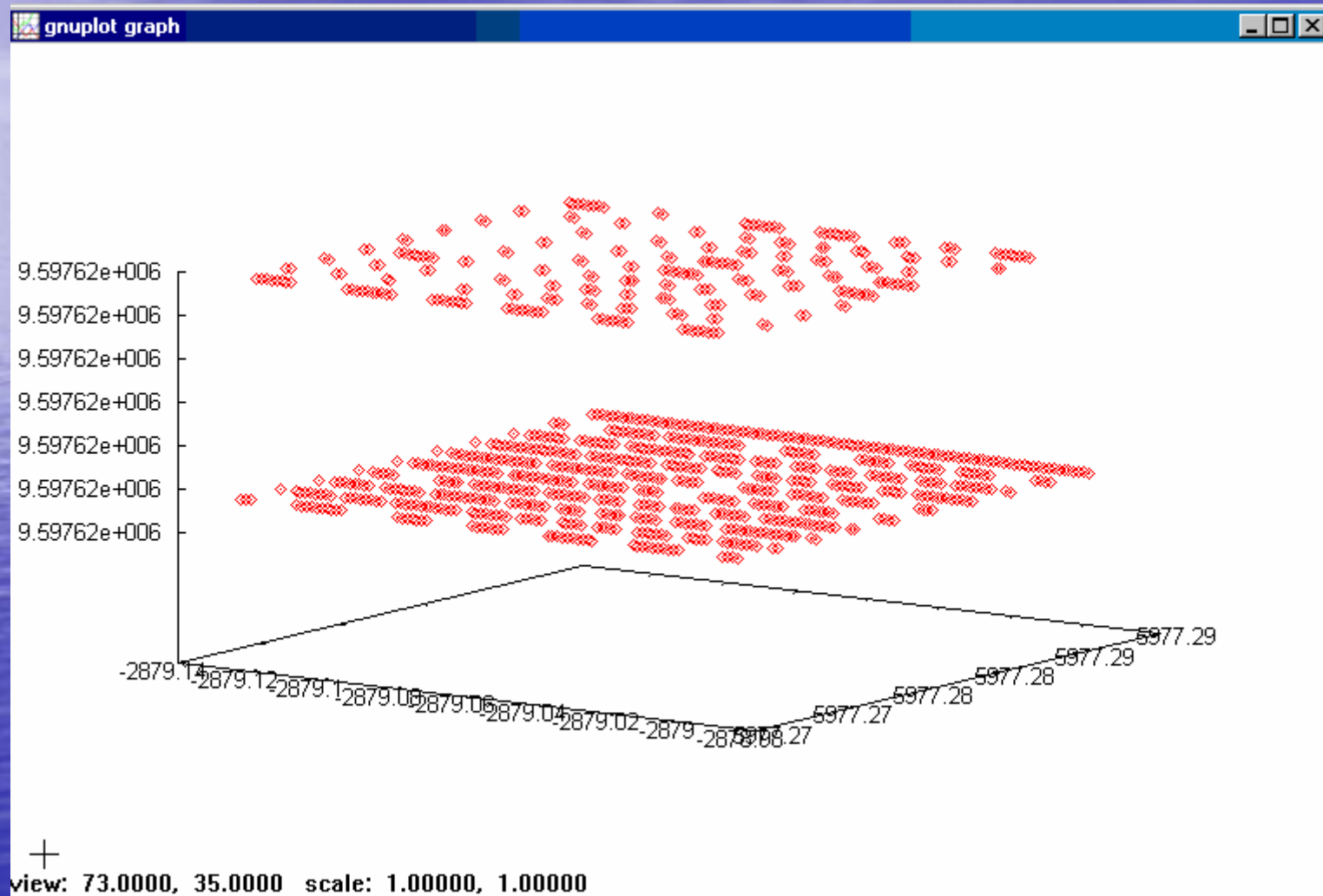
Suggestions For Pillar Search

- Provide tools to aid users in managing the pillars :
  - Measurement refinement local search for discontinuity
  - Graphics tools for rendering the image
- A central OGSA-DAI database which allows developers to store and share the results.
- Path-guided searches
- Split searches in several distributed jobs
- Another possible method to estimate the pillar location :
  - Use the discontinuity of the function to locate the position of a pillar. An abrupt change in the gradient of the slope is a fast & good indication of the vicinity of a pillar.

The Ultimate Spirit !!

Gianluca
(**C**hief **F**inance **O**fficer)

Andrew
(**C**hief **V**isionary **O**fficer)

Alberto
(**C**hief **T**echie)

Songkrant
(**C**hief **E**xecutive **O**fficer)

Xoan
(**C**hief **I**nformation **O**fficer)

Wansin
(**C**hief **S**ecretary **O**fficer)

Massimo
(**C**hief **T**echnology **O**fficer)

Simone
(**C**hief **O**peration **O**fficer)