

# **Activity Report**

## **IEEE P2301**

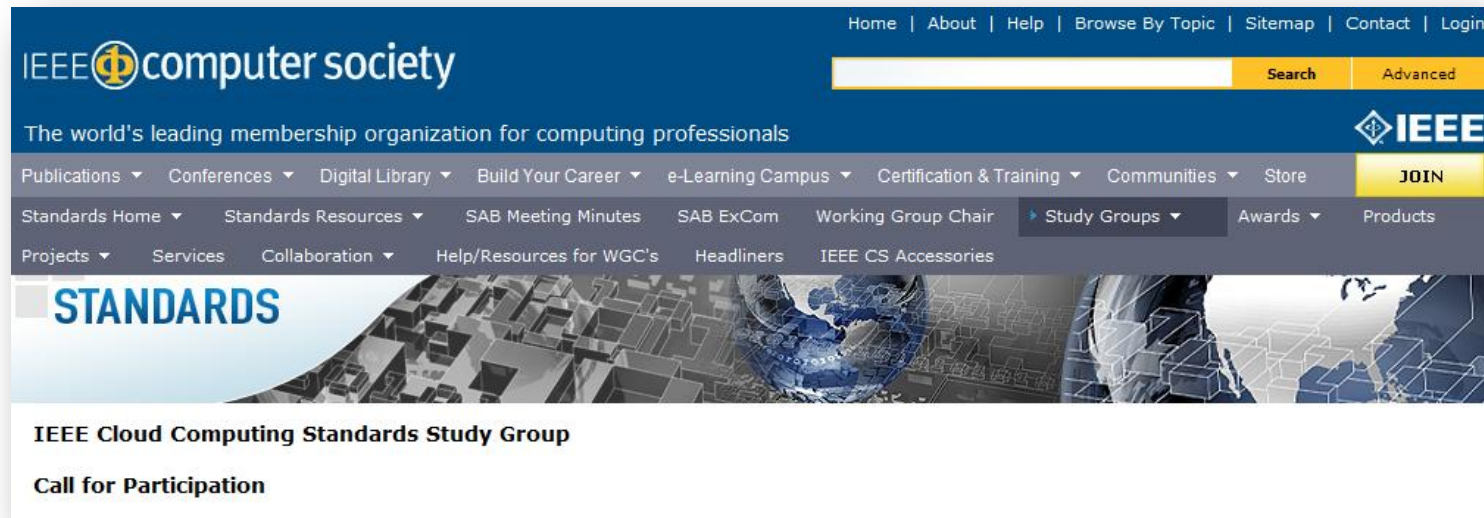
## **IEEE P2302**

### **Background, and Initial Activities Progress**

**David Bernstein**  
**Working Group Chair P2301**  
**Working Group Chair P2301**

**May, 2011**

# First came the Cloud Computing Standards Study Group

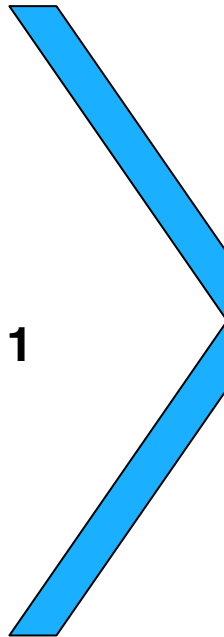


- **Early 2010 IEEE Cloud Computing Standards Study Group formed**
- **We contacted members and non members as individuals, in service providers, vendors, corporations, and departments of government, to determine appropriate role for IEEE in Cloud Computing Standards**

# Study Group Methodology and Output

Twenty (20), 60-minute in-depth with respondents who are viewed as thought leaders in cloud computing, were conducted:

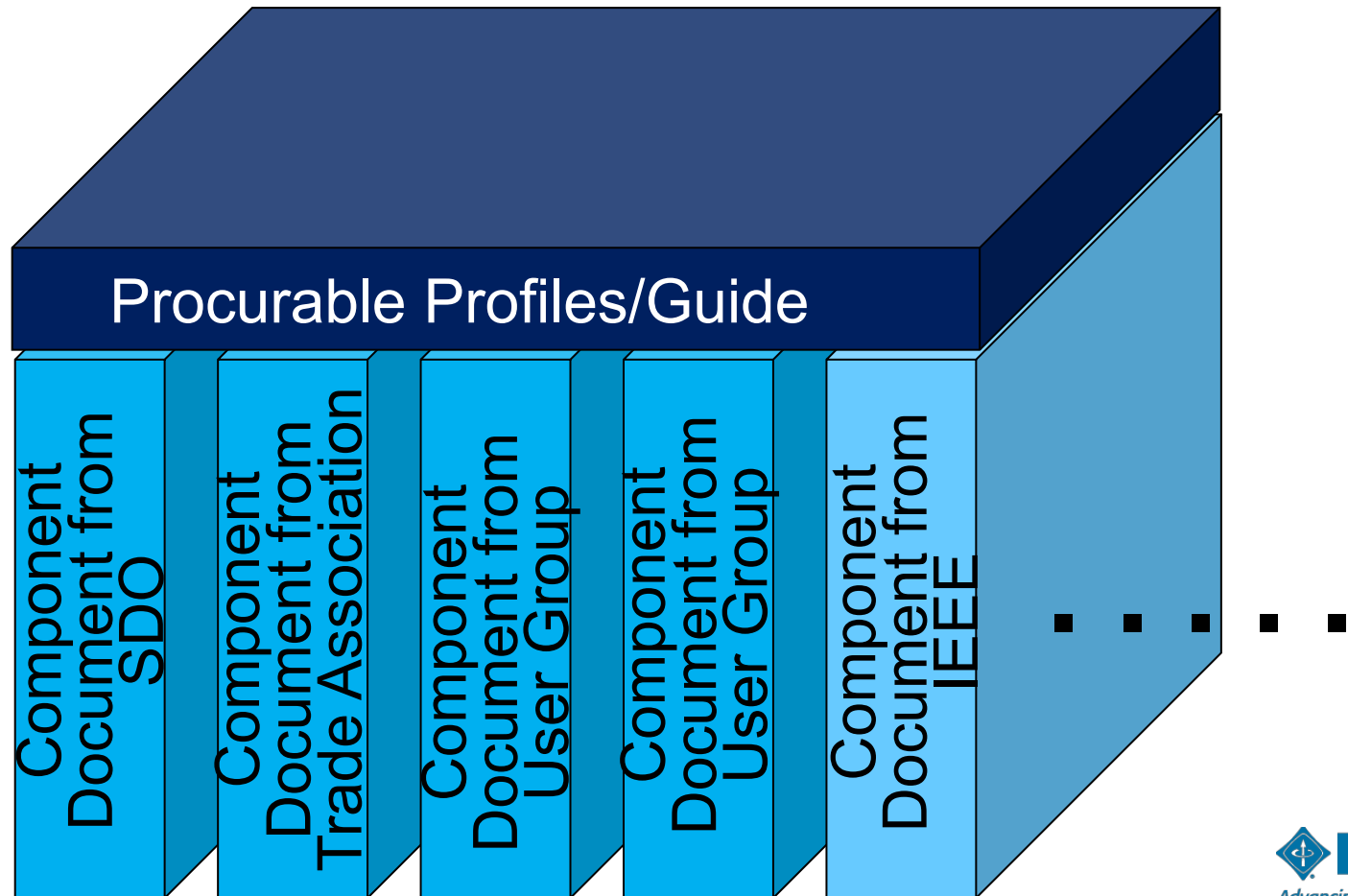
- Industry – 12
- Industry Trade Associations – 1
- Academia – 4
- U.S. Federal Government – 3
- International – 4
- Members – 12
- Non-members – 8



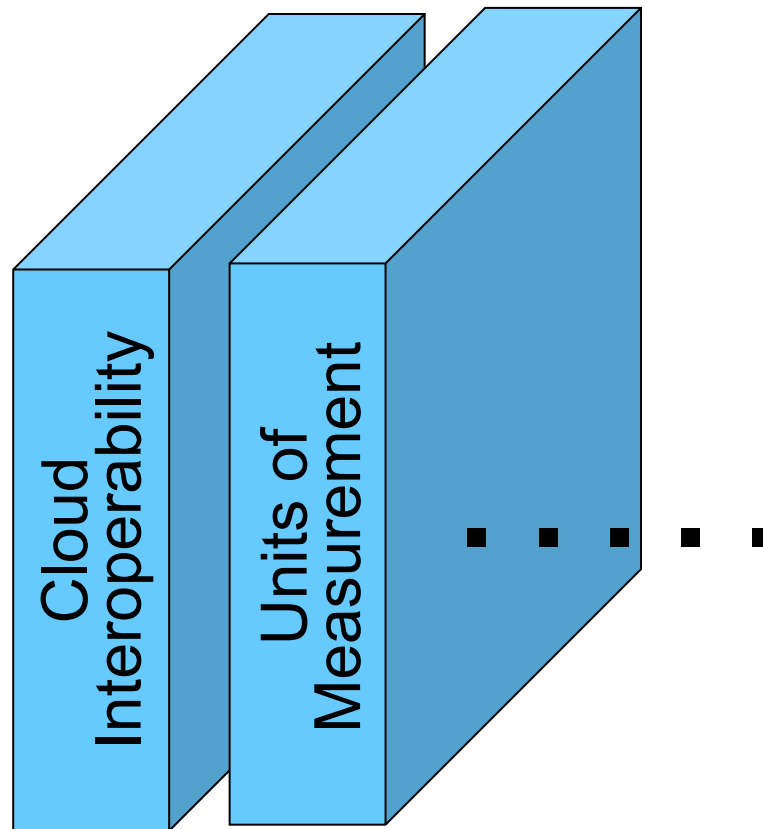
## Two Themes Emerged

- Help to organize existing work – don't duplicate! – in standards, industry guides, ad-hoc working groups, open source projects into *Procurable Profiles/Guide*
- Develop Standards only where no other group is working on a specific area

# IEEE Standards Activity Proposal part one – “Profiles/Guide”



# IEEE Standards Activity Proposal part two – “Gaps in Standards”



# **(1) Guide for Cloud Portability and Interoperability Profiles (CPIP)**

- Most cloud ecosystem participants prefer to align with generally accepted, common, or standardized conventions
- Many need to reference a formal SDO publication for their business practice
- IEEE CPIP will enumerate options, grouped in a logical fashion called “profiles,” such definitions from a variety of sources, using the open yet formal SDO process

## **(2) Standard for Intercloud Interoperability & Federation (SIIF)**

- One technical area which needs specific standards-development leadership is Cloud to Cloud federation/interoperability
- This area requires protocols, directory service, registration authority, trust authority, and governance coordination
- IEEE SIIF will develop this standard in partnership with real-world test-bed projects, using the open yet formal SDO process

# Validation Workshop at IEEE CloudCom 2010

Joint Workshop sponsored by IEEE and NIST



**Cloud Computing Standards Cataloging,  
Categorization, and Coordination  
Workshop**

*Towards a Formal Guidebook: Standards  
Projects, Industry Associations, Community  
Efforts, and Government Initiatives*

**Steve Diamond, David Bernstein, IEEE  
Dawn Leaf, Bob Bohn, NIST**

**IEEE CloudCom 2010  
Friday, 3 December 2010  
University Place Conference Center**

  
National Institute of  
Standards and Technology

  
Advancing Technology  
for Humanity

# IEEE P2301 and P2302 Launched April 2011



# Registration and Trust Authorities Directions

## IEEE Standards Association

PROJECT SEARCH

Text Size: A A A Search

PRODUCTS & SERVICES IEEE-SA MEMBERSHIP STANDARDS DEVELOPMENT NEWS & INFORMATION

### Registration Authority Home

### Registries

### Public Listings

### Tutorials

### Resources

### Frequently Asked Questions

### Registration Authority Committee

### Registry Standards

### Contact Us

## IEEE Registration Authority

Registration is the assignment of unambiguous names to objects in a assignment available to interested parties.

The IEEE Registration Authority was formed in 1986 to register Organ Identifiers (OUI) at the initiative of the P802 (LAN/MAN) standards group recognized by [ISO/IEC](#) as the authorized Registration Authority to provide world-wide.

Since that time, the activities of the Registration Authority have continued to expand to include:

- Organizationally Unique Identifiers (OUI)
- OUI-36
- Individual Address Blocks (IAB)
- EtherType Fields
- Manufacturer ID
- Logical Link Control (LLC)
- Standard Group MAC Addresses
- Unique Registration Numbers (URN)
- IEEE Template/TDL Items
- PSID
- IEEE 802.16 Operator ID

## IGTF

International Grid Trust Federation

AP|EU|TAG

### About the IGTF

[IGTF Charter](#)  
[TOSCA Accord \(2003\)](#)

### Member PMAs and Registries

[APGridPMA](#)  
[EUGridPMA](#)  
[TAGPMA](#)  
[YACAS](#)

### Authentication Profiles


[Classic X.509 CAs](#)  
[Short-lived Credential Services](#)  
[TOSCA](#)  
[TOSCA Integrated Credential Services](#)  
[Download the Distribution](#)  
[Download the Utilities](#)  
[IGTF RAT toolkit](#)

### Open Grid Forum Relationships

[CA Operations WG](#)  
[WG documents](#)

### Links

[Open Grid Forum](#)  
[TERENA T2T2T2](#)  
[Infrastructure Reflection Group](#)  
[Comments to info@igtf.net](#)  
[Disclaimer and Privacy notice](#)



## The International Grid Trust Federation

The international community is deploying large scale distributed computing grids on a production scale, across organisations, across countries, and across continents, for the advancement of science and engineering. In shaping this common grid infrastructure, many of these grids are relying on common practices, policies and procedures to reliably identify grid subscribers and resources.


The International Grid Trust Federation (IGTF) is a body to establish common policies and guidelines between its Policy Management Authorities (PMAs) members and to ensure compliance to this Federation Document amongst the participating PMAs. The IGTF does not provide identity assertions but instead ensures that within the scope of the [IGTF charter](#) the assertions issued by accredited authorities of any of its member PMAs meet or exceed an authentication profile relevant to the accredited authority.

### Functions and the Trust Anchor Distribution

The IGTF maintains a list of trust anchors, root certificates and related meta-information for all the accredited authorities, i.e., those that meet or exceed the criteria mentioned in the *Authentication Profiles*. The Distribution contains Certificate Revocation List (CRL) locations, contact information, and signing policies.

- [Download the latest update of the Common Distribution](#)
- [Download the Distribution Tools and the fetch-crl utility](#)

### Constituency



The IGTF constituency consists of our three member PMAs: the [APGridPMA](#) covering Asia and the Pacific, the [EUGridPMA](#) covering Europe, the Middle East and Africa, and [The Americas Grid PMA](#) covering Latin America, the Caribbean and North America. All registered members in each regional PMA are also members of the IGTF. These include identity providers, CAs, and their major Relying Parties, such as the international Grid Deployment and Infrastructure projects.

Each member PMA holds regular meetings and manages a (closed) email list for discussion. The open IGTF meetings are held at the Open Grid Forum's regular meetings. You can get in contact with the IGTF through your Regional PMA.

### News

The latest IGTF trust anchor distribution is always available from the PMA web sites: [EUGridPMA](#) and [APGridPMA](#). Please refer to the [README](#) and [CHANGES](#) files for information about the distribution and its use.

# Testbed Directions

GICTF, with NICT  
co-location

**GICTF** Global Inter-Cloud Technology Forum

**NICT** National Institute of  
Information and  
Communications  
Technology



Global Certificate  
Authority

Research  
Department  
of Telefonica

**Telefónica I+D**  
Leading the innovation  
at Telefónica

IEEE Reference Root  
and Exchange hosted in  
Rackspace Cloud  
Datacenter

**THE UNIVERSITY  
OF ARIZONA**

THE STATE UNIVERSITY OF NEW JERSEY  
**RUTGERS**

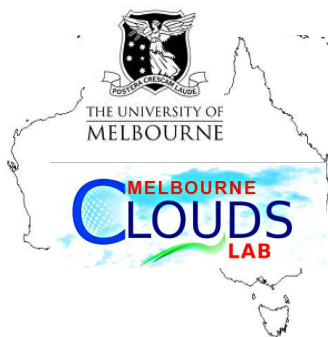
**MISSISSIPPI STATE  
UNIVERSITY**

**rackspace**  
**IEEE**  
Advancing Technology  
for Humanity

**UF** UNIVERSITY of  
**FLORIDA**



NSF Center for  
Autonomic  
Computing  
Member  
Universities



University of  
Melbourne

# Testbed Activity

- Participants place cloud implementation of their choice in well-connected datacenter in a geography
- Researchers to contribute to the open source implementation of the Intercloud protocol suite
- While adapting the protocols to the cloud in use
- Connect to the reference Intercloud Root and Exchange IEEE are running at Rackspace in USA
- Leverage/extend governance mechanisms of IGTF
- Experiment with cloud federation through these services, further develop protocols, ontologies, and explore the topology issues for scalability
- Feed results to IEEE Standard project

# Conclusions and Discussion

- First WG Meetings
  - IEEE P2301 Morning of July 15, Santa Clara, CA
  - IEEE P2301 Afternoon of July 15, Santa Clara, CA
- <http://grouper.ieee.org/groups/2301/>
- <http://grouper.ieee.org/groups/2302/>
- Discussion, Questions
- THANK YOU