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Deliverable DN2.0.5,2: GÉANT2 Web Content and Functionality Development



Deliverable DN2.0.5,2

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Abstract

This document serves as notification of the development of the content and functionality of the GÉANT2 websites during Year 3. The sites contain publicly available content describing the activities funded under the GN2 contract, and password-protected internal project documents.

Table of Contents

0	Executive Summary	iv
1	Aims and Approach	1
2	Target Audiences	2
2.1	Policy Makers	2
2.1.1	Achievements	2
2.1.2	Deliverables	2
2.2	NRENs	3
2.2.1	Services Information	3
2.2.2	CERT “Portal”	4
2.2.3	perfsonar.net	4
2.2.4	Training Support	4
2.2.5	Technical Workshops	4
2.2.6	Year 4 Planning Support	5
2.2.7	Wiki Support	5
2.3	User Community	5
2.3.1	Learn About GÉANT2	5
2.3.2	eInfrastructures Working Group	5
2.4	Press	6
2.4.1	Video Content	6
2.4.2	Improved Profile of Topology	6
3	Functionality Developments	7
3.1	Search Improvements and Optimisation	7
3.2	.eu Domain Registration and Configuration	7
3.3	Progress Towards Single Sign-on	8
4	Conclusions	9
Appendix A	Site Maps	10

A.1	www.geant2.net	10
A.2	intranet.geant2.net	12
Appendix B	Usage Statistics	15
B.1	Top Ten Search Terms, Downloads and Pages	15
B.2	Homepage Views	16
B.3	Site Visitors	17
B.4	Video Downloads and Pageviews	18

Table of Figures

Table B.1: Top ten search terms and downloads, July 2006 – June 2007	15
Figure B.1: Homepage views, by month, July 2006 – June 2007	16
Figure B.2: Unique site visitors (showing repeat visitors), by month, June 2006 - June 2007	17
Figure B.3: Downloads and page views of video files, by month, June 2006 – June 2007	18

0 Executive Summary

Over the reporting period, content on the GÉANT2 websites has continued to expand and to evolve to reflect the needs of its target audiences, and the achievements and priorities of the project, for example, expanding the Achievements section of the site to reflect the project's successes in its first years, adding a dedicated Services section covering network services and reflecting continuing activity in the User area.

Functionality has also developed to improve the user experience for site visitors, most notably including enhancements to the search facility, and progress towards single sign-on for registered visitors.

The websites are making more use of new multimedia technologies, especially video, to communicate the project's key messages. The steady increase in site visitors, and more significant increase in repeat visitors, reflects their success in doing so.

1 Aims and Approach

The overall objective of the public GÉANT2 website continues to be to make the benefits and achievements of the GÉANT2 project known to relevant target groups. These include those interested in research networking, (particularly users and potential users in the research and education environment), NRENs, and policy makers and politicians.. This deliverable refers primarily to content and functionality on the public website, except where otherwise specified.

The aim of providing a central secure access point for project-related information, while promoting the project's achievements to internal audiences, continues to be met by the combination of the GÉANT2 intranet and the new GÉANT2 wiki sites. The password-protected project intranet provides a repository and access point for project-related information, for use by the project partners. It also contains sections which are made available to the European Commission and the project reviewers.

The operating and hosting arrangements for the main sites have remained the same for the period under review.

Both GÉANT2 websites have been developed extensively during the period under review, with additional sections added to most areas of the site (for a full site map with new sections highlighted in blue, see Appendix B). The sites continue to be hosted by DANTE, and are distinguished from one another by use of different colour schemes.

2 Target Audiences

The core target audiences remain the same, including policy makers at national and EU levels, NRENs, the user community, and the media. The websites provide information for all these groups, but are particularly aimed at several high-priority segments.

2.1 Policy Makers

The public site's content is written with the interested policy maker in mind, and thus in its entirety provides a valuable resource for policy makers to consult if they wish to know more about the project's activities. Content work in recent months particularly relevant to policy makers has focused on improving the reflection of all the project has achieved thus far, by expanding the Achievements section of the site to describe the transition to service of many of GÉANT2's research activities, and to improve the profile of the project's numerous Deliverables.

2.1.1 Achievements

The Achievements section (<http://www.geant2.net/server/show/nav.737>) has been successfully developed from a brief re-statement of the project's key objectives as envisaged at the start of the project, to a celebration of its significant achievements. Reflecting the success of the project's joint research activities, the Achievements area of the site now features a dedicated section on Transition to Service, outlining the successful introduction of the products of several joint research activities into production service on the network. This section also covers the continuing expansion and upgrading of international links to other countries and regions outside Europe.

2.1.2 Deliverables

The large number of Deliverables now published by the project is testament to all it has achieved over its three years. At the start of Year 3, only a small number of Deliverables were available to the general public. As the project has progressed, the number of Deliverables has grown accordingly, with nearly 40 public deliverables published during Year 3 (nearly as many as were published in the previous two years). As a result, as well as

Project:	GN2
Deliverable Number:	DN2.0.5.2
Date of Issue:	27/07/07
EC Contract No.:	511082
Document Code:	GN2-07-202v2

containing a single, “flat”, listing of Deliverables at GÉANT2 Home > Media Centre > Document Library > Deliverables, the site now also offers lists of Deliverables sorted by activity.

Each activity’s deliverables are also presented in a dedicated category alongside the main page (in the Research section of the site) that provides an overview of the activity’s achievements to date and plans for future development.

2.2 NRENS

The development of public content targeted at NRENS has included:

- Enhanced and expanded services information
- A CERT ‘portal’ page
- A dedicated website for perfSONAR, the measurement and monitoring framework produced by JRA1
- Training information.

In addition, significant additions have been made to the intranet, including:

- Technical Workshops area
- Year 4 Planning support
- Wiki sites

2.2.1 Services Information

One of the most significant developments on the public site in the last year has been the expansion of information on network services, reflecting the project’s progress towards full service in many activities. At launch, the GÉANT2 site contained basic information on the plans for network services. This has now been developed and expanded into a dedicated, primary section of the website, entitled ‘Services’, and containing more complete information on:

- IPv6
- MPLS
- Point-to-point services
- Multicast (including technical implementation and IPv6 multicast)
- Multi-domain Monitoring
- PERT
- Quality of Service (covering Best Effort, Less Than Best Effort and QoS tools)
- Premium IP (incorporating the AMPS system and detailed implementation information)
- VPN
- Testbed
- Security
- Training

It is envisaged that this section will continue to develop as the project's service portfolio expands.

2.2.2 CERT "Portal"

In support of the Security joint research activity (JRA2), a CERT "portal" page (<http://www.geant2.net/cert>) was created in the Services section. This page provides information on the CERTs currently active in affiliation with GÉANT2, including links, where available, to the NREN CERT's homepage and to contact information.

2.2.3 perfsonar.net

JRA1's monitoring framework, perfSONAR, has continued to develop in collaboration with the project's collaborators in the USA. To reflect this productive international co-operation, an independent site was developed for perfSONAR, hosted by Internet2 at www.perfsonar.net. The initial structure and content were developed primarily by GÉANT2, with input from its collaborators. During the second half of Year 3, technical arrangements have been implemented to allow DANTE staff direct access to edit the site's pages and contribute more actively to its development.

2.2.4 Training Support

With the introduction of NA8 (Knowledge Transfer), sections on both the public (<http://www.geant2.net/server/show/nav.1938>) and intranet sites have been developed to advertise the project's training function, to present forthcoming course dates, to provide easy access to course materials and to provide some background to the purposes and objectives of training work within the project.

2.2.5 Technical Workshops

The project intranet has once again supported the Workshops in Year 3 through the provision of logistics and programme information, individual session agendas, and all workshop presentations (GEANT2 Intranet > Management > Technical Workshops). In addition, online registration facilities and feedback systems were offered. DANTE has also sought to respond to feedback from previous events to continually improve the website support offered to the Workshops.

For January 2007, an online credit-card payment system for the Workshops was piloted. It was decided not to continue with this in June 2007, as many NRENs expressed a strong preference for invoicing for all attendees rather than managing ad-hoc payments.

Significant improvements have also been made to the presentation of information from the Workshops. All presentations from the June 2007 workshops were online within a week of the Workshops' end, and most were posted during the week itself. Presentations, video and other materials from previous workshops have also

been reorganised in order to streamline and rationalise access, and are now presented in a single 'Previous Workshops' section, linked in to the workshop programme and session agendas.

2.2.6 Year 4 Planning Support

As the project's approach to project planning has become more formal, technical developments have been discussed in structured planning workshops. The intranet has supported these activities through the provision of logistics information, and by hosting presentations and other documents produced as outputs of the planning meetings.

2.2.7 Wiki Support

As well as the formal repository of internal documents supported by the intranet, GÉANT2 has sought to provide collaborative working support in the form of private wiki sites for each activity (<http://wiki.geant2.net>). Access to these sites is controlled through the same authorisation database as is used for the main websites, so a single username and password provides access to all web facilities

2.3 User Community

Users continue to be a key focus for the dissemination activity. As well as continuing to update the development of the network services offered to the "case study" users showcased in the site's 'Who Uses GÉANT2?' section, DANTE has added important additional features to the website.

2.3.1 Learn About GÉANT2

The interactive network demonstration produced by NA3 during Year 2 has proved immensely popular, and has been widely distributed at the events at which GÉANT2 has been represented. In order to increase its exposure, the demonstration has also been placed online in the Users section of the website. This has been enabled by its development approach: because the demonstration was developed on Adobe's Flash platform, it has been possible to provide the entire demonstration as a downloadable file on the website.

2.3.2 eInfrastructures Working Group

During Years 2 and 3, the eInfrastructures Concertation initiative established by the European Commission has developed further into a formal eInfrastructures Working Group. GÉANT2 has taken a leading role in the progression of this activity, and as such the information on the website has been expanded accordingly.

Project:	GN2
Deliverable Number:	DN2.0.5.2
Date of Issue:	27/07/07
EC Contract No.:	511082
Document Code:	GN2-07-202v2

2.4 Press

Media activity in the project has stepped up over the last year. In support of this, the website has significantly increased its multimedia resources, and improved their profile to provide ease of access for journalists and other press contacts.

2.4.1 Video Content

The extremely successful GÉANT2 DVD has provided the impetus for the expansion of video material on the site. The Media Centre now includes a dedicated Video area, which includes each segment from the DVD as both a streaming clip and a downloadable file. Streaming clips have also been placed in Google Video to increase their exposure to a wider audience.

Alongside the DVD content, clips are also produced from footage filmed at other project events. The Third Technical Workshops in January 2007 provided a number of short films that are also available from the video section, including an excellent introduction to the project's plans for transition to service, composed of excerpts from the plenary sessions and "talking head" interviews with attendees.

2.4.2 Improved Profile of Topology

Since the network coming into full production service, interest in the topology has naturally grown. The Network and Topology areas continue to appear in the top 5 most visited pages on the website after the homepage. To reflect this high level of interest, access to the topology has been significantly improved, with direct links to download the PDF or order a printed copy available directly from the homepage. A smaller version has also been embedded directly into the main Topology page in order to give an instant overview of the network.

3 Functionality Developments

Functionality development in Year 3 has focused on enhancing ease of use for both public and internal visitors.

3.1 Search Improvements and Optimisation

The most significant functionality development has been enhancements to the site's search engine. The developers have made significant improvements to the full-text indexing of all site content, ensuring that all content has been captured and indexed properly.

For multiple-word searches, results have also improved, with the sites' logical "OR" matching system replaced by default "AND" matching. This means that searches on a multiple-word phrase now return fewer and more directly relevant results. Furthermore, the improvement of Boolean search functions means that it is possible to search on an exact phrase by enclosing the search terms in double quotes.

Discussion with the developers has improved understanding of the content scoring process used by the site's search engine. There is now increased flexibility to optimise results for particularly important elements, reflected in the improved performance of the Press Pack and Deliverables sections, for example.

Work is currently underway to optimise search speed on the sites.

3.2 .eu Domain Registration and Configuration

The project's identity as a truly European body has always been important. With the release of the .eu top-level domain, it was important to ensure that relevant domain names were registered. geant2.eu was accordingly applied for in the first sunrise phase (supported by the project's trademark status), and the domain, once available, pointed at the public website. Although geant2.eu is not expected to become the project's main identity, owing to the need to emphasise GÉANT2's international interconnections beyond Europe, it is an important reflection of the project's broad outlook.

Project:	GN2
Deliverable Number:	DN2.0.5.2
Date of Issue:	27/07/07
EC Contract No.:	511082
Document Code:	GN2-07-202v2

3.3 Progress Towards Single Sign-on

Systems development work has also taken place within DANTE to improve ease of access for project participants to restricted internal tools and systems. In Year 3, this translated in work undertaken to ensure that the authentication and authorisation systems for the project's web tools were all driven from the same database. A single, unique username and password now gives each registered user access to multiple tools, including the project intranet, the wiki sites, the project mailing list archives, the wiki-based collaborative workspaces and the network monitoring portal.

4 Conclusions

The GÉANT2 website continues to reflect the objective of NA2 to present a considered and professional picture of the GÉANT2 project, its aims and achievements, to its key target audiences.

DANTE's public relations team strives to ensure that the site continues to reflect activity in the project in a timely fashion. Responsiveness to feedback from its user base is also important, with significant improvements to content organisation having taken place in anticipation of user needs, confirmed by direct user feedback.

Appendix A **Site Maps**

This appendix shows the sitemaps for the public GÉANT2 website and intranet site. New sections since the previous iteration of this Deliverable (in July 2006) are shown in bold and blue.

A.1 **www.geant2.net**

- Project
 - Partners
 - Management
 - Who's Who
 - NREN Support
 - Providing Foresight
- Network
 - Topology
 - Procurement
 - Design
 - Roll-Out
 - Global Connectivity
 - International Collaboration
 - Operations
- Users
 - User Support
 - Learn about GÉANT2
 - Who Uses GÉANT2?
 - BioCASE
 - CERN LHC
 - DEISA
 - EVN
 - MUPBED
 - PERT
 - PERT Roles
- **elinfrastructures**
 - eConcertation
 - Participating Projects
 - Second eConcertation Workshop
 - Contact User Support
- **Services**
 - **IPv6**
 - **MPLS**
 - **Multicast**
 - **Technical Implementation**
 - **IPv6 Multicast**
 - **Multi-domain Monitoring**
 - **Overview**
 - **Users and Support**
 - **Request Support**
 - PERT
 - PERT Roles
 - Quality of Service
 - **Best Effort**
 - **Less Than Best Effort**
 - **QoS Tools**
 - **Premium IP**
 - **AMPS**

Project:	GN2
Deliverable Number:	DN2.0.5.2
Date of Issue:	27/07/07
EC Contract No.:	511082
Document Code:	GN2-07-202v2

- **Implementation**
- **Contact Us**
- **Point-to-Point**
- **VPN**
- **Testbed**
- **Security**
- **Training**
- Achievements
 - Key Facts
 - Results
 - **Transition to Service**
 - **perfSONAR**
 - **eduroam**
 - **AutoBAHN**
 - **International Links**
- Research
 - Performance Measurement
 - **Deliverables**
 - Security
 - **Deliverables**
 - Bandwidth On Demand
 - **Deliverables**
 - Testbed
 - **Deliverables**
 - Roaming and Authorisation
 - **Deliverables**
 - Multi-domain Support
 - **Deliverables**
- Media Centre
 - News Archive
 - Press Articles
 - **Maps**
 - Watch the Video
 - Screensaver
 - GÉANT2 Launch Event
 - Programme
 - Speakers
 - Demos
 - Photo Gallery
 - Video Clips
 - Events Calendar
 - Press Pack
- Document Library
 - Publications
 - Presentations
 - Deliverables
 - **Performance Monitoring**
 - **Security**
 - **Bandwidth on Demand**
 - **Testbed**
 - **Roaming and Authorisation**
 - **Multi-domain Support**
- Order Publications

A.2 intranet.geant2.net

- Docs
 - Contract
 - Technical Annexes
 - Deliverables
 - Technical Deliverables
 - NA1 - Management
 - NA2 - Dissemination
 - NA3 - User Support
 - NA4 - NREN Support
 - **NA5 - Foresight**
 - NA7 - Events
 - SA1 - Procurement
 - SA3 - End-to-End QoS
 - SA4 - Global Connectivity
 - JRA1 - Performance
 - JRA2 - Security
 - JRA3 - BoD
 - JRA4 - Testbed
 - JRA5 - Roaming
 - Executive Committee
 - Documents for Review
 - Policy Committee
 - All 2006 PC Documents
 - All 2005 PC Documents
 - Agendas
 - Minutes
 - Presentations
 - GÉANT Monthly Service Reports
 - Related Projects
 - MUPBED
 - NOBEL
 - OIF Documents
 - NA1 - Management
 - **Consortium Agreement**
 - Policy Documents
 - Agendas
 - Minutes
 - Presentations
 - NA2 - Dissemination
 - NA3 - User Support
 - NA4 - NREN Support
 - **NA5 - Foresight**
 - SA1 - Procurement
 - Minutes
 - Presentations
 - SA2 - Operations
 - Monthly Service Reports
 - SA3 - End-to-End QoS
 - JRA1 - Performance
 - JRA2 - Security
 - JRA3 - BoD
 - JRA4 - Testbed
 - JRA5 - Roaming
 - Monthly Reports
- Management
 - **Project Management**
 - **Contacts**
 - **Deliverables**
 - **Milestones**
 - **Technical Annex**
 - **Budget**
 - **NREN Quarterly Reports**
 - **Templates**
 - **How To's & FAQs**
 - Policy Committee
 - **PC Meeting 11 July 2007 - Amsterdam**
 - **PC Meeting 26 April 2007 - Bratislava**
 - **PC Meeting 23 January 2007 - Munich**
 - **PC Meeting 19 October 2006 - Malta**
 - **PC Meeting 13 July 2006 - Frankfurt**
 - PC Meeting 22/23 May 2006 - Berlin
 - PC Meeting 9 March 2006 - Prague

Project:	GN2
Deliverable Number:	DN2.0.5.2
Date of Issue:	27/07/07
EC Contract No.:	511082
Document Code:	GN2-07-202v2

- PC Meeting 12 December 2005 - Amsterdam
- PC Meeting 20 October 2005 - Budapest
- PC Meeting 8 July 2005 - Brussels
- PC Meeting 9 May 2005 - Pisa
- PC Meeting 31 March 2005 - Amsterdam
- PC Meeting 11 February 2005 - Bled
- PC Meeting 3 December 2004 - Brussels
- PC Meeting 22 October 2004 - Cyprus
- PC Meeting 15 September 2004 - Amsterdam
- Executive Committee
 - Policy Documents
 - Work In Progress
 - All Documents
 - Deliverables Status
 - Meetings
- Technical Committee
- **Planning Meetings**
- GÉANT2 Architecture Planning
- GÉANT2 Technical Workshops
 - Programme
 - **Presentations**
 - Logistics
 - **Attendees**
 - Feedback
 - Photo Galleries
 - **Previous Workshops**
- EC Reviews
 - **Third EC Review - October 2006**
 - Second EC Review - September 2005
 - First EC Review - July 2005
- International Collaboration
- Ops
 - APM Meetings
 - Meeting Archive
 - Operational Procedures
 - Fault Reporting
- Monthly Service Reports
 - MSRs pre-Sept '04
- Technical Policies
- DWS Information
- JRA1
 - Meetings
 - Documents
 - Presentations and Papers
 - Management
 - Related Activities
 - Useful Links
 - WI1 - Requirements
 - WI2 - Design
 - WI4 - Evaluation
- JRA2
 - Meetings
 - Documents
 - Participants
- JRA3
 - Meetings
 - Documents
 - WI2 - Requirements
 - WI3 - Service Specification
- JRA4
 - Meetings
 - Documents
- JRA5
 - Meetings
 - Documents
 - Monthly Reports
 - Deliverables
- SA3
 - **PERT**
 - Performance Monitoring
 - Meetings
 - Documents
 - Deliverables
 - Products

- NAs
 - PR Network
 - Key Messages
 - Meetings
 - Members
 - Press Kit
 - GÉANT2 Publications
 - Photo Gallery
 - Priority Order Form
 - Exhibition Displays Booking
 - Workplans
 - User Segmentation
 - **Training**
 - **perfSONAR Training**
 - **PERT Training**
- User Support
 - PERT

Appendix B Usage Statistics

Usage statistics continue to demonstrate a steadily growing user base. Significantly, repeat visitor figures are increasing more rapidly than overall unique visitor figures, suggesting that GÉANT2 is succeeding in building loyalty in its users, who are increasingly returning to site to learn more about European research networking.

B.1 Top Ten Search Terms, Downloads and Pages

Top Ten Search Terms ¹	Top Ten Pages	Top Ten Downloads
geant2 (3616) ²	Research Makes Mount Etna Sing! (12 603)	GEANT2 Topology (9323)
Geant (420)	Topology (11 621)	GÉANT2 Performance Enhancement and Response Team (PERT) User Guide and Best Practice Guide (2044)
geant 2 (392)	The Network (8495)	Second Review of BoD-related Technologies (1067)
GÉANT2 (279)	The Project (5875)	Inter-NREN Roaming Infrastructure and Service Support Cookbook (995)
stage set up (230)	Media Centre (4517)	PERT Performance Guides (850)
NREN (190)	The GÉANT2 Joint Research Programme (4073)	Roaming Glossary of Terms (734)
mount etna (184)	For Users (3809)	AMPS Design Specification (727)
bandwidth on demand (153)	GÉANT2 Services (3767)	Initial Review of Technologies Related to the Provision of Bandwidth-on-Demand (BoD) Services (705)
geant2.net (150)	Events Calendar (3766)	Global Connectivity Poster (609)
GN2 (132)	Partners (3682)	Documentation on GÉANT2 AAI Requirements (570)

1 Search terms entered in external search engines that resulted in a visit to geant2.net

2 Hits/downloads for each item are shown afterwards in parentheses.

Table B.1: Top ten search terms and downloads, July 2006 – June 2007

Project:	GN2
Deliverable Number:	DN2.0.5.2
Date of Issue:	27/07/07
EC Contract No.:	511082
Document Code:	GN2-07-202v2

The search-engine ‘friendliness’ of site content is evident in the unusually successful performance of the terms “stage set up”, which form part of the title of a photograph included in the Photo Gallery from the GÉANT2 Launch Event.

A key shift from Year 2 to Year 3 is the enormous growth in interest in the project’s formal deliverables, particularly those concerned with bandwidth on demand, the Performance Enhancement and Response Team, and JRA5’s work in roaming and authorisation. All but 2 of the top 10 most downloaded files are project deliverables or other technical documents. The single most popular download, however, continues to be the network topology poster, which in its various forms has been downloaded just over 9300 times over the reporting period, nearly four times as often as the next most popular file.

The outstanding success of the press release concerning volcano sonification is clear in the high performance of both ‘mount etna’ as a search term and the release itself. The press release was featured on many popular websites, including BBC Online, the New Scientist and the Discovery Channel, all of which boosted its performance in search engine rankings.

B.2 Homepage Views

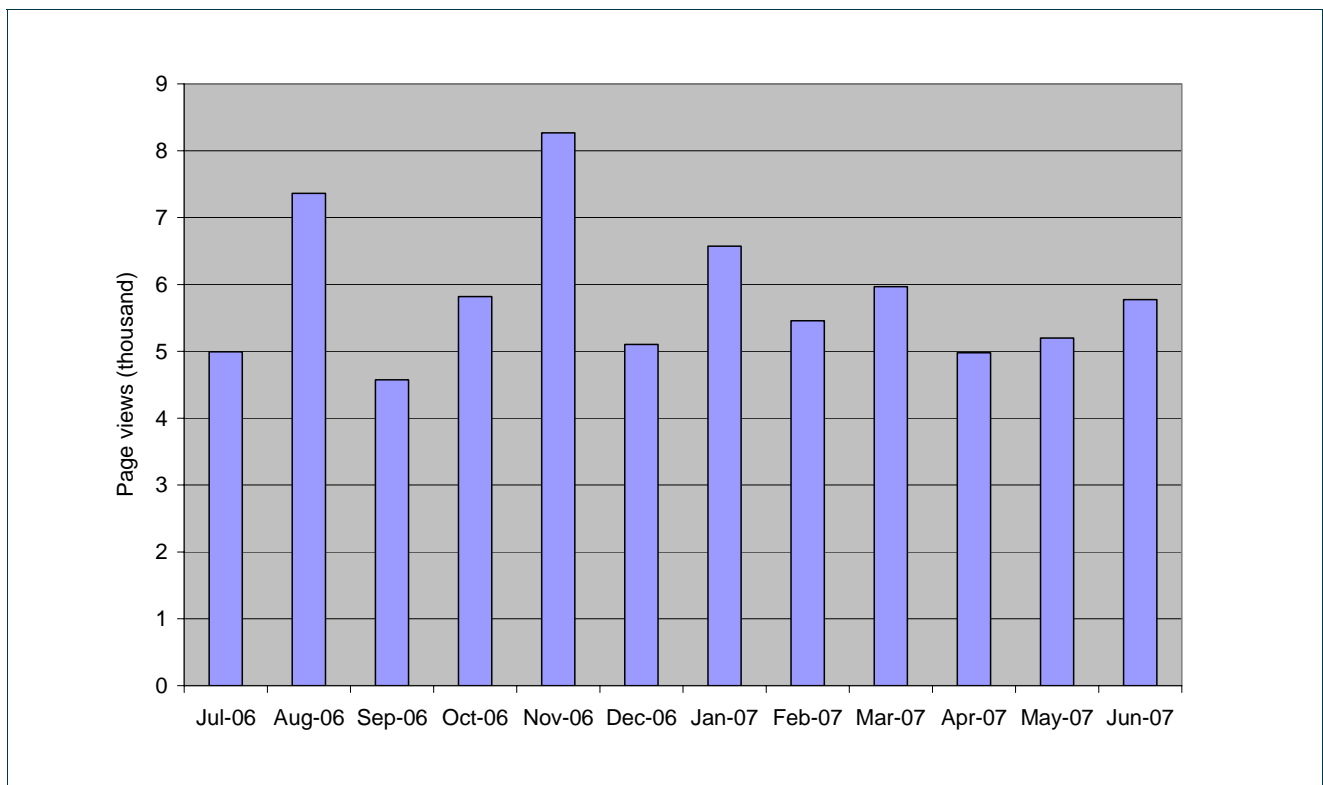


Figure B.1: Homepage views, by month, July 2006 – June 2007

Project:	GN2
Deliverable Number:	DN2.0.5.2
Date of Issue:	27/07/07
EC Contract No.:	511082
Document Code:	GN2-07-202v2

Peaks in homepage views in August 2006 and November 2006 could potentially be correlated with the highly popular volcano sonification release and GEANT2's presence at IST2006 respectively.

B.3 Site Visitors

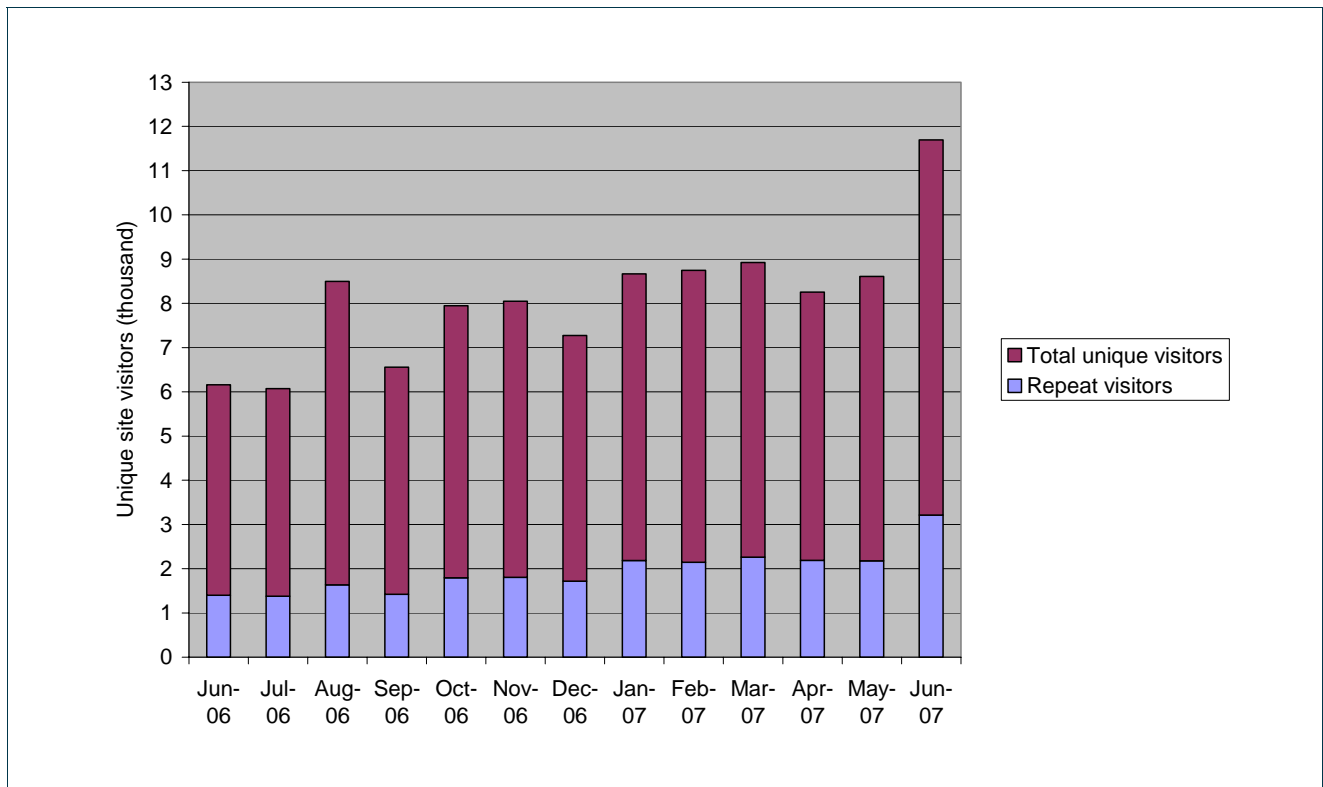


Figure B.2: Unique site visitors (showing repeat visitors), by month, June 2006 - June 2007

It is particularly significant that repeat visitors are increasing at a higher rate than overall site visitor levels, with nearly double the number of repeat visitors in June 2007 as a year earlier. Visitor figures are also significantly higher than homepage views (Figure B.1 above), suggesting the site is succeeding in drawing visitors in directly to content that is relevant to them, whether from search results or distributed URLs in the press, reports or publicity material.

B.4 Video Downloads and Pageviews

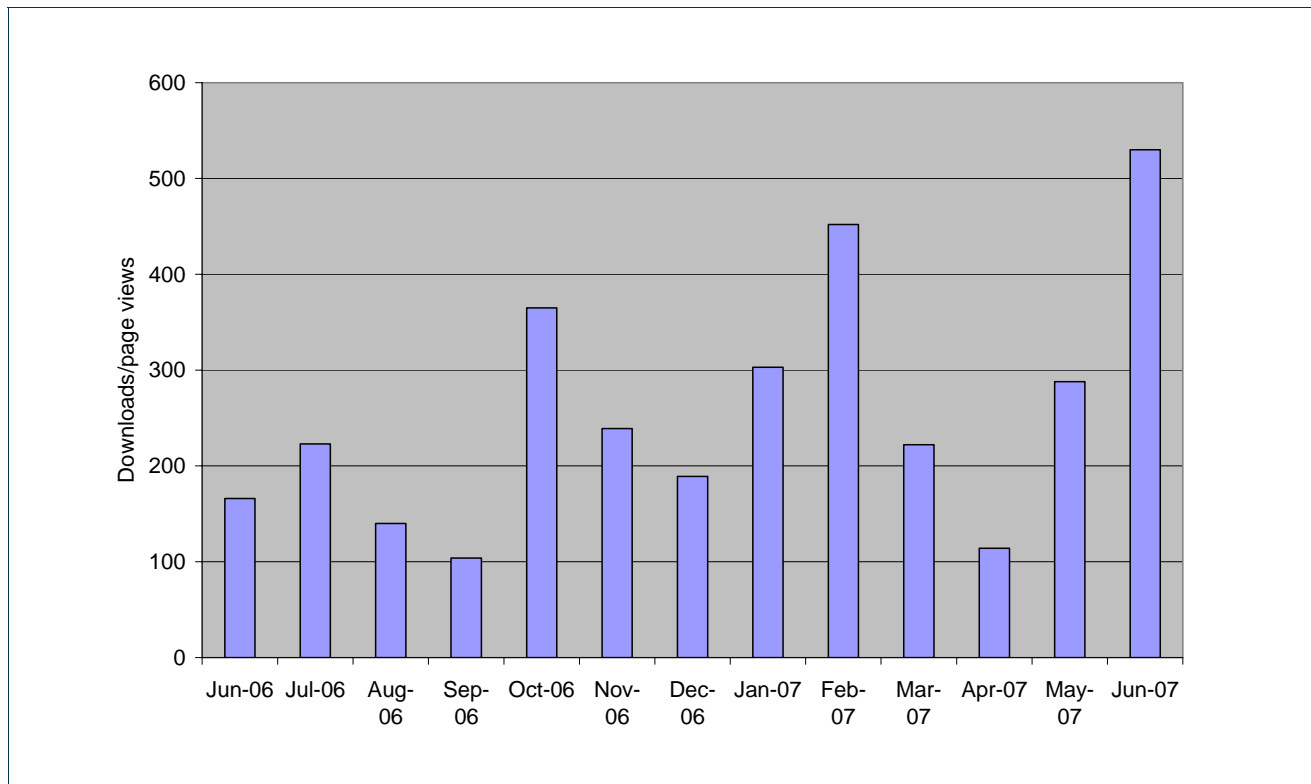


Figure B.3: Downloads and page views of video files, by month, June 2006 – June 2007

Interest in video material has been strongly influenced by project events such as the Technical Workshops. The dramatic recovery in download figures during May and June 2007 reflects a strong preference for viewing embedded, streaming clips, rather than downloading large video files for offline viewing, as well as the greater range of video resources made available from the sites during those months.