



A Implantación de Fibra Óptica na RECETGA permite Novas Aplicacións de Rede:
Contornos de Trabajo Colaborativo AccessGrid

Fondo Europeo de Desarrollo Regional
 Intemeg III A
 España - Portugal

Direcção-Geral do Desenvolvimento Regional
 Autoridad de Pago

Dirección Gral. de Fondos Comunitarios y Financiación Territorial
 Autoridad de Gestión

UNIVERSIDADE DE VIGO
Universidade do Minho
CESGA
Centro de Computación Gráfica

RECETGA

Rede de Ciencia e Tecnoloxía de Galicia



| CENTROS CONECTADOS A RECETGA | |
|--|--------------|
| Universidade da Coruña | 155 Mbps |
| Campus da Coruña | 155 Mbps |
| Campus de Ferrol | 155 Mbps |
| Universidade de Santiago de Compostela | 2 x 155 Mbps |
| Campus de Santiago | 155 Mbps |
| Campus de Lugo | 155 Mbps |
| Universidade de Vigo | 155 Mbps |
| Campus Vigo | 155 Mbps |
| Campus de Pontevedra | 155 Mbps |
| Campus de Ourense | 34 Mbps |
| Centros Tecnolóxicos e de Investigación | |
| ANFACCO - Vigo | 10 Mbps |
| Aula de Produtos Lácteos | 2 Mbps |
| CEIDA - Centro de Divulgación Ambiental de Galicia | 11 Mbps |
| Centro de Investigacións Forestais de Lourido | 155 Mbps |
| Centro Superior Bibliográfico de Galicia | 155 Mbps |
| Centro de Investigacións Lingüísticas "Ramón Piñeiro" | 155 Mbps |
| Centro de Experimentación en Acuicultura | 64 Kbps |
| Estación de Viticultura e Enoloxía de Leira | 64 Kbps |
| Centro de Culturas Marítimas (Ribadeo) | 64 Kbps |
| Centro de Información e Tecnoloxía Ambiental | 2 Mbps |
| Centro de Investigacións Agrarias de Mabegondo | 2 Mbps |
| Centro de Control de Calidade do Medio Mariño | 155 Mbps |
| Centro de Investigacións Marítimas | 2 Mbps |
| Centro de Supercomputación de Galicia | 422 Mbps |
| Consortio de Bibliotecas Universitarias de Galicia | 155 Mbps |
| Centro Tecnolóxico del Mar (CEIMAR) | 11 Mbps |
| Centro de Innovacións e Servizos en Ferrol | 155 Mbps |
| Fundación Empresa-Universidade de Galicia | 155 Mbps |
| Novo Seminario de Estudos Galegos | 2 Mbps |
| Secretaría Xeral de Investigación e Desenvolvemento | 155 Mbps |
| Hospitais | |
| Complejo Hospitalario "Cristal Piñor" | 64 Mbps |
| Hospital Clínico Universitario de Santiago de Compostela | 155 Mbps |
| Complejo Hospitalario "Xeral-Ces" | 155 Mbps |
| Complejo Hospitalario Universitario "Juan Canalejo" | 155 Mbps |
| Unidade de Investigación do Hospital do Meixoeiro | 155 Mbps |
| IEO | |
| Instituto Español de Oceanografía - A Coruña | 64 Kbps |
| Instituto Español de Oceanografía - Vigo | 128 Mbps |
| CSIC | |
| Misión Biolóxica de Galicia- CSIC | 2 Mbps |
| Instituto de Investigacións Agrobiolóxicas (CSIC) | 10 Mbps |
| Instituto de Investigacións Marítimas (CSIC) | 155 Mbps |
| Instituto de Estudos Galegos "Podre Sornento" | 2 Mbps |
| Delegación do CSIC en Galicia | 64 Kbps |
| Outros Centros | |
| Palacio de Exposicións e Congresos de Galicia | 155 Mbps |
| Parque Tecnolóxico de Galicia | 155 Mbps |
| Autopista Galega da Información (AGI) | 155 Mbps |

Ejemplo de enlace de acceso Radioenlace Monte Bailadora – Campus A Coruña



BAILADORA



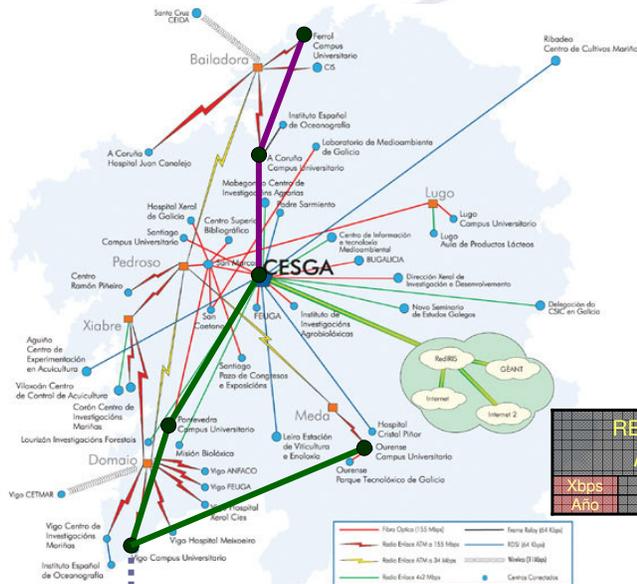
18 Ghz

- Enlace SDH 155 Mbps
- 12 Kilómetros de vano.
- Se aprovechan las torres e instalaciones de la RTVG.
- En el nodo final hay un ASX200 de FORE con una capacidad de conmutación de 2.5 Gbps
- En el usuario se instala un armario y equipamiento que permita conectar otros centros.
- En este caso el IEO Coruña

Campus Coruña



Centros conectados a RECETGA

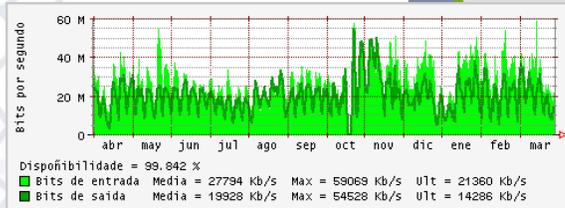


RECETGA EVOLUCIÓN ANCHO DE BANDA

| Xbps | 64 Kbps | 155 Mbps | Nx1 Gbps |
|------|---------|----------|----------|
| Año | 1993 | 1995 | 2003 |

Centros conectados a RECETGA

- Fecha finalización: Antes fin 2005
- Ancho de banda: 1 GB
- Backup ATM
- Soporte nuevas tecnologías: *Mcast*, IPv6, MPLS
- Cambio global: 2.5 – 10 Gb (2007)
- Conexión inter campus



TORGA.NET



AccessGrid



Fondo Europeo de Desarrollo Regional

Interreg III A España - Portugal



Dirección-Geral do Desenvolvemento Regional
Autoridad de Pago



Dirección Gral. de Fondos Comunitarios y Financiación Territorial
Autoridad de Gestión



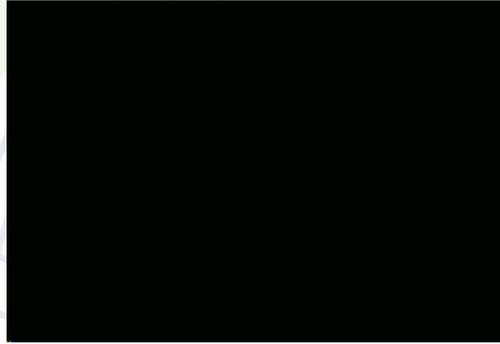
¿Qué es *AccessGrid*?

- Conjunto de recursos hardware y software que incluye:
 - Displays multimedia de gran tamaño
 - Entornos interactivos y de presentación.
 - Interfaces al middleware Grid
 - Interfaces a entornos de visualización.
 - AGAVE (<http://www.evl.uic.edu/cavern/agave/>)
- Se utiliza para:
 - Reuniones con grupos de N participantes
 - Clases
 - Seminarios
 - Charlas
 - Entornos de trabajo colaborativo



Entornos de trabajo colaborativo: *AccessGrid*

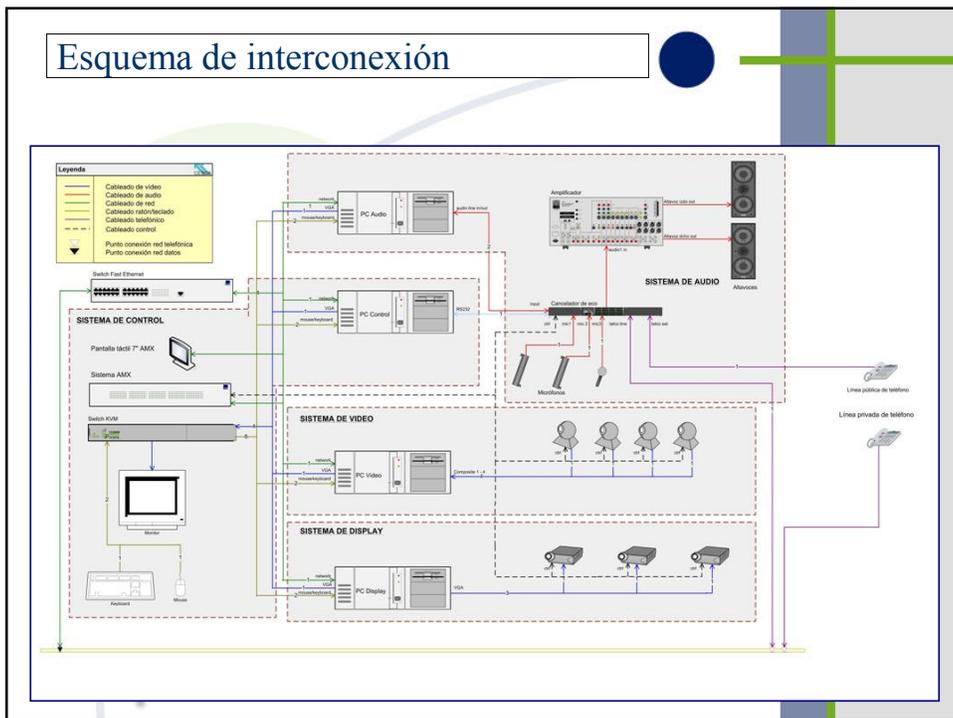
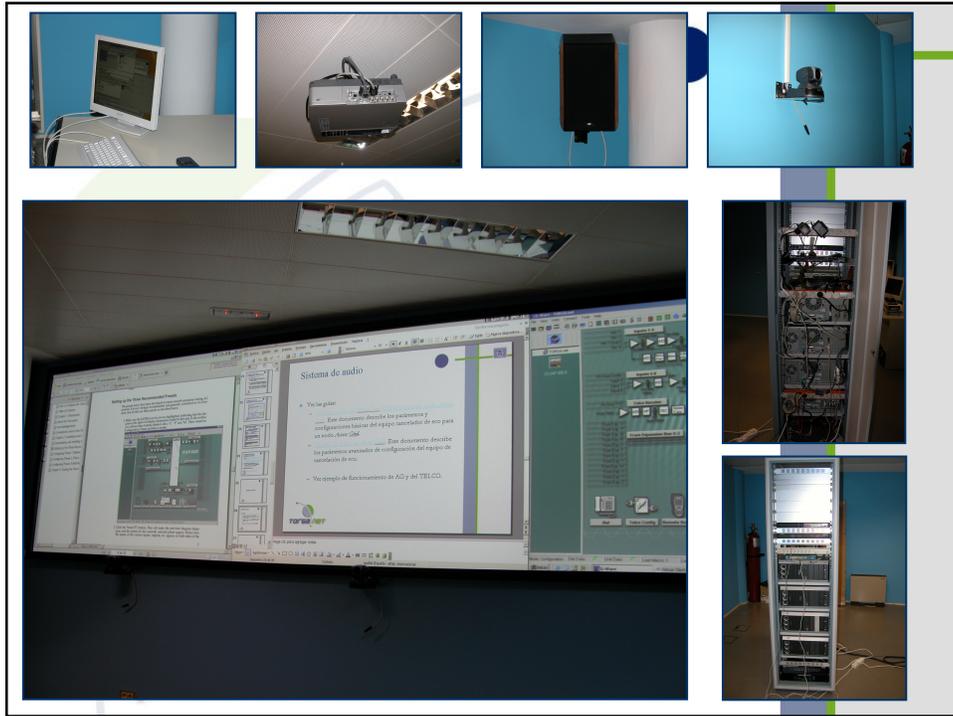
AccessGrid en el ANL



Características

- Protocolos
 - Multicast
 - Video H.261
 - Audio 16Khz
- Nº de flujos
 - 4 per site, típicamente 8 a 40 en una reunión colaborativa
 - Selección, límite
 - Representación de los flujos entrantes
- Ancho de banda
 - 2Mb/s a 10Mb/s
 - Descubrimiento
 - El método de salas virtuales permite la conmutación de direcciones multicast de forma sencilla y dinámica.
- Software colaborativo:
 - DPPT, VNC, Viz software (vtk interactor),





Software

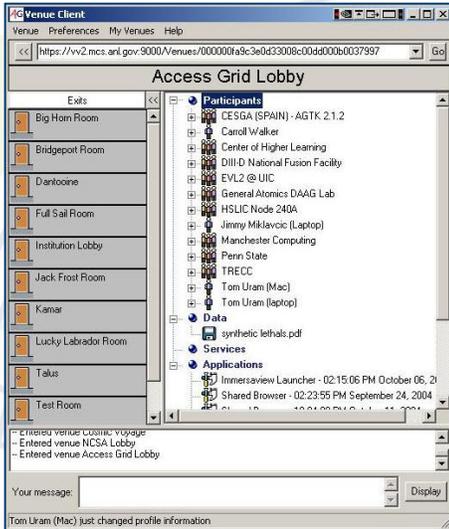
| | | |
|----------------------------|--|---|
| Sistemas Operativos | Windows 2000/XP | |
| | Linux (Gentoo, Slackware, Fedora Core 2, Debian) | |
| | Mac OSX | |
| Herramientas | AGTK 2.3 | AccessGrid Toolkit Implementa "espacios persistentes" Controla los cuatro servidores |
| | Microsoft Office | Power Point Distribuido |
| | Herramientas multimedia | VIC, RAT, VP |
| | Multicast Beacon | Monitorización del estado de la conectividad multicast |
| | Herramientas compartidas | <ul style="list-style-type: none">■ Shared browser■ Shared presentation■ Basic image■ Shared Movie player - Visor de películas compartido■ Rasmol - Visualizador de moléculas■ Shared Question Tool - Gestión de preguntas■ VenueVNC■ InmersaView Launcher |
| | Canal de Texto | Jabber (Cliente PSI) |

Seguridad

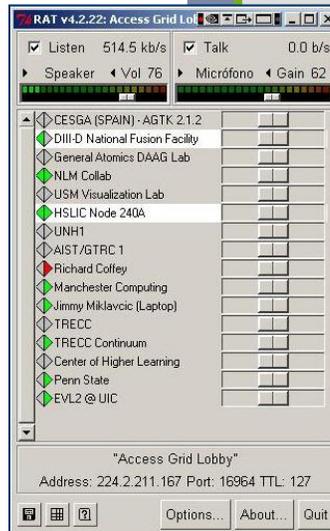
- Implementada mediante certificados
 - Globus
 - CA (Autoridades de certificación)



Software. *AccessGrid* Toolkit



Software. *AccessGrid* Toolkit



Notas sobre la instalación

- **Hardware**

1. Selección de hardware
 - Wiki con algunas configuraciones probadas
 - Consulta ag-tech
 - Hardware no compatible: Ej.: capturadoras no soportadas en Linux
2. Dificultades:
 - Servidor audio y video: Linux
 - * Configuración de las capturadoras de video
 - * Configuración de las tarjetas de sonido

- **Software**

1. Red:
 - Soporte *multicast*
 - » *Multicast Bridges*
 - Sincronización mediante NTP
2. Servidores que es recomendable instalar:
 - Instalación de un servidor *web*
 - Instalación de un *beacon*



Software. Multicast Beacon

Multicast Beacon

Loss Delay Jitter Order Duplicate

Time: Tue Sep 26 10:01:41 CDT 2000

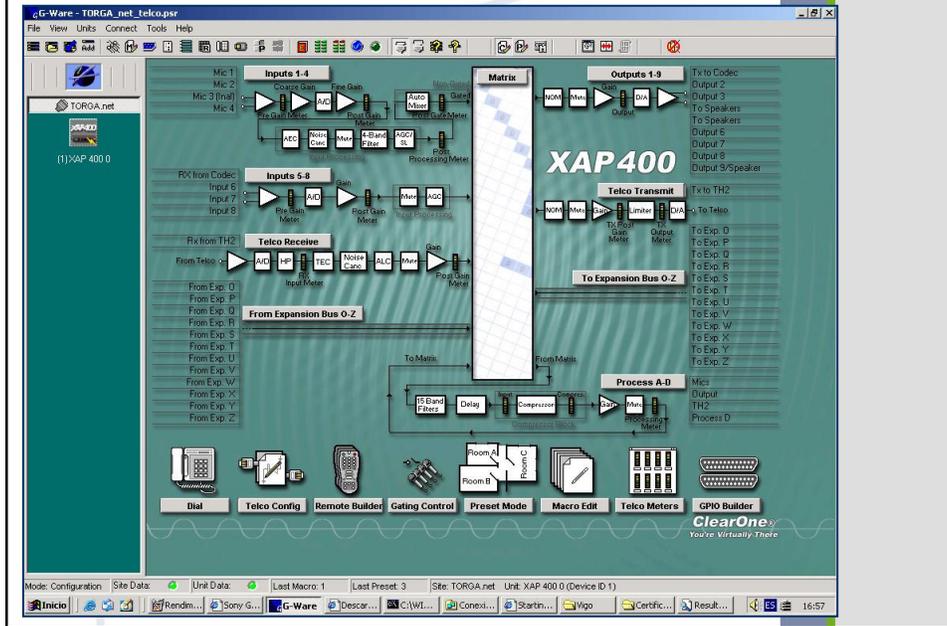
Target: 233.2.171.1:56464

Beacons: 32 [details](#)

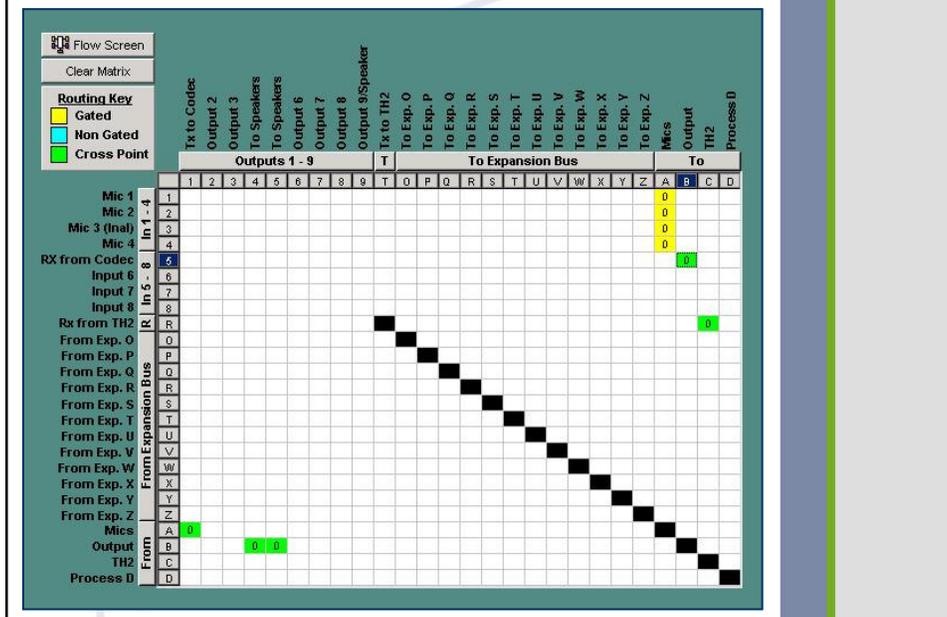
Page: refresh in 60 seconds

| Loss (%) | S0 | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 | S11 | S12 | S13 | S14 | S15 | S16 | S17 | S18 |
|--|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| R0 beacon@203.255.248.241 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R1 beacon@jude.mcs.aml.gov | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R2 beacon@gcode.mcs.aml.gov | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R3 beacon@nem104.unc.aml.gov | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R4 beacon@ns2.jp.apan.net | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R5 beacon@sgaudio.bu.edu | 22 | 0 | 0 | 20 | 20 | 0 | 25 | 0 | 15 | NA | 5 | 2 | NA | 20 | NA | 10 | 2 | 0 | 0 |
| R6 beacon@thorn.es.net | NA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R7 beacon@scotty.es.net | NA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R8 beacon@heaven.cs.fiu.edu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R9 beacon@sgaudio.acl.lanl.gov | NA | 0 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| R10 debaz@wile.lbl.gov | NA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R11 beacon@sgaudio.umet.maine.edu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R12 beacon@audiomai.mhpcc.edu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R13 beacon@video.nnd.msu.ru | NA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R14 beacon@noc.itna.net.it | NA | NA | NA | NA | NA | 0 | NA | NA | 0 | NA | NA | NA | NA | NA | 0 | 0 | 5 | 2 | 0 |
| R15 beacon@pdq.cc.ndsu.nodak.edu | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | NA | 2 | NA | 0 | 0 | 0 | 0 |
| R16 beacon@sgaudio.ndsu.nodak.edu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R17 beacon@sgaudio.osc.edu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R18 beacon@vever.runit.no | NA | 0 | 2 | 0 | 5 | 0 | 2 | 0 | 0 | 0 | NA | 2 | 0 | NA | 5 | NA | 0 | 0 | 0 |
| R19 beacon@physics.engr.sc.edu | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| R20 beacon@ng-video.adfc.edu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R21 beacon@beacon.ag.uair.edu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R22 beacon@rum.asci.uchicago.edu | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| R23 beacon@glacier.evl.uic.edu | 0 | NA | 0 | NA | NA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R24 beacon@ng-access-video.ncsa.uiuc.edu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R25 beacon@ng-5239-video.ncsa.uiuc.edu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R26 beacon@fox2-ng-video.ncsa.uiuc.edu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R27 beacon@cube.cso.uiuc.edu | 99 | 0 | 0 | 0 | 99 | 0 | 0 | 99 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 99 | 0 | 99 |
| R28 beacon@vrm.cc.ukans.edu | NA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R29 beacon@blackwidow.engr.ukans.edu | NA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R30 beacon@video.ccs.uky.edu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| R31 utah-beacon@avtrvo.cs.utah.edu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Software. Gware



Software. Gware



Software. Gware

The screenshot displays two windows from the software interface. The top window, titled "Outputs 1-9 - XAP 400 0 (Device ID 1)", shows a signal flow diagram with a "From Matrix" input, a "Mute" button, a "Gain" knob, a "D/A" converter, and an "Output" meter. Below this are eight output channels: "Tx to Codec", "Output 2", "Output 3", "To Speakers", "Output 6", "Output 7", "Output 8", and "Output 9/Speaker". Each channel includes a "Mute" button, a "Gain" knob, and a "Level" meter. The bottom window, titled "Inputs 1-4 - XAP 400 0 (Device ID 1)", shows four microphone input channels (Mic 1 to Mic 4). Each channel has a "Mute" button, "AGC/SL" and "P Pwr" meters, "AEC" and "NC" checkboxes, "Filters" and "Gate" buttons, and a "Gain" knob. Below the gain knob are "Pre Gain" and "Post Gain" meters. The interface also includes a "Data" indicator and a "Close" button.

Software. Gware

The screenshot displays two windows from the software interface. The top window, titled "Processing - XAP 400 0 (Device ID 1)", shows a signal flow diagram with a "From Matrix" input, a "15 Band Filters" block, a "Delay" knob, an "Input" knob, a "Compressor" knob, a "Gain" knob, a "Mute" button, and a "Processing Meter" leading to a "To Matrix" output. Below this are four processing channels: "Mics", "Output", "TH2", and "Process D". Each channel includes a "Mute" button, "Filters" and "Delay" knobs, and "Gain" and "Process" meters. The bottom window, titled "Dial - XAP 400 0 (Device ID 1)", features a "Connect" and "Disconnect" button, a numeric keypad (1-9, *, 0, #), an "In-Block Dialing" section with "Dial" and "View Last #", a "Speed Dial" section with a dropdown menu and "Dial" and "Edit" buttons, and a "Re-Null" and "Hook Flash" section with "Mute Transmit" and "Mute Receive" buttons. The interface also includes a "Data" indicator and a "Close" button.



Software. NCSA Scheduler

AG

SCHEDULE

Global Mode

Timezone: BuenosAires

Home | View Calendar | Schedule a Meeting | AG Directory | Tour | Register
Timezone: BuenosAires
---> Login

Today: 6/16/2004

Schedule for Today

| Month | Day | Time | Event |
|-------------|-----|---------|-------|
| June 2004 | Su | 7:00AM | |
| June 2004 | Mo | 7:30AM | |
| June 2004 | Tu | 8:00AM | |
| June 2004 | We | 8:30AM | |
| June 2004 | Th | 9:00AM | |
| June 2004 | Fr | 9:00AM | |
| June 2004 | Sa | 9:30AM | |
| July 2004 | Su | 10:00AM | |
| July 2004 | Mo | 10:00AM | |
| July 2004 | Tu | 11:00AM | |
| July 2004 | We | 11:30AM | |
| July 2004 | Th | 12:00PM | |
| July 2004 | Fr | 12:00PM | |
| July 2004 | Sa | 1:00PM | |
| August 2004 | Su | 1:00PM | |
| August 2004 | Mo | 1:30PM | |
| August 2004 | Tu | 2:00PM | |
| August 2004 | We | 2:30PM | |
| August 2004 | Th | 3:00PM | |
| August 2004 | Fr | 3:30PM | |
| August 2004 | Sa | 4:00PM | |
| August 2004 | Su | 4:30PM | |
| August 2004 | Mo | 5:00PM | |
| August 2004 | Tu | 5:30PM | |
| August 2004 | We | 6:00PM | |
| August 2004 | Th | 6:30PM | |
| August 2004 | Fr | 7:00PM | |
| August 2004 | Sa | 7:30PM | |
| August 2004 | Su | 8:00PM | |
| August 2004 | Mo | 8:30PM | |
| August 2004 | Tu | 9:00PM | |
| August 2004 | We | 9:30PM | |
| August 2004 | Th | 10:00PM | |
| August 2004 | Fr | 10:30PM | |
| August 2004 | Sa | 10:30PM | |
| August 2004 | Su | 10:30PM | |

Legend:

X - There is a meeting scheduled on this day

X - Current Date

ACCESS GRID

Software. NCSA Scheduler

AG

SCHEDULE

Global Mode

Timezone: BuenosAires

Home | View Calendar | Schedule a Meeting | AG Directory | Tour | Register
Timezone: BuenosAires
---> Login

Today: 10/26/2004

sc global test cruise

| Month | Day | Time | Event |
|---------------|-----|---------|-------|
| October 2004 | Su | 7:00AM | |
| October 2004 | Mo | 7:30AM | |
| October 2004 | Tu | 8:00AM | |
| October 2004 | We | 8:30AM | |
| October 2004 | Th | 9:00AM | |
| October 2004 | Fr | 9:00AM | |
| October 2004 | Sa | 9:30AM | |
| November 2004 | Su | 10:00AM | |
| November 2004 | Mo | 10:00AM | |
| November 2004 | Tu | 11:00AM | |
| November 2004 | We | 11:30AM | |
| November 2004 | Th | 12:00PM | |
| November 2004 | Fr | 12:00PM | |
| November 2004 | Sa | 1:00PM | |
| December 2004 | Su | 1:00PM | |
| December 2004 | Mo | 1:30PM | |
| December 2004 | Tu | 2:00PM | |
| December 2004 | We | 2:30PM | |
| December 2004 | Th | 3:00PM | |
| December 2004 | Fr | 3:30PM | |
| December 2004 | Sa | 4:00PM | |
| December 2004 | Su | 4:30PM | |
| December 2004 | Mo | 5:00PM | |
| December 2004 | Tu | 5:30PM | |
| December 2004 | We | 6:00PM | |
| December 2004 | Th | 6:30PM | |
| December 2004 | Fr | 7:00PM | |
| December 2004 | Sa | 7:30PM | |
| December 2004 | Su | 8:00PM | |
| December 2004 | Mo | 8:30PM | |
| December 2004 | Tu | 9:00PM | |
| December 2004 | We | 9:30PM | |
| December 2004 | Th | 10:00PM | |
| December 2004 | Fr | 10:30PM | |
| December 2004 | Sa | 10:30PM | |
| December 2004 | Su | 10:30PM | |

Legend:

X - There is a meeting scheduled on this day

X - Current Date

ACCESS GRID

sc global test cruise

General Information

When: **Thursday, October 28, 2004**
11:00PM - 12:00AM Local (UTC +2:00)
 10/28/2004 2100-2200 UTC

Local Reservations: [Login now to see local reservation](#)

Details: Final Pre-pittsburgh test cruise

Creator: **Ivan Judson**

Attendees:

- This meeting has an open invitation for all sites to participate.
- **Argonne National Laboratory** - Library (Building 221, Room D118)
- **Argonne National Laboratory** - Library (Building 221, Room D118)
- **Australian National University** - Local Reservation Unconfirmed
- **Boeing Phantom Works** - Local Reservation Unconfirmed
- **Boston University** - B17 (AG Conference Facility)
- **Florida A&M University** - Local Reservation Unconfirmed
- **Florida International University** - Local Reservation Unconfirmed
- **inSORS Communications** - Local Reservation Unconfirmed
- **Internet 2** - Local Reservation Unconfirmed
- **Los Alamos National Laboratory** - Local Reservation Unconfirmed
- **Nat'l Institute of Adv. Industrial Science and Technology (AIST)** - Local Reservation Unconfirmed
- **NCSA** - Local Reservation Unconfirmed
- **Purdue University** - Local Reservation Unconfirmed
- **U of Manchester (CSAR)** - Local Reservation Unconfirmed
- **Virginia Tech** - RB14 - 104
- **Worcester Polytechnic Institute** - Local Reservation Unconfirmed

Technical Information

Venue: SCGlobal Test Room
 Link to venue becomes active 2 hours before starting time.
 Link Open: 9:00PM - 12:30AM
 (1900 - 2230 UTC)

AG2 Venues are available at: <https://venues.ncsa.uiuc.edu:9000/Venues/default>

[\[Check Permissions\]](#)

Beacon Status: [Click Here](#)

AccessGrid en el CESGA

- SC Global 2004: <http://www.sc-conference.org/sc2004/scglobal.html>
- SC Global 2003: <http://www.sc-conference.org/sc2003/global.html>

| Events | | | | | | |
|--------|---------------------------|------------|----------|---------|-------|-----------------------------------|
| Date | Event Type | Start Time | End Time | Rm # | Chair | Main Title/Event |
| 11/09 | SC Global Showcase | 10:30AM | 12:00PM | 403-405 | | SC Global Keynote |
| 11/09 | SC Global Showcase | 01:30PM | 03:00PM | 403-405 | | Collaborative Tools |
| 11/09 | SC Global Showcase | 03:30PM | 05:00PM | 403-405 | | Virtual Reality |
| 11/10 | SC Global Showcase, Panel | 10:30AM | 12:00PM | 403-405 | | MSI Consortium Panel |
| 11/10 | SC Global Showcase | 01:30PM | 03:00PM | 403-405 | | Low & High Bandwidth Environments |
| 11/10 | SC Global Showcase | 03:30PM | 05:00PM | 403-405 | | SC2004 Technology |
| 11/11 | SC Global Showcase | 10:30AM | 12:00PM | 403-405 | | Expanding Uses of AG |
| 11/11 | SC Global Showcase | 03:30PM | 05:00PM | 403-405 | | Artistic/Cultural Applications |



ESGA

Eventos: SC Global

Interface Speed: 1 gbit/s
 In: 8152/360, Avg In: 8152/360, Max In: 8152/360, Min In: 8152/360, Last In: 8152/360, 432015.00
 Out: 8152/360, Avg Out: 8152/360, Max Out: 8152/360, Min Out: 8152/360, Last Out: 8152/360, 3768111.00

AccessGrid en el CESGA

- Asistencia a eventos: Otras reuniones



Eventos: *Inauguración*



Eventos: *Doctorado Endocrinología*

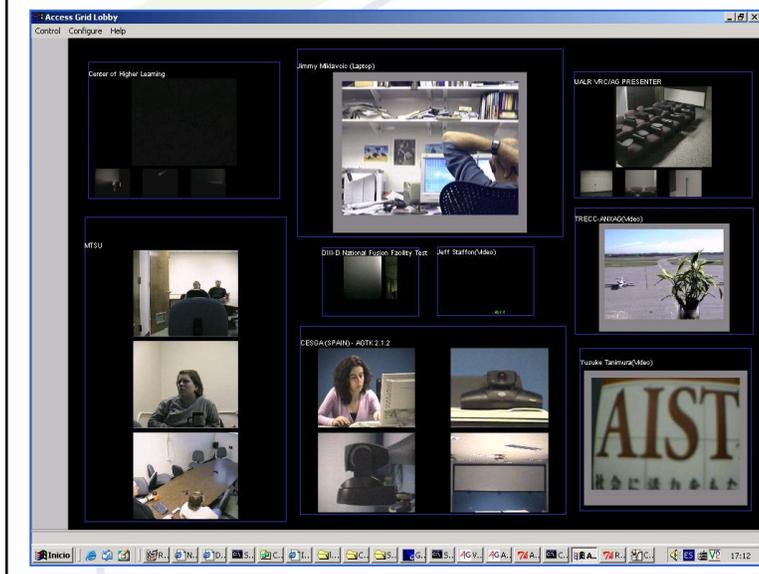
PIG vs. Nodo AG

- Única diferencia: número de servidores
 - PIG = *Personal Interface to the access Grid*
 - NODO = Generalmente más de un servidor AG.



Líneas futuras

- Mejora de las capacidades de video: VP 0.8, nuevos *codecs*



Líneas futuras

- Migración a la nueva versión AGTK
 - Mayor estabilidad
 - Desarrollo actual basado en AGTK 2.3
- Prueba de nuevas funcionalidades
 - Nuevas funcionalidades de software compartido
 - VenueVNC
 - SharedQuestionTool
 - AGPager
 - Nuevos servicios de nodo
 - Productor y consumidor MPEG4
 - Beacon



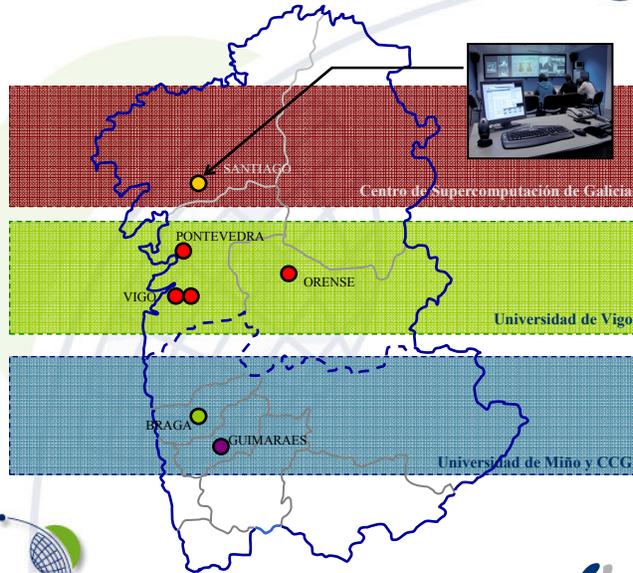
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AccessGrid en la Euroregión



- Sala Access Grid del CCG
- Sala Access Grid de la Universidad de Miño
- Salas Access Grid de la Universidad de Vigo
- Sala Access Grid del CESGA



Conclusiones. Desventajas

- Multimedia
 - Complejidad en audio para elevado número de *sites*
- Software
 - Dependencia actual de grupos de desarrollo
 - La versión actual proporciona la funcionalidad necesaria
 - Actualizaciones continuas
 - Aplicaciones compartidas: funcionalidad limitada (dpt)
- Operador
 - Necesidad de un operador
 - Período de entrenamiento de un operador
- Red
 - Multicast
 - No está globalmente extendido
 - Existencia de puentes
 - Gran consumo de BW



Conclusiones. Ventajas

- **Multimedia**
 - Gran calidad
 - Audio: Muy buena (Codificación, Equipamiento – ruido y eco, operador responsable)
 - Video: Suficiente y sujeta a actualizaciones inmediatas)
 - Sensación de presencialidad
 - **Software**
 - En continua evolución
 - Código fuente disponible
 - API para el desarrollo de aplicaciones compartidas
 - **Red**
 - Aporta las ventajas del *multicast*
 - **Otros**
 - Gran número de sites
 - Ej: Townhall, SC Global).
 - Videoconferencia tradicional: requiere MCU
 - No sólo videoconferencia: es un entorno de trabajo colaborativo
 - Aplicaciones compartidas
 - Otras: VNC
- Posibilidad de PIG

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Referencias

- URL del proyecto *Access Grid* impulsado por ANL:
 - <http://www.accessgrid.org>
- URL del proyecto de documentación de *Access Grid*:
 - <http://www.accessgrid.org/agdp/>
- Cursos gratuitos AG– in-a-Box (**importante el registro**):
 - <http://webct.ncsa.uiuc.edu:8900/public/AGIB/>
- Agenda de eventos AG (**importante el registro**):
 - <http://agschedule.ncsa.uiuc.edu/>
- Asia Pacific Access Grid:
 - <http://www.ap-accessgrid.org/>
- European Access Grid:
 - <http://euroag.accessgrid.org/>

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¡Gracias!



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