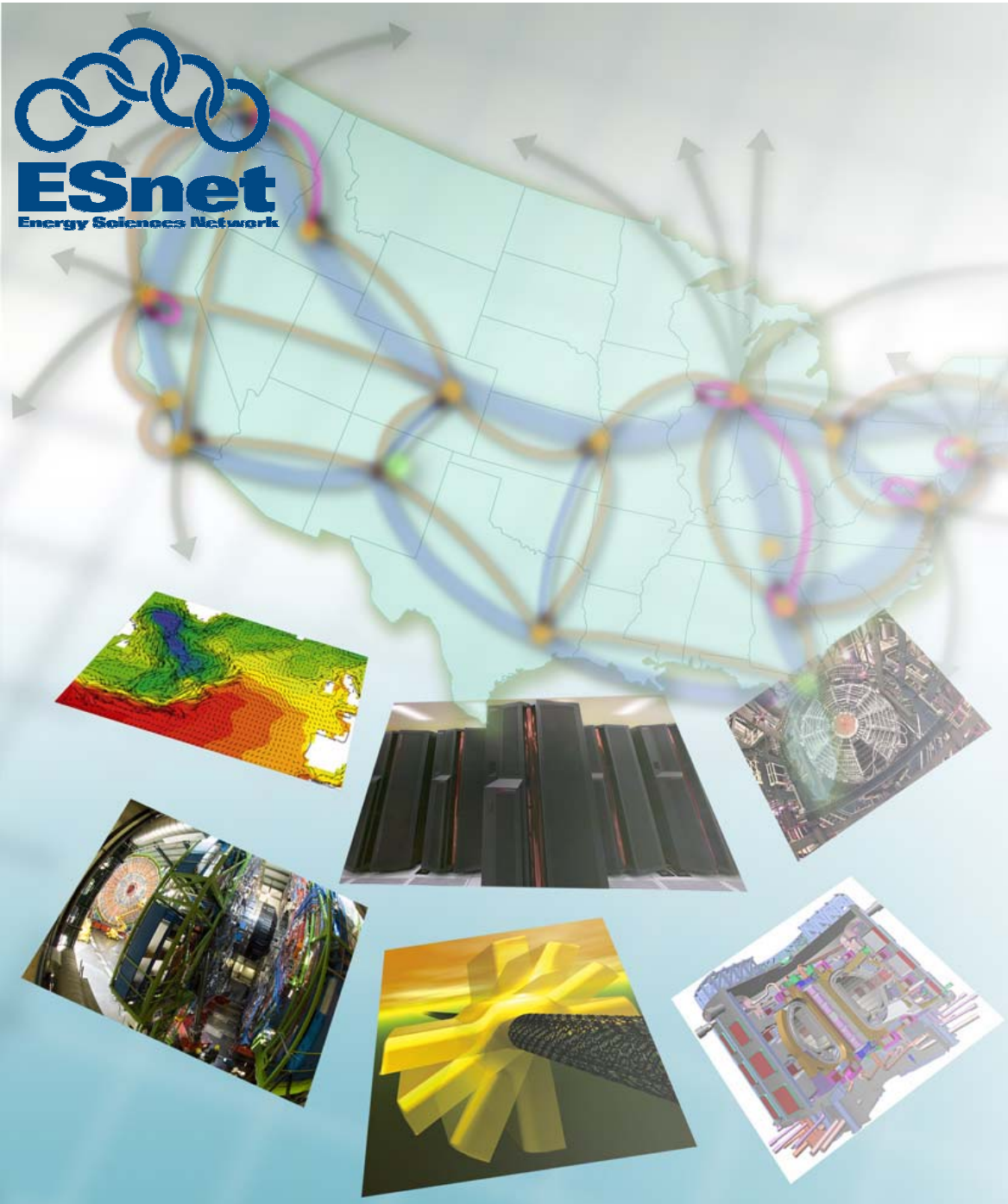

GNI API WG

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Energy Sciences Network
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GLIF meeting
Catania, March 5 2009

Networking for the Future of Science

Agenda

- WG overview

- Progress report
  - Interface
  - Software development

- Framework overview
- Lessons learned so far
- Plans for the future
  - Growth
  - Software development
  - Cooperation with other groups

- Demonstration by Ryousei Takano

WG overview

- Objectives:
  - To bring network provisioning system developers together,
  - So that they jointly develop a common network provisioning service interface prototype,
  - Then develop a reference implementation of the interface,
  - Within a software framework that facilitates translating from the common interface to others,
  - And that also provides a playground where such interfaces can be quickly developed, tested, and evaluated.
  - Bring feedback from this work into other WGs (NSI, NML) and back into each separate project.

- Non-Objectives:
  - Does not aim to become a standard.
  - Does not aim to get everything right 1st time!

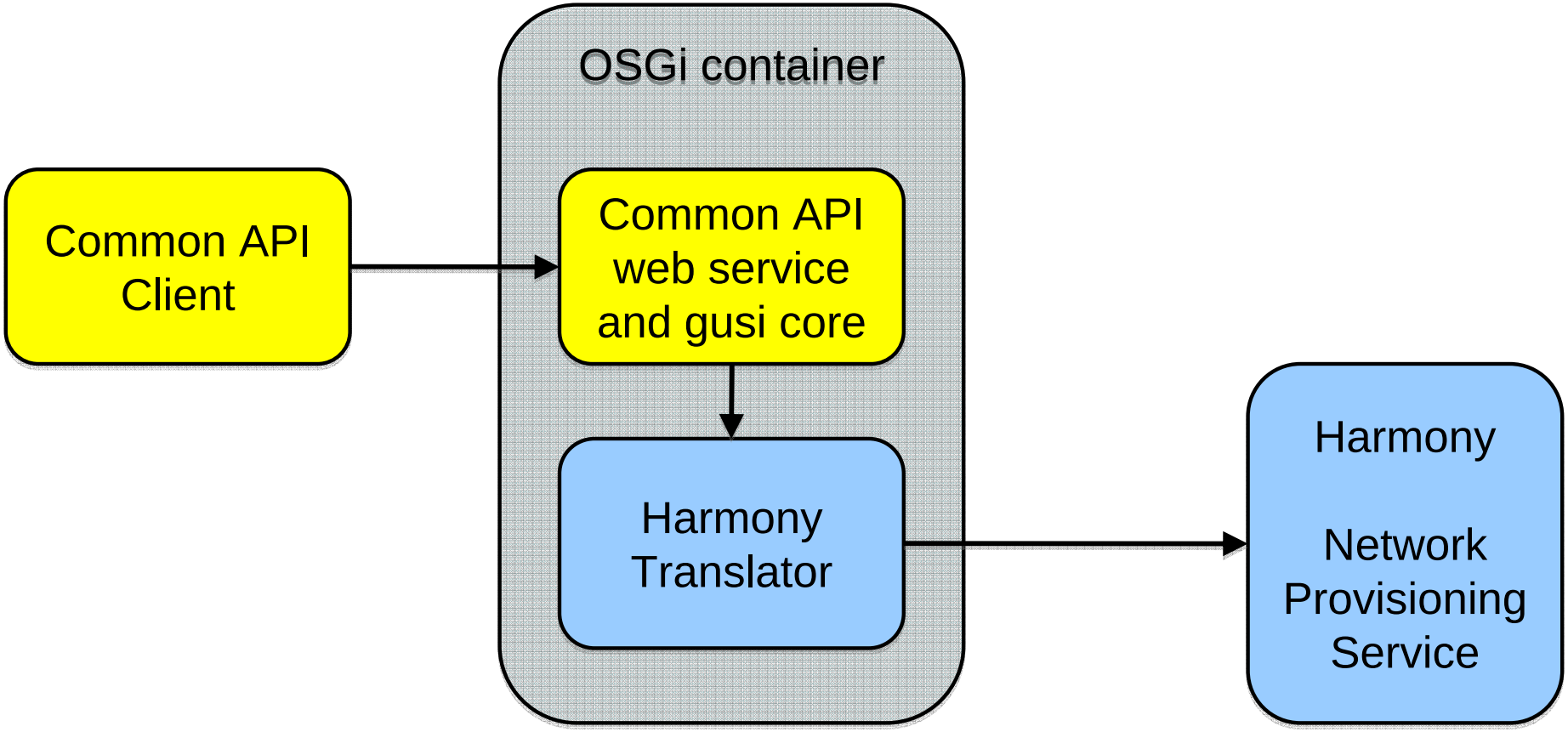
- Active Participants:
  - Representatives from G-Lambda, IDC, Harmony

Progress report

- Interface:
  - Not a great deal of progress; the various interfaces have been evaluated and a (non-satisfactory) first attempt at a common interface was made but not quite agreed on.
  - An extremely bare bones interface was rapidly put together in anticipation of a demo at this meeting.

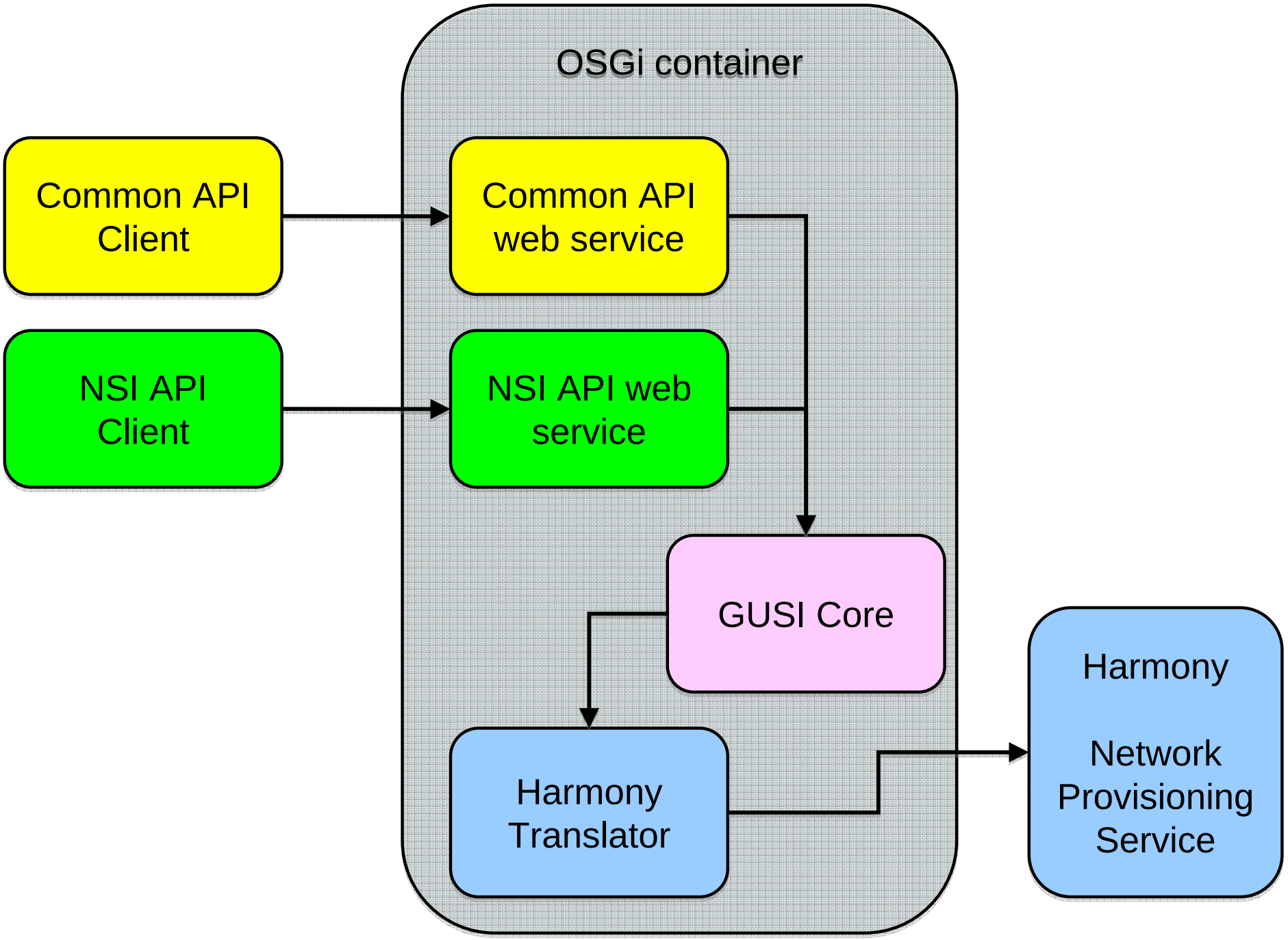
- Software development
  - A lot more progress here!
  - A first pass at a framework has been completed,
  - The bare-bones interface was implemented and exposed as a web service,
  - We have working code that translates from that to g-Lambda calls,
  - We have (nearly) working code that translates to IDC calls,
  - We can much more easily move forward from here.

Framework overview



We leverage OSGi, CXF, and Spring-DM tools to expose the common API as a web service and to do “autowiring” between the core and the translator.

Future Framework overview



Lessons learned

- We made a selection of tools that can make some things extremely easy..
- But other things very hard:
  - Lots of problems with Java classloading,
  - Lots of problems with OSGi bundling
  - Many common libraries don’t work in an OSGi container
  - Maven version / repository hell
  - Tedious, trial-and-error debugging
  - I spent 95% of my time fighting the above.
- We ran out of time; maybe needed another 2 weeks for a demo here.
- This is because we underestimated the difficulties.
- We did not have enough resources invested.

Future plans

- Growth:
  - Invite AutoBAHN into the WG,
  - Publicize our work,
  - Ask projects to commit some resources

- Software development
  - Continue work on GUSI
  - Find a better name for it, too
  - Improve bare-bones interface
  - Have a demo for next GLIF meeting

- Cooperation with other groups
  - Provide feedback to NSI
  - Provide framework to rapidly test out potential NSI interface
  - If GUSI does topology exchange, use NML

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