

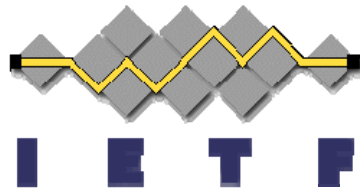
# GridHotline 5

- 【OGFオーバービュー】13:00-13:15 伊藤智(産総研)  
OGFとOGF22 の概要
- 【技術動向】13:15-13:45 田中良夫(産総研)  
セキュリティに関する動向
- 【技術動向】13:45-14:15 小島功(産総研)  
データグリッドに関する動向
- 【技術動向】14:15-14:45 谷村勇輔(産総研)  
Applications Area の標準化動向
- 第23回ワークショップ  
テーマ “E-Science”

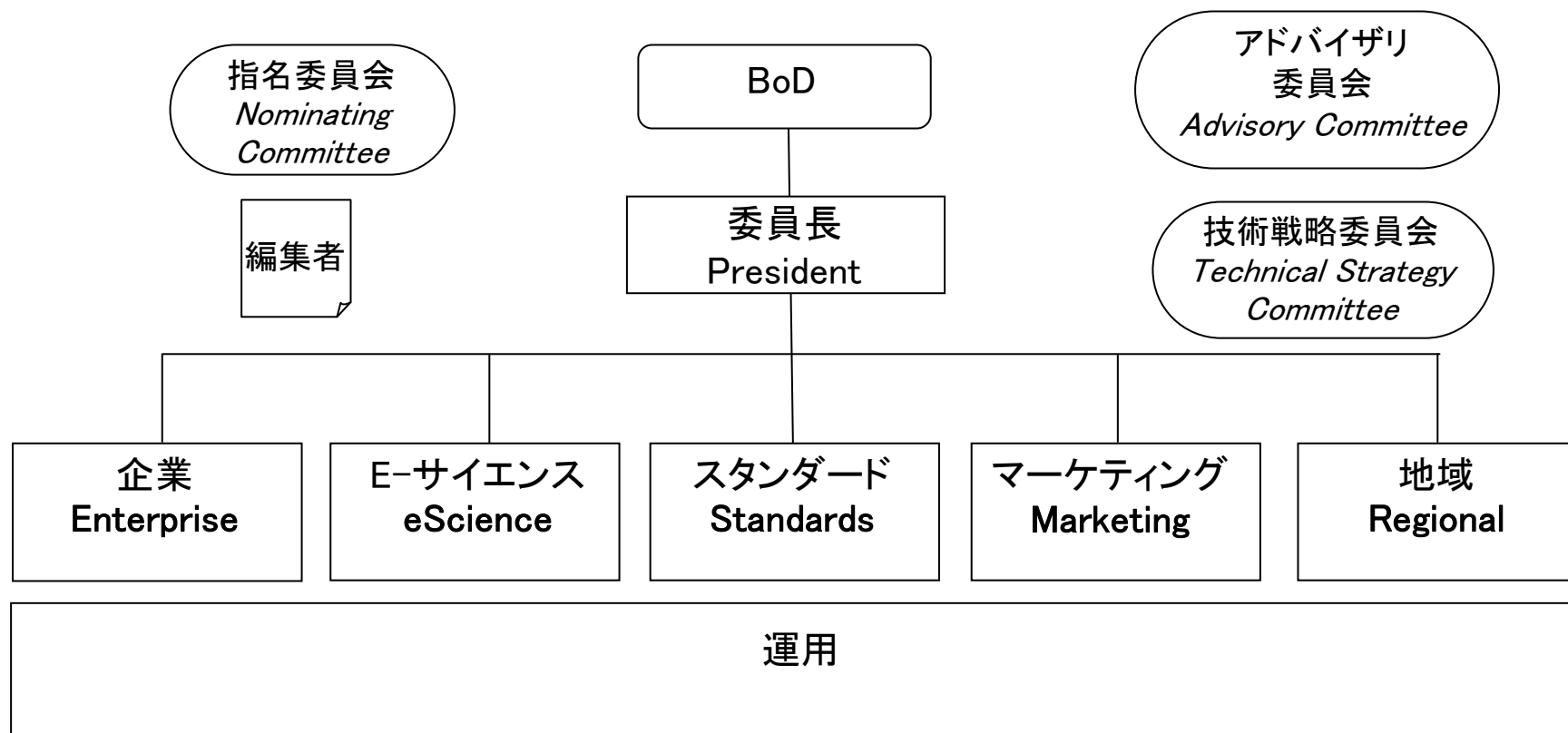
休憩15分

# グリッド技術の標準化

- OGF (Open Grid Forum)を中心に、Webサービス関連のフォーラム標準団体にて推進



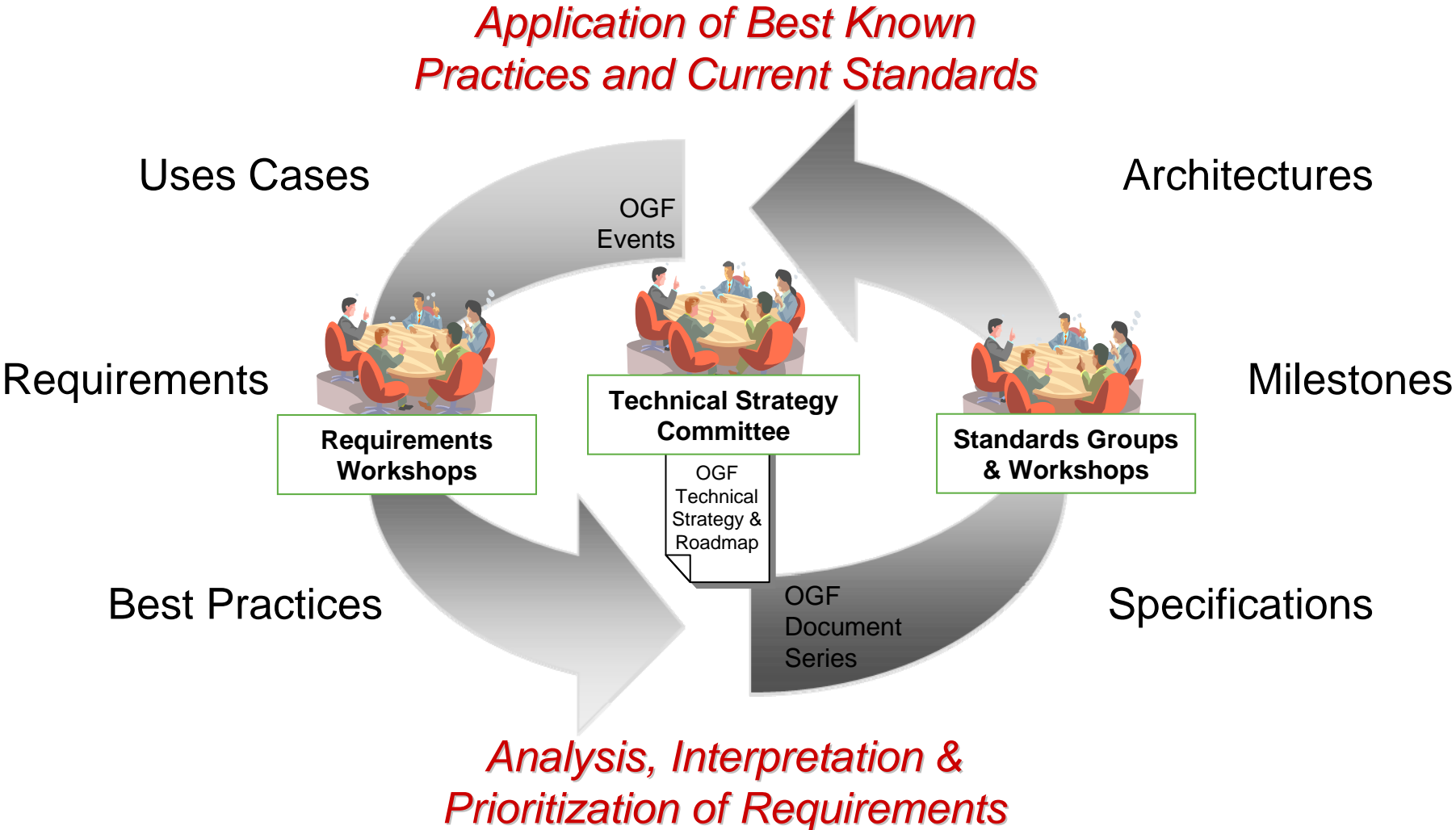
# 組織



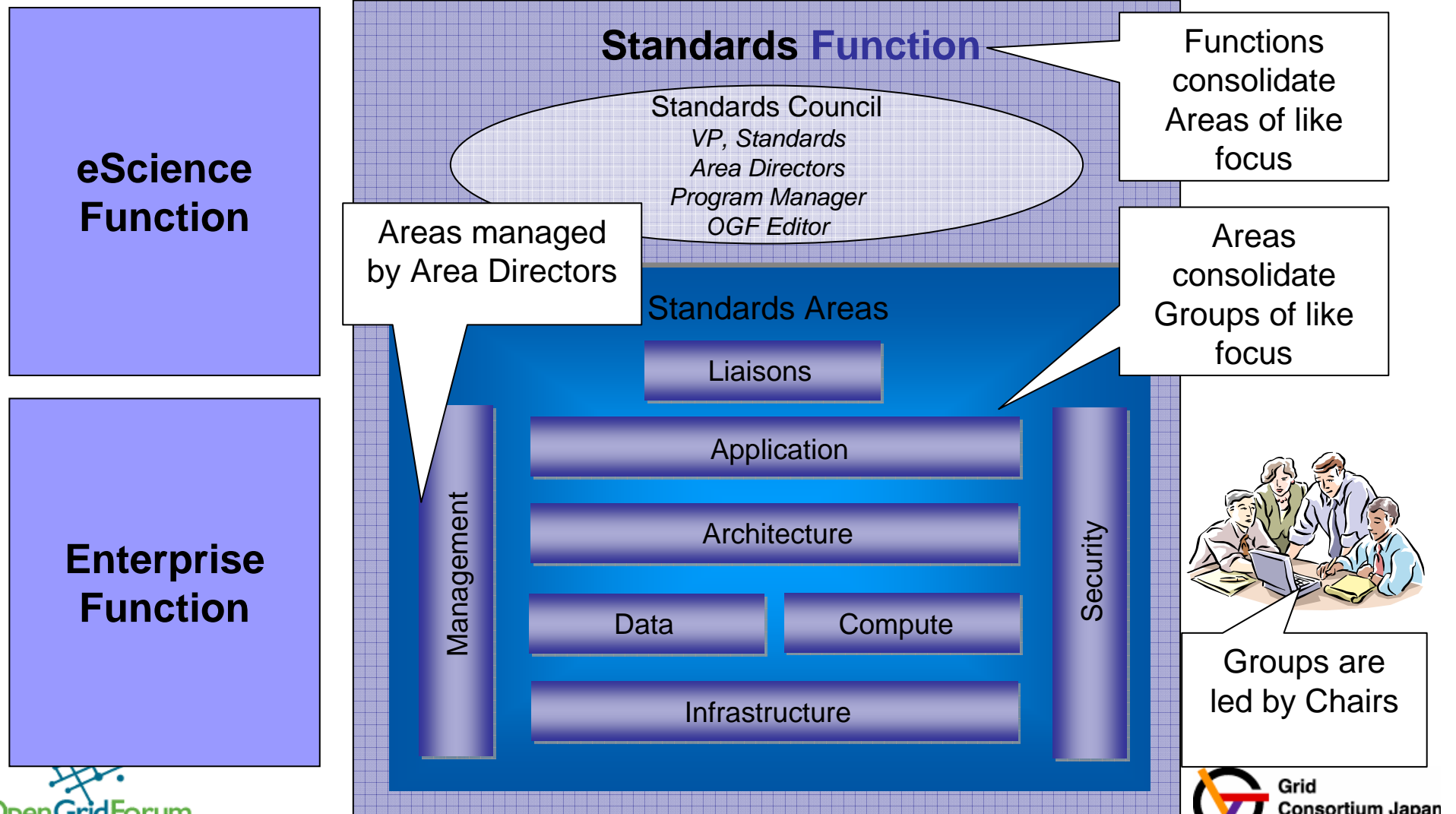
OGFの概要ドキュメントは以下のURLで見ることができます:

[http://www.ogf.org/rotate\\_headers/rotate\\_launch.php](http://www.ogf.org/rotate_headers/rotate_launch.php)

# OGF Technical Strategy/Stakeholder Alignment Process



# Functions/Areas/Groups/Chairs



# eScience/Enterprise Functions

## eScience Functions (16Groups)

Community Affairs	Build, Test and Certification of Grid Software Community Group (btc-cg) Education and Training (et-cg) Grid Reliability and Robustness RG (gridrel-rg)
Grid Operations	<b>Certificate Authority Operations RG (caops-wg)</b> Grid Interoperation Now Community Group (gin-cg) Production Grid Services-RG (pgs-rg) Remote Instrumentation Services in Grid Environment - RG (risge-rg)
Research Applications	Applications Developers and Users RG (apps-rg) Astronomy Applications RG (astro-rg) Humanities, Arts, and Social Sciences RG (hass-rg) Life Sciences Grid RG (lsg-rg) Particle and Nuclear Physics Applications RG (pnpa-rg) Preservation Environments RG (pe-rg)
Technology Innovators	Grid Computing Environments RG (gce-rg) Semantic Grid RG (sem-rg) Workflow Management RG (wfm-rg)

## Enterprise Functions (3Groups)

Industry Applications	Enterprise Grids Requirements RG (egr-rg) Storage Networking Community Group (sn-cg) Telecomm Community Group (telco-cg)
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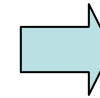
# Standards Function (35Groups)

Applications	<ul style="list-style-type: none"> <li>·Distributed Resource Management Application API WG (drmaa-wg)</li> <li>·Grid Information Retrieval WG (gir-wg)</li> <li>·Grid Remote Procedure Call WG (gridrpc-wg)</li> <li>·<b>Simple API for Grid Apps RG (saga-rg)</b></li> <li>·<b>Simple API for Grid Applications Core Working Group (saga-core-wg)</b></li> </ul>
Architecture	<ul style="list-style-type: none"> <li>·OGSA Naming Working Group (ogsa-naming-wg)</li> <li>·Reference Model Working Group (rm-wg)</li> <li>·Open Grid Services Architecture WG (ogsa-wg)</li> </ul>
Compute	<ul style="list-style-type: none"> <li>·Grid Resource Allocation Agreement Protocol WG (graap-wg)</li> <li>·Grid Scheduling Architecture RG (gsa-rg)</li> <li>·Job Submission Description Language WG (jsdl-wg)</li> <li>·OGSA Basic Execution Services WG (ogsa-bes-wg)</li> <li>·High Performance Computing Profile WG (hpcp-wg)</li> <li>·OGSA Resource Selection Services WG (ogsa-rss-wg)</li> </ul>
Data	<ul style="list-style-type: none"> <li>·Data Format Description Language WG (dfdl-wg)</li> <li>·Info Dissemination WG (infod-wg)</li> <li>·Grid File System Working Group (gfs-wg)</li> <li>·OGSA ByteIO Working Group (byteio-wg)</li> <li>·Grid Storage Management WG (gsm-wg)</li> <li>·OGSA Data Movement Interface WG (ogsa-dmi-wg)</li> <li>·GridFTP WG (gridftp-wg)</li> <li>·OGSA-Data Working Group (ogsa-d-wg)</li> <li>·<b>Database Access and Integration Services WG (dais-wg)</b></li> </ul>
Infrastructure	<ul style="list-style-type: none"> <li>·Grid and Virtualizaion Working Group (gridvirt-wg)</li> <li>·Network Mark-up Language Working Group (nml-wg)</li> <li>·Grid High-Performance Networking RG (ghpn-rg)</li> <li>·Network Measurements Working Group (nm-wg)</li> </ul>
Liaison	<ul style="list-style-type: none"> <li>·Standards development organizations Collaboration on networked Resources Management (scrm-wg)</li> </ul>
Management	<ul style="list-style-type: none"> <li>·Configuration Description, Deployment, and Lifecycle Management WG (cddlm-wg)</li> <li>·Glue Schema Working Group (glue-wg)</li> <li>·OGSA Resource Usage Service WG (rus-wg)</li> <li>·Usage Record WG (ur-wg)</li> </ul>
Security	<ul style="list-style-type: none"> <li>·Firewall Issues RG (fi-rg)</li> <li>·Levels of Authentication Assurance Research Group (loa-rg)</li> <li>·OGSA Authorization WG (ogsa-authz-wg)</li> </ul>

# OGF ドキュメントのタイプ

GGF Document (GFD)  
Grid Working Drafts (GWD)

GWD-I  
GWD-E  
GWD-C  
GWD-R



GFD-I  
GFD-E  
GFD-C  
GFD-R  
GFD-R-P

(Proposed Recommendation)

## Informational or Experimental

▶ Purpose: To Inform the community

✦ 相互運用性のテスト結果、プロトコルや仕様の具体的実装 など

## Community Practice

▶ Purpose: To Influence the community

✦ GGF ドキュメントプロセス、グリッド運用・手順・サポートのベストプラクティス など

## Recommendations Track

標準仕様

▶ Purpose: Define a standard

✦ プロトコル、API、オブジェクト、アーキテクチャの仕様 など

# OGFドキュメント

GFD-I	62
GFD-E	13
GFD-C	10
GFD-R-P	27
GFD-R	2

- 2008年3月12日現在 114のドキュメントを発行済み
- GFD-R-P (Proposed Recommendation)
  - ▶ Open Grid Services Infrastructure (OGSI)
  - ▶ GridFTP: Protocol Extensions to FTP for the Grid
  - ▶ GridFTP v2 Protocol Description
  - ▶ A Hierarchy of Network Performance Characteristics for Grid Applications and Services
  - ▶ BytelO Specification 1.0
  - ▶ BytelO OGSA™ WSRF Basic Profile Rendering 1.0
  - ▶ A GridRPC Model and API for End-User Applications
  - ▶ Distributed Resource Management Application API Specification 1.0
  - ▶ Configuration Description, Deployment, and Lifecycle Management (CDDL) SmartFrog-Based Language Specification
  - ▶ Configuration Description, Deployment, and Lifecycle Management (CDDL) Component Model v 1.0
  - ▶ Configuration Description, Deployment, and Lifecycle Management (CDDL) Deployment API
  - ▶ CDDL Configuration Description Language Specification, Version 1.0

OGF初の  
Recommendation

# OGFドキュメント(2)

## GFD-R-P (Proposed Recommendation)

- ▶ **Job Submission** Description Language (JSDL) Specification, V1.0
- ▶ JSDL HPC Profile Application Extension, Version 1.0
- ▶ JSDL SPMD Application Extension, Version 1.0
- ▶ OGSA™ Basic **Execution** Service Version 1.0
- ▶ **Application Contents** Service Specification 1.0
- ▶ Web Services **Data Access** and Integration - The **Core** (WS-DAI) Specification, Version 1.0
- ▶ Web Services **Data Access** and Integration - The **XML** Realization (WS-DAIX) Specification, Version 1.0
- ▶ Web Services **Data Access** and Integration - The **Relational** Realisation (WS-DAIR) Specification, Version 1.0
- ▶ OGSA™ **WSRF Basic Profile** 1.0
- ▶ OGSA™ Basic **Security Profile** 1.0 - Core
- ▶ OGSA™ **Security Profile** 1.0 - Secure Channel
- ▶ **Usage Record** - Format Recommendation
- ▶ **Resource Namespace** Service Specification
- ▶ **WS-Naming** Specification
- ▶ Web Services **Agreement** Specification (WS-Agreement)
- ▶ **Information Dissemination** in the Grid Environment - Base Specifications
- ▶ HPC Basic Profile, Version 1.0

# 新しいドキュメント

## ● OGF21以降2件

- ▶ GFD.124 Interoperability Experiences with the High Performance Computing Basic Profile (HPCBP), Version 1.0, Compute, HPCP-WG, EXP
- ▶ GFD.123 Defining the Grid: A Roadmap for OGSA® Standards v1.1 [Obsoletes GFD.53], Architecture OGSA-WG INFO

## ● パブリックコメント受付中

- ▶ Job Submission Description Language (JSDL) Specification, Version 1.0 (Errata draft 020) P-REC JSDL-WG 3/15
- ▶ Secure Addressing Profile 1.0 P-REC OGSA-WG 4/1
- ▶ Secure Communication Profile 1.0 P-REC OGSA-WG 4/1
- ▶ HPC File Staging Profile, Version 1.0 P-REC HPCP-WG 4/30
- ▶ OGSA® Basic Security Profile 2.0 P-REC OGSA-WG 4/30
- ▶ OGSA-DMI Functional Specification 1.0 P-REC OGSA-DMI-WG 4/30

# OGF22

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- February 25-28, 2007
- Hyatt Regency Cambridge, Cambridge, MA USA
  
- 30+ groups and BoFs in 53 sessions
- 3 Keynotes
- 8 Spec Adoption sessions
  - ▶ OMII-Europe, NML/NM, Authz, HPC-BP, GIN, SAGA, DRMAA, UNICORE
- 5 Workshops
- 6 Enterprise sessions
  - ▶ (4) Enabling the Next Gen IT Infrastructure
  - ▶ Enterprise Requirements
  - ▶ Best Practice
- 15 community sessions

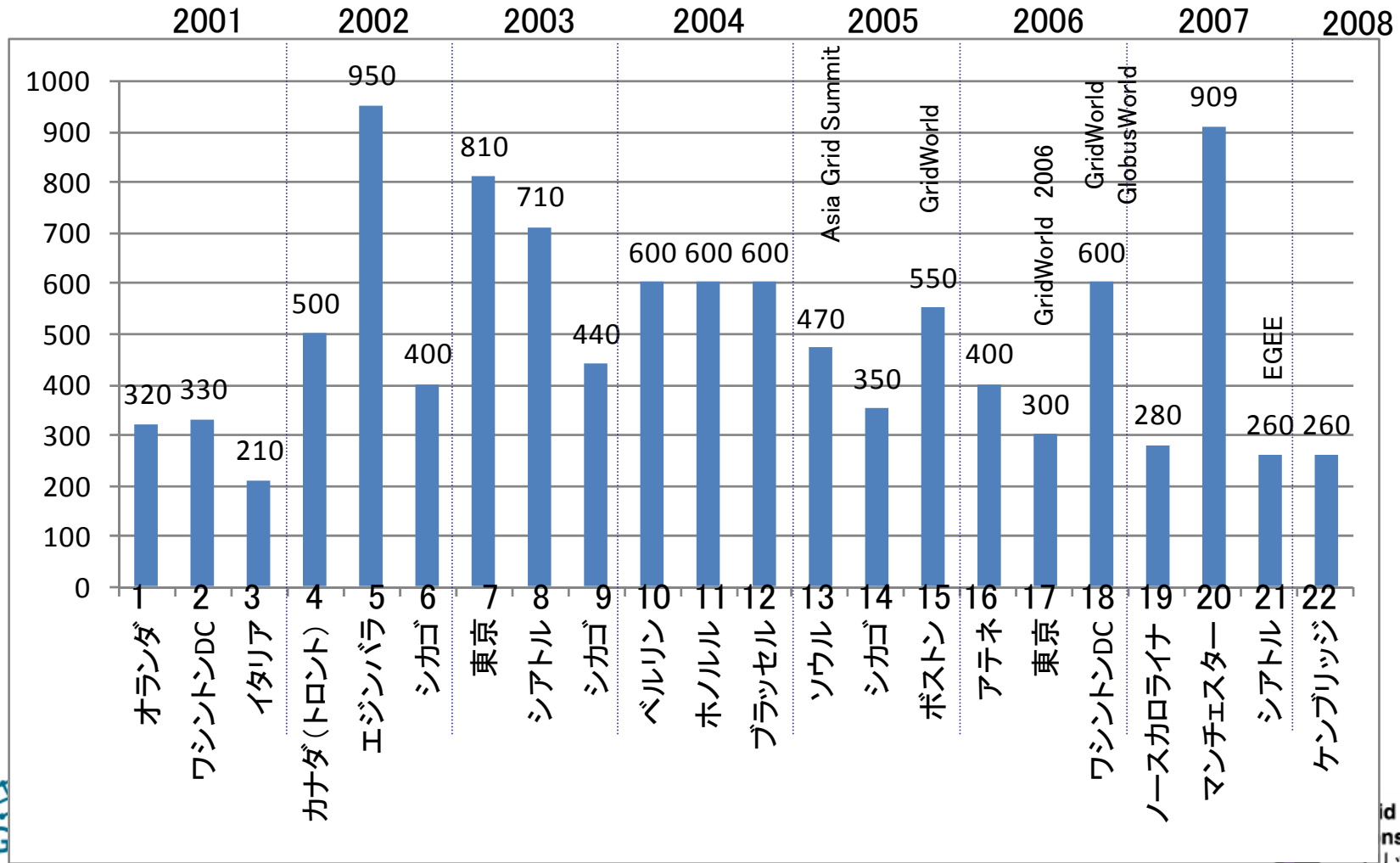
# 3 Keynotes

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- Charlie Catlett  
CIO, Argonne National Laboratory  
Senior Fellow at the Argonne/University of Chicago Computation Institute  
“What OGF Can Do for Enterprises  
(A View from the CIO Office) ”
- Irving Wladawsky-Berger  
Chairman Emeritus, IBM Academy of Technology  
Visiting Professor of Engineering Systems, MIT  
“Cloud Computing, Grids and the coming IT Cambrian Explosion”
- Addison Snell  
VP/GM ,Tabor Research  
“Grid Usage and Productivity in HPC”

# OGF22参加者

参加者 約260人



# Group の新設と消滅(2007/10以降の変更)

## ● 新設

- ▶ なし

## ● 消滅

- ▶ なし

## ● OGF21のBOF

- ▶ JSDLにて Activity instance document schema BoF
- ▶ Creating a standard software API for Data Grid Management Systems BoF
- ▶ Grid Visualization and Steering: Status and collaboration with RISGE-RG (BoF)
- ▶ **Cloud Systems** BoF

# What are Clouds?



- Clouds are “Virtual Clusters” (“Virtual Grids”) of possibly “Virtual Machines”
  - They may cross administrative domains or may “just be a single cluster”; the user cannot and does not want to know
- Clouds support access (lease of) computer instances
  - Instances accept data and job descriptions (code) and return results that are data and status flags
- Each Cloud is a “Narrow” (perhaps internally proprietary) Grid
- When does Cloud concept work
  - Parameter searches, LHC style data analysis ..
  - Common case (most likely success case for clouds) versus corner case?
- Clouds can be built from Grids
- Grids can be built from Clouds

Geoffrey Fox  
Indiana University  
[www.ogf.org](http://www.ogf.org)



# Why Clouds?

- Resource consumers
  - ◆ Individual users or Virtual Organization
  - ◆ Requirements
    - Customized environments for their services/applications
    - Services/applications can be short-lived
    - New environments/services deployed quickly and often
- Resource providers
  - ◆ Own and operate physical resources
  - ◆ Requirements
    - Ability to monitor and control their resources
    - Provide resources at reasonable operational cost
    - Protection from activities performed by resource consumer
- Consumers need to be able to **lease** (potentially for short-term) platforms that they can customize and control

Kate Keahey  
University of Chicago

# 今後の予定

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## OGF23

- ▶ June 2-6, 2008
- ▶ Barcelo Sants Hotel, Barcelona, Spain
- ▶ **OGF-Europe**'s First International Event
- ▶ Hosted by the Barcelona Supercomputing Center
- ▶ Co-Located with the **BEinGRID** Industry Days

## OGF24

- ▶ September 15-19, 2008
- ▶ Singapore



## Mobilising and Integrating Communities on Grid Standards & Best Practices Globally

Dr David Wallom

Oxford eResearch Centre

[david.wallom@oerc.ox.ac.uk](mailto:david.wallom@oerc.ox.ac.uk)



# GOAL

*“The Goal of OGF-Europe is to stimulate, coordinate and harmonise networked actions on Grid adoption across Europe and globally through **reinforcement of the Open Standards message** and thus capillary diffusion of the Open Grid Forum (OGF) model to Europe in alignment with OGF mission, strategy and leadership.”*