



EQUIP: An Extensible Platform for Distributed Collaboration

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History

- MASSIVE-1
 - Spatially managed interaction
 - Tele-conferencing (ITW)
- MASSIVE-2
 - Multicast and scalability
 - Inhabited TV (Poetry, OOTW), MR Boundaries
- MASSIVE-3
 - Flexibility, consistency, record and replay
 - Inhabited TV (Avatar Farm), temporal links, interfaces (Augurscope, Table, DOME)



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Context

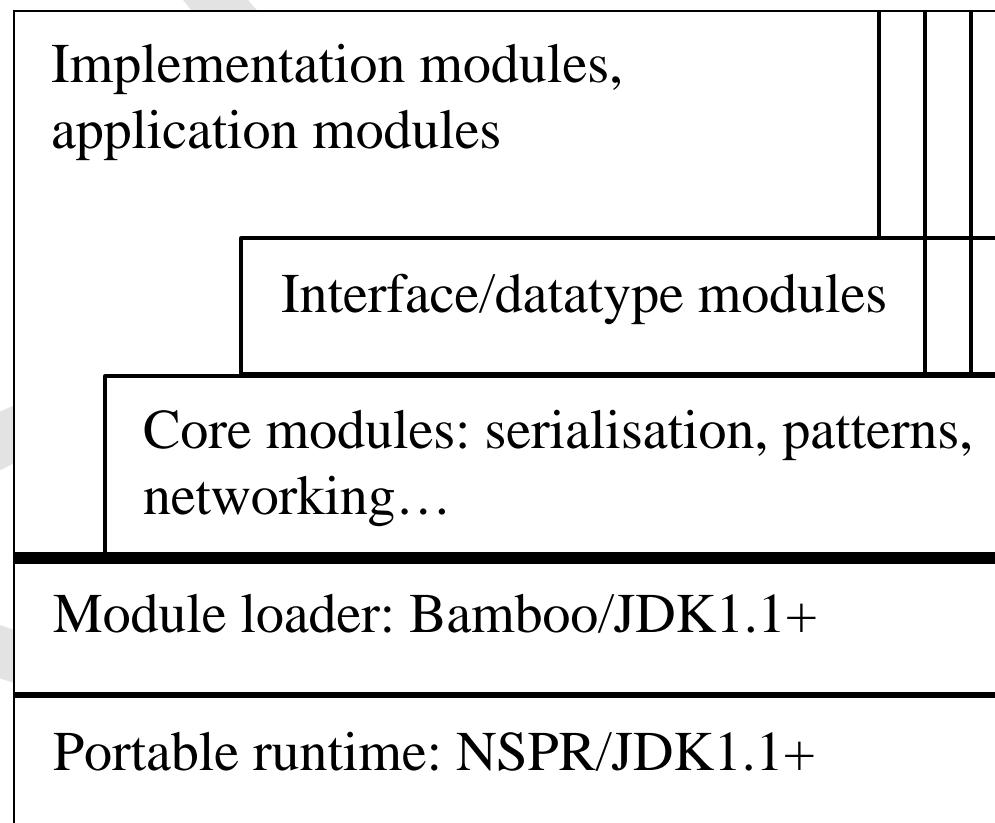
- EQUATOR IRC
 - UK EPSRC-funded, 6 years (~2 years in), 8 Universities, £10M.
 - “Exploring the boundary between the physical and the digital”
 - Infrastructure, interfaces and devices, interaction
 - Non-work applications (home, tourism, play and learning, art and performance)
 - New e-Science sub-projects (30 months, ~3 months in)
 - Environmental, and medical sensing



Driving Requirements

- Application and device diversity
 - From 3D CVE in a ReaCTor/RealityCentre...
 - ...to text on a PDA
- Dual language (C++ and Java)
- Extensibility and modularity
 - New data types, modules, dynamic code loading
- Distributed system support
 - For synchronous collaboration, and distributed interfaces (tuple space meets CVE)

EQUIP runtime structure

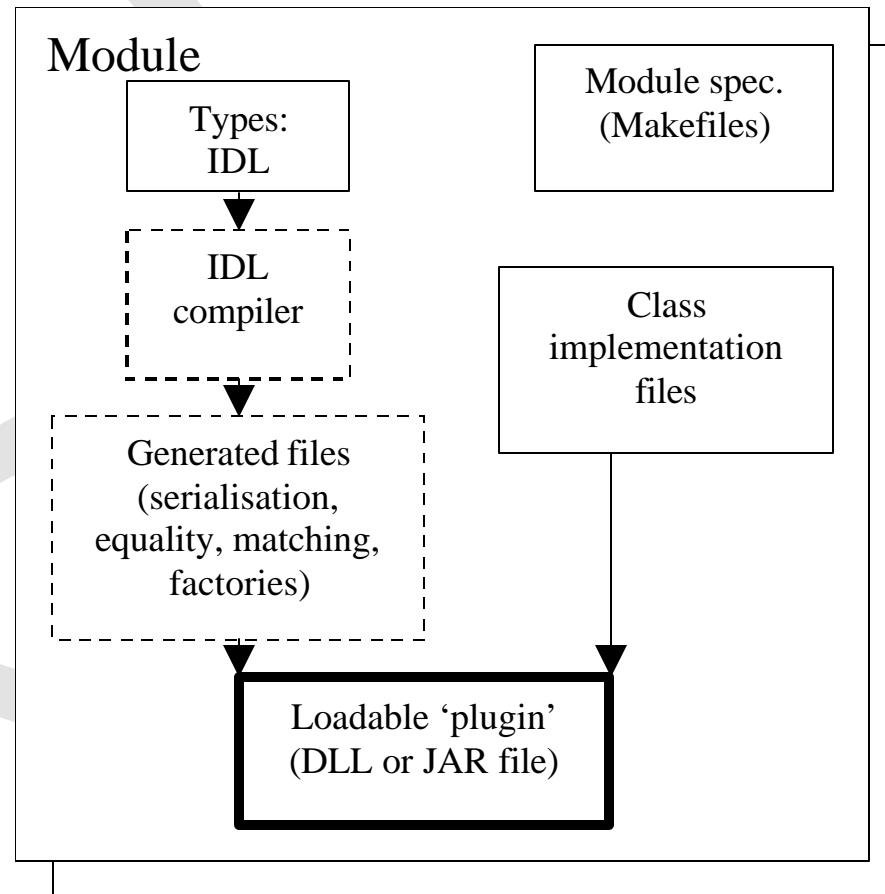




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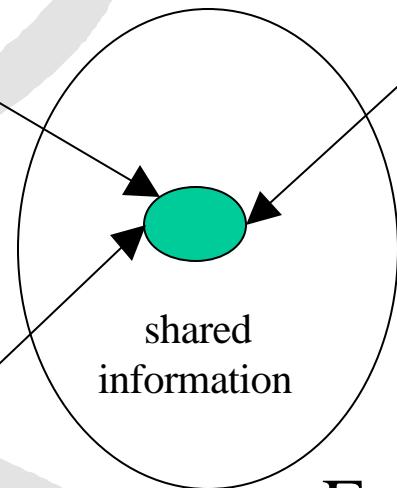
EQUIP module structure





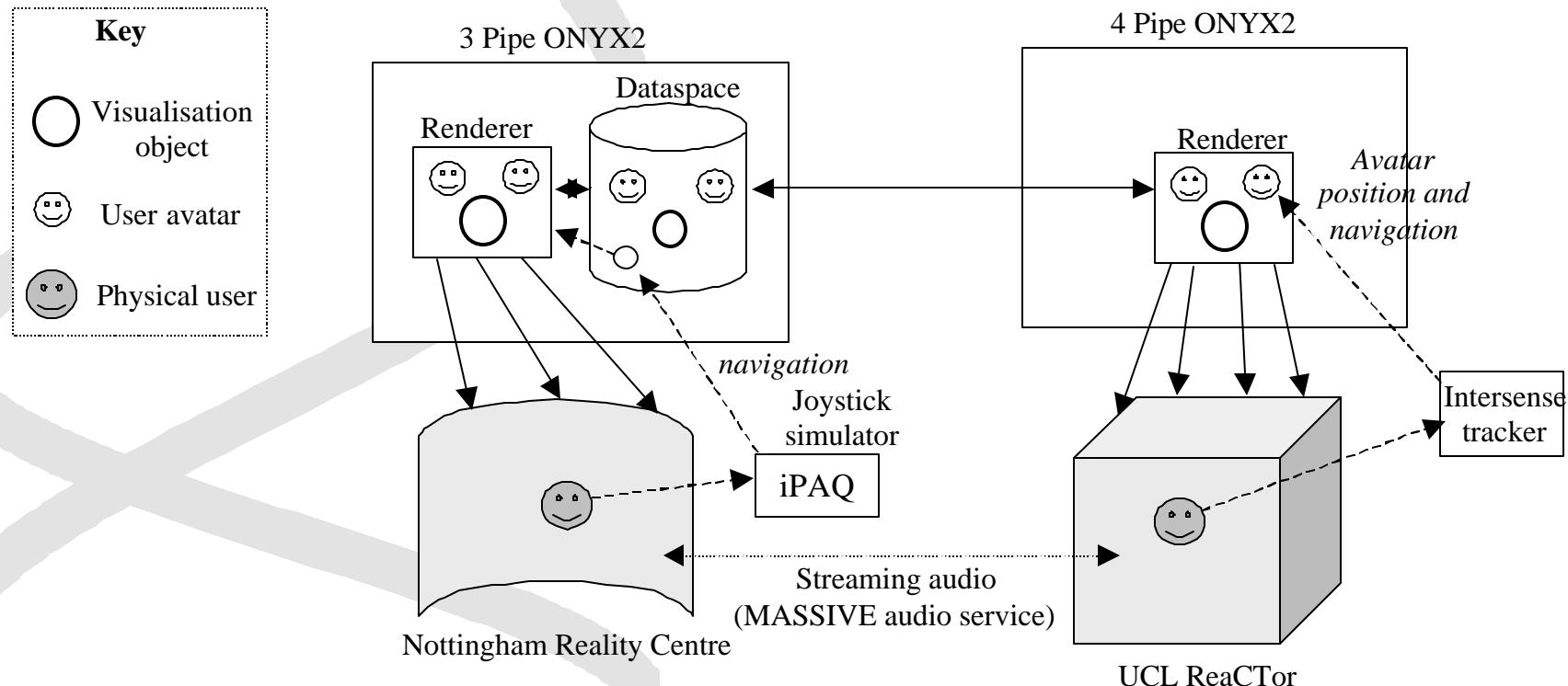
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EQUIP dataspaces

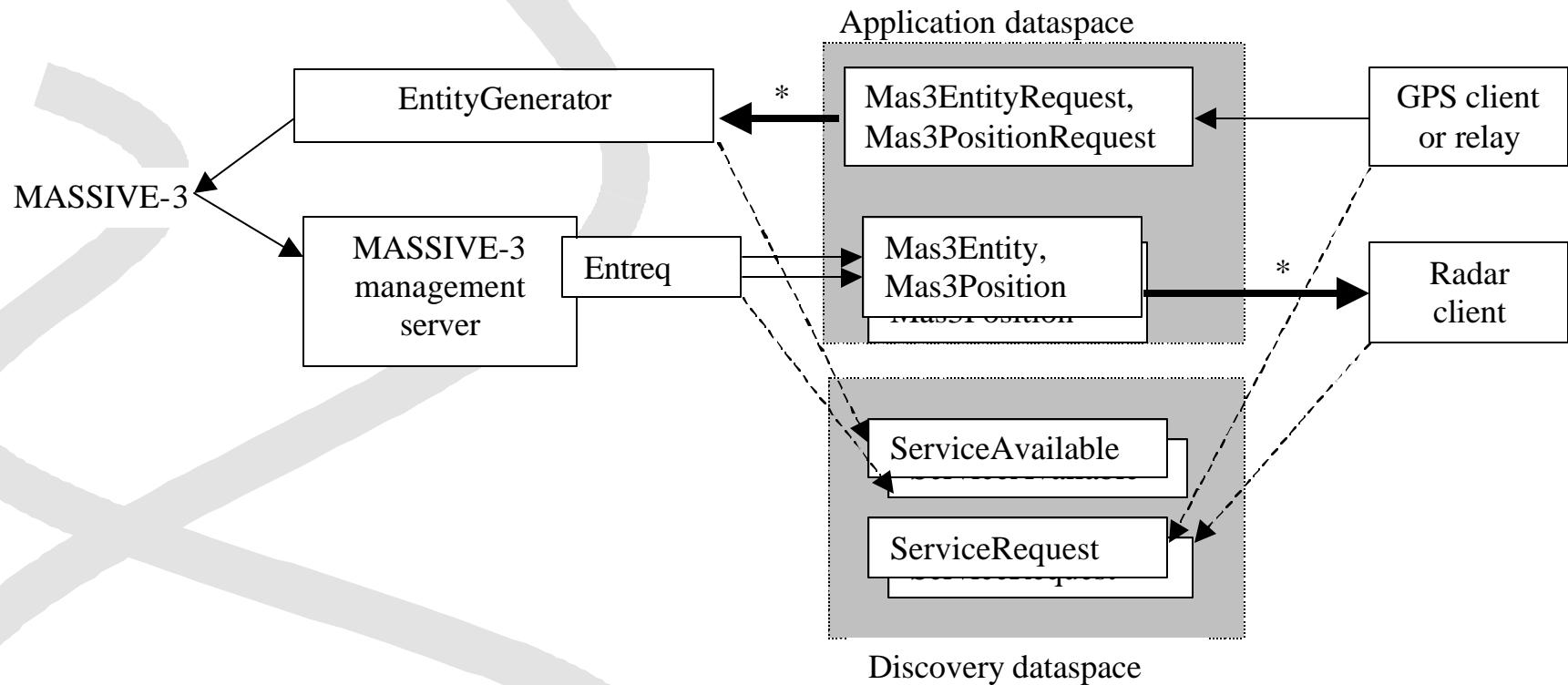


Equip Dataspace

EQUIP dataspace example (i)



EQUIP dataspace example (ii)





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Current driving applications

- CityWide performance:
 - wireless handheld devices, embedded/ambient interfaces and on-line collaboration
- City: visiting/tourism/co-visiting
- Antarctic and urban environmental:
 - remote sensing; visualisation, modelling...?
- myGrid??
 - bioinformatics, SemanticWeb, OGSA, UIs...



Open issues

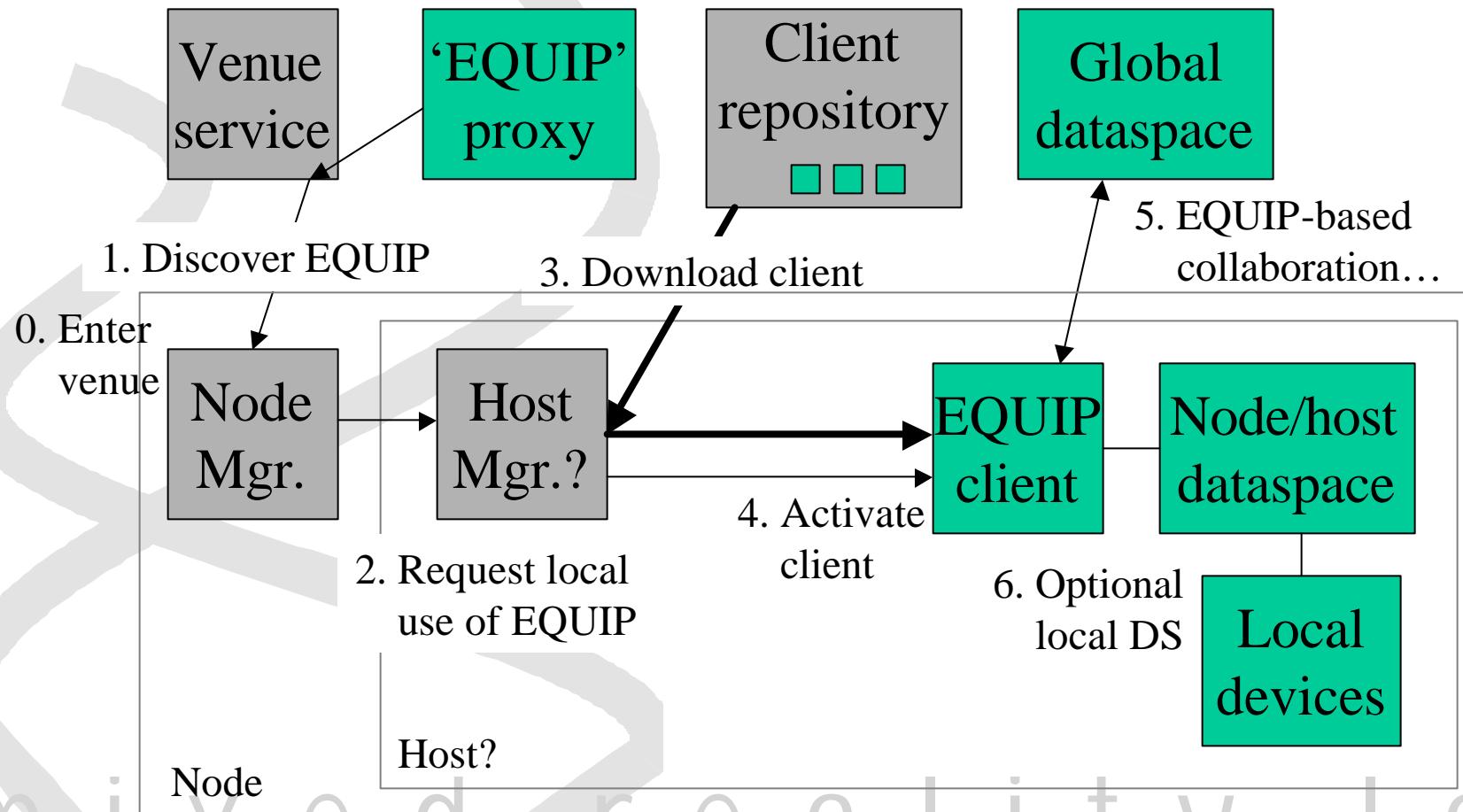
- Ease of use: compilation, debugging, configuration, deployment, management
- Persistence, history, security, service discovery, ...
- Visualisation and rendering integration?
- Generic collaboration??
 - AG? (see next), GRID?, myGrid?
- GRID/Globus/OGSA compliance and interworking?

Virtual AG Node?

- Virtual world with embedded audio/video...?
- See also Mixed Reality Boundaries



E.g. AG possibilities





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Links

- <http://www.equator.ac.uk/>
 - <http://www.equator.ac.uk/technology/equip>
 - CVS
`:pserver:anonymous@
delirium.cs.nott.ac.uk:/mrl/src/cvsroot`