

Online Services Deployed by Pervasive Technology Labs through June, 2006

**Items in bold indicate new for the reporting period 1/06 to 6/06.

| Name | Description | Lab | URL | Comments |
|--------------------------------------|--|--|--|---|
| Generic Programming Web Site | On-line community for generic programming researchers and practitioners. | Open Systems | http://www.generic-programming.org/ | |
| Regional Optical Map | Visualization tool allowing display of regional networks to facilitate aggregation into nation-scale, networks. | Advanced Network Management | http://paintsquidrel.ucs.indiana.edu/map/ | |
| Censearchip | Online service to compare Internet search results across different national domains. | Advanced Network Management Lab | http://homer.informatics.indiana.edu/censearchip/ | |
| Chembiogrid Wiki and Services | Collaborative project notebook for the NIH-funded CICC project. | Community Grids | http://www.chembiogrid.org/wiki. | |
| CrisisGrid Wiki and Services | Collaborative project notebook for the NASA funded SERVOnet/QuakeSim project. | Community Grids | http://www.crisisgrid.org/wiki. | Wiki includes links to the QuakeSim portal, SourceForge repository, and various Web Service projects: HPSearch, WS-Context, Web Map Service, Web Feature Service, and Sensor Grid. |
| QuakeSim Portal | Portal for QuakeSim project. | Community Grids | http://www.complexity.ucs.indiana.edu:8282. | Uses several services listed above under www.crisisgrid.org. New services include updates to Virtual California, Pattern Informatics, and SensorGrid applications. |

****Items in bold indicate new for the reporting period 1/06 to 6/06.**

| Name | Description | Lab | URL | Comments |
|---|--|---|--|---|
| OGCE Web Site | Central download site for OGCE software. Website was completely revised using XDoc. | Community Grids | http://www.collab-ogce.org | |
| CIMA Crystallography Lab Federation Portal | Federation of X-ray diffraction labs in the US and abroad. | Knowledge Acquisition and Projection | https://iri164.informatics.indiana.edu:8443/gridsphere/gridsphere | Supports facility sharing, data management and expertise sharing for molecular structure determination by diffraction methods across cooperating facilities. |
| Open MPI Web Site | Web site for worldwide community of Open MPI users and developers. | Open Systems | http://www.open-mpi.org/ | |
| LAM/MPI Web Site | Web site for worldwide community of LAM/MPI users and developers. | Open Systems | http://www.lam-mpi.org | |
| Waiyu | On line translation service for Chinese, Japanese, and Korean languages. | Open Systems | http://www.waiyu.org/ | |
| Traffic Grapher | Visualization tool allowing real-time graphical display of network statistics, used internally by the Research and Educational Network Information Sharing and Analysis Center (not open to the public). | Advanced Network Management | http://paintsquirlrel.ucs.indiana.edu/~dajr/tg.php | |
| IPV6 Oracle | Online services which decomposes an IPv6 (Internet Protocol, version 6) address into its component parts and checks for address validity. | Advanced Network Management | http://steinbeck.ucs.indiana.edu:47401 | |

| Name | Description | Lab | URL | Comments |
|-------------------------------|---|-----------------|--|--|
| Video snapshot capture | Captures video stream images as snapshots for annotation; preserves snapshot's timestamp for playback in streaming applications. | Community Grids | Links from www.globalmmcs.org | |
| Real™ Streaming and Archiving | Transcodes all GlobalMMCS supported audio/video streams into Real™ streams. Streams can also be archived for playback. | Community Grids | Links from www.globalmmcs.org | |
| H.323 Gatekeeper | Acts as bridge between H.323 systems (such as Polycom) and other GlobalMMCS services. | Community Grids | Links from www.globalmmcs.org | |
| Portal Server | Allows you to login into the system, register for online conferences, and join sessions. | Community Grids | Links from www.globalmmcs.org | |
| GlobalMMCS Client | Provides client interface to audio and video streams from multiple types of providers (H.323, Real, Access Grid, screen frame buffer captures.) | Community Grids | Links from www.globalmmcs.org | |
| Collaborative Whiteboard | Shared whiteboard allows multiple clients to draw and annotate images. All messages go over NaradaBrokering. | Community Grids | Links from www.globalmmcs.org | |
| Instant Messaging Chat Client | Allows multiple participants to chat. All messages go over NaradaBrokering. | Community Grids | Links from www.globalmmcs.org | |
| Messaging Service | Service to stream data in workflow fed by real-time sources; based on NaradaBrokering which can also be used in cases just involving archival data. | Community Grids | Links from complexity.ucs.indiana.edu:8282 and www.crisisgrid.org | **These have multiple URLs and may migrate from hosts. The user interface and wiki URLs are thus listed instead. |

| Name | Description | Lab | URL | Comments |
|---|--|-----------------|--|--|
| Notification Service | Supplies alerts to users when filters (data-mining) detects features of interest. | Community Grids | Links from complexity.ucs.indiana.edu:8282 and www.crisisgrid.org | **These have multiple URLs and may migrate from hosts. The user interface and wiki URLs are thus listed instead. |
| Workflow/Monitoring/Management Services | HPSearch project uses HPSearch Web Services to execute JavaScript workflow descriptions. Recently revised to support WS-Management and to support both workflow and system management. | Community Grids | Links from complexity.ucs.indiana.edu:8282 and from www.crisisgrid.org | **See Above |
| Authentication and Authorization | Uses capabilities built into portal. Simulations are typically performed on machines where user has accounts while data services are shared for read access. | Community Grids | Links from complexity.ucs.indiana.edu:8282 and from www.crisisgrid.org | **See Above |
| Registry and Discovery Services | Data model extensions to UDDI to support XPath queries over Geographical Information System capability.xml files. Designed to replace OGC (Open Geospatial Consortium) Web registry service. | Community Grids | Links from complexity.ucs.indiana.edu:8282 and www.crisisgrid.org | **See Above |
| Context Data Service | Stores information gathered from users' interactions with the portal interface in a generic, recursively defined XML data structure. Typically input parameters are stored and choices made by the user so they can be recovered and reloaded later. | Community Grids | Links from complexity.ucs.indiana.edu:8282 and www.crisisgrid.org | **See Above |

| Name | Description | Lab | URL | Comments |
|--------------------------------|--|-----------------|--|--|
| Portal | An OGCE based portal based on portlet architecture. | Community Grids | Links from complexity.ucs.indiana.edu:8282 and www.crisisgrid.org | **These have multiple URLs and may migrate from hosts. The user interface and wiki URLs are thus listed instead. |
| Web Map Service | Web Service version of Open Geospatial Consortium specification. W constructs images out of abstract feature descriptions. | Community Grids | Links from complexity.ucs.indiana.edu:8282 and www.crisisgrid.org | **See Above |
| Scientific Plotting Services | Dislin-based scientific plotting services, a variation of CGL's Web Map Service: for a given input service, service can generate a raster image (like a contour plot) which can be integrated with other scientific and GIS map plot images. | Community Grids | Links from complexity.ucs.indiana.edu:8282 and www.crisisgrid.org | **See Above |
| Compute Access | Accesses specific job schedulers in straightforward ways. Do not need to link multiple compute jobs but rather single compute jobs on a user-chosen site with multiple services. | Community Grids | Links from complexity.ucs.indiana.edu:8282 and www.crisisgrid.org | **See Above |
| File Services | File web service that uploads, downloads, and crossloads between different services. Supports operations such as file browsing, creation, deletion and copying. | Community Grids | Links from complexity.ucs.indiana.edu:8282 and www.crisisgrid.org | **See Above |
| Sensor Grid Services | Supports streaming GPS signals and successive filtering into different formats. Built over NaradaBrokering. | Community Grids | Links from complexity.ucs.indiana.edu:8282 and www.crisisgrid.org | **See Above |
| Quake Tables Database Services | USC QuakeTables fault database project includes a web service that allows user to search for Earthquake faults. | Community Grids | Links from complexity.ucs.indiana.edu:8282 and www.crisisgrid.org | **See Above |

| Name | Description | Lab | URL | Comments |
|---|---|-----------------|--|--|
| Data Tables Web Service | Web Service based on the National Virtual Observatory's VOTables XML format for tabular data. Useful general format for ASCII data produced by various application codes in SERVO and other projects. | Community Grids | Links from complexity.ucs.indiana.edu:8282 and www.crisisgrid.org | **These have multiple URLs and may migrate from hosts. The user interface and wiki URLs are thus listed instead. |
| Application and Host Metadata Service | Application and Host Descriptor service based on XML schema descriptors. Portlet interfaces allow code administrators to make applications available through the browser. | Community Grids | Links from complexity.ucs.indiana.edu:8282 and www.crisisgrid.org | **See Above |
| Web Feature Service | Web Service version of OGC standard, extended to support data streaming for increased performance. | Community Grids | Links from complexity.ucs.indiana.edu:8282 and www.crisisgrid.org | **See Above |
| Specific Applications: Virtual California, Geofest, Park, RDAHMM... | Applications can be all launched by a single Job Management service or by custom instances with metadata preset to a particular application. | Community Grids | Links from complexity.ucs.indiana.edu:8282 and www.crisisgrid.org | **See Above |
| Workflow/Monitoring/Management Services | CICC uses Taverna from the UK e-Science Program/OMII. MyLEAD (from the LEAD project) also being evaluated as a workflow environment. | Community Grids | Links from www.chembiogrid.org | **See Above |
| Authentication and Authorization | Currently all services openly available. | Community Grids | Links from www.chembiogrid.org | **See Above |

| Name | Description | Lab | URL | Comments |
|--|---|-----------------|---|--|
| Registry and Discovery Services | Inherited registry services through previously developed SERVOGrid work. | Community Grids | Links from www.chembiogrid.org | **These have multiple URLs and may migrate from hosts. The user interface and wiki URLs are thus listed instead. |
| Portal and portlets | Service using JSR 168-based portal. | Community Grids | Links from www.chembiogrid.org | **See Above |
| File Services | No specialized service. URLs are used for naming files and simple remote download. Services developed previously for SERVOGrid can be used for uploads. | Community Grids | Links from www.chembiogrid.org | **See Above |
| NIH DTP Database Services | Provides access to NIH Developmental Therapeutics Program (DTP)'s database of molecular screens against 60 cancer cell lines. | Community Grids | Links from www.chembiogrid.org | **See Above |
| PubChem Database Service | Free service provided by the NIH and used by CGL. | Community Grids | Links from www.chembiogrid.org | **See Above |
| PubMed Search Service (in development) | Provides a searchable online database of medical journal articles. | Community Grids | Links from www.chembiogrid.org | **See Above |
| SPRESI Services | Proxies to commercial SPRESI service. SPRESI's database houses molecular and reaction data. | Community Grids | Links from www.chembiogrid.org | **See Above |
| VARUNA Database Service | Database contains molecular structure and more detailed information (such as force fields.) | Community Grids | Links from www.chembiogrid.org | **See Above |
| VOTables Data Tables Web Service | CICC is developing a Web Service based on the National Virtual Observatory's VOTables XML format for tabular data. | Community Grids | Links from www.chembiogrid.org | **See Above |

| Name | Description | Lab | URL | Comments |
|---|--|--------------------------------------|---|--|
| Specific Applications: BCI, OpenEye, Varuna, AutoGEFF | CICC inherits job management services from SERVOGrid) for managing the execution of both commercial and in-house developed high performance computing applications. | Community Grids | Links from www.chembiogrid.org | **These have multiple URLs and may migrate from hosts. The user interface and wiki URLs are thus listed instead. |
| Condor and BirdBath | Examining the use of Condor and its SOAP interface (BirdBath) as a super-scheduler for Varuna applications on the TeraGrid. | Community Grids | Links from www.chembiogrid.org | **See Above |
| ToxTree Service | Wraps an algorithm for estimating toxic hazards in a particular compound. | Community Grids | Links from www.chembiogrid.org | **See Above |
| OSCAR3 Service | Service (based on OSCAR3 application developed by WWMM) to perform text analysis on journal articles to extract chemistry-specific information. | Community Grids | Links from www.chembiogrid.org | **See Above |
| CDK Services | CICC-developed simple services based on Chemistry Development Kit (CDK) - including similarity calculations, molecular descriptor calculations, fingerprint generators, 2D image generators, and 3D coordinate molecular generators. | Community Grids | Links from www.chembiogrid.org | **See Above |
| OpenBabel Service | Service converts between various chemical formats (such as between InChI and SMILES). | Community Grids | Links from www.chembiogrid.org | **See above |
| LifeScienceWeb | Variety of Web services for protein structure analysis | Scientific Data Analysis | http://www.lifescienceweb.org/ | |
| Instrument Middleware Portal | Supports interaction in instrument middleware collaboration | Knowledge Acquisition and Projection | http://www.instrument_middleware.org | Supports approximately ten sites worldwide |