e-ScienceTalk

ANNUAL IMPACT AND SUSTAINABILITY REPORT ON E-SCIENCETALK PRODUCTS

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Abstract

This report summarises the impact of longer running products such as iSGTW and GridCafé, and explores possibilities for the sustainability of all e-ScienceTalk's products beyond the close of the project in May 2013.

I. COPYRIGHT NOTICE

II. DELIVERY SLIP

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III. DOCUMENT LOG

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3			

IV. APPLICATION AREA

This document is a formal deliverable for the European Commission, applicable to all members of the e-ScienceTalk project and its beneficiaries and collaborating projects.

V. DOCUMENT AMENDMENT PROCEDURE

Amendments, comments and suggestions should be sent to the authors.

VI. PROJECT SUMMARY

Over the last 10 years, the European Commission and governments have invested substantial funds in distributed computing infrastructures. Scientists have access to state-of-the-art computational and data resources located around the world, putting European research into a leading position to address the greatest challenges facing us today, such as climate change, pandemics and sustainable energy. The advent of the European Grid Infrastructure, combined with the blurring of boundaries between grids, clouds, supercomputing networks and volunteer grids, means that a clear consistent source of information aimed at non-experts is now more important than ever, through dissemination projects that cross national boundaries.

Objectives:

- e-ScienceTalk will build on the achievements of the GridTalk project in bringing the success stories of Europe's e-Infrastructure to policy makers in government and business, to the scientific community and to the general public.
- e-ScienceTalk will work with EGI-InSPIRE and other collaborating projects to expand the scope of the existing GridTalk outputs, and to report on the interactions of grids with e-Infrastructures such as cloud computing and supercomputing.
- The project will explore options for the sustainability of e-ScienceTalk's products.
- e-ScienceTalk will produce a series of reports aimed at policy makers to disseminate key policy issues underpinning grid and e-Infrastructure development in Europe. The project will also coordinate e-concertation activities.
- The GridCafé, GridCast and GridGuide suite of websites will cover new topics and explore novel web technologies; they will integrate closely with GridPP's Real Time Monitor, combining live views of grid activity with the human aspects of computing.
- The growing weekly publication, International Science Grid This Week (iSGTW) will bring news and events to the existing and potential e-Science community.

VII. EXECUTIVE SUMMARY

e-ScienceTalk targets researchers, policy makers in industry and government, and the wider public at all ages through a suite of interconnected information products that fall under the e-ScienceTalk brand 'umbrella'. As e-ScienceTalk is not connected to any specific project, it is ideally placed to provide unbiased reporting of the successes of distributed computing across Europe and beyond.

This report summarises the intended and unexpected impacts of each of the products. E-ScienceTalk's impact has been measured by quantitative analyses using key metrics set out during the project's initiation in September 2010. Qualitative assessment of the project's impact and reach has also been collected from surveys, focus groups and from anecdotal reports from individuals working in scientific research and science policy. As the project enters its final year of funding, strategies for sustainability for each of e-ScienceTalk's range of products are presented.

The GridCafé project, previously curated by the GridTalk project following its initial inception by CERN, has been expanded upon by integrating it as an individual location within a larger 'e-Science City'. For PY2, it was proposed that three new locations be developed. This metric has been met, with two new areas firmly established with the third due to go live imminently. New locations within e-Science City have been well-received by visitors so far, despite promotion being held back until the City as a whole is more developed. GridCasts continue to support the sense of community for participants in e-infrastructure and distributed computing across the globe, with traffic increasing from locations in south-east Asia and Latin America. A greater focus has been placed on promoting the GridCast through social media, and e-ScienceTalk has developed a following through Twitter as @e_scitalk. GridGuides have seen an increase in the number of sites covered, and the Real Time Monitor is increasingly being used as a visual tool for educators explaining the potential of the grid. E-ScienceBriefings continue their expanding coverage of e-infrastructure and e-science policy-related issues for policy makers in industry and governments throughout Europe. Perhaps the biggest success story in terms of impact is the weekly publication, International Science Grid This Week, which has seen readership of individual articles and pick-ups by the popular technical and science press increase significantly over the last few years, with a similarly high score on social media analysis tools such as Klout. The magazine has also 2,649 subscribers through social media in addition to over 8,100 mailing list subscribers.

Going forward, strategies for sustainability rely heavily on the success the project has experienced in establishing individual product brands, in addition to the network of support partners with whom MoUs have been established (CHAIN, EDGI, EGI, e-irgsp3, EMI, EU-IndiaGrid, EUDAT, GISELA Global Excursion, LINKSCEEM, N4U, SHIWA, Virtus and WeNMR). Alternative models for some products, including cost-recovery and minimal maintenance strategies, are also explored.

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1 INTRODUCTION

e-ScienceTalk's main aim is to build on the significant achievements of GridTalk in bringing the success stories of Europe's e-infrastructure to its audiences. The key challenges are to work with the new distributed computer e-Infrastructures and maintain and enhance the quality of existing outputs, while reaching out to new disciplines and regions. Outlined below are some of the key objectives of the e-ScienceTalk project.

- To disseminate the success stories and societal impact of grid computing and e-Infrastructures to researchers throughout Europe and beyond.
- To engage policy makers in grid and e-Infrastructures.
- To raise awareness amongst the general public of the existence of e-Infrastructures and how these networks contribute to the European Research Area.
- To communicate good practices and key successes to other projects.

1.1 e-ScienceTalk objectives

e-ScienceTalk's aims, as outlined in the Description of Work [R1], are to increase awareness of the scientific impact of European grid and e-Infrastructure projects by providing interesting, useful and insightful material aimed at four main audiences:

1. Influential policy makers in European science, government and business.
2. European scientists in a position to develop or exploit grid computing and e-Infrastructures.
3. Members of the public in Europe and worldwide.
4. University and final year high school students i.e. the future users of the infrastructure.

1.2 Target audience and main messages

The project scope goes beyond the dissemination of grid computing to cover the broader e-Infrastructures e.g. volunteer, cloud, high performance computing. The principal messages communicated in the project have been:

- Grids and e-Infrastructures are enabling scientists in Europe and around the world to achieve results and make discoveries that would otherwise be impossible.
- Computing grids and e-Infrastructures are a daily part of the lives of scientists and Europe is in a leading position to exploit these infrastructures in disciplines from life sciences, to social sciences, to high energy physics.
- Use of e-Infrastructures is growing, with tens of thousands of users depending on grid computing projects in Europe alone and new projects proliferating across the globe.
- Funding for grid computing and e-Infrastructures has been, and remains, a worthwhile investment for Europe in order to support the European Research Area through the Digital Agenda.
- The technologies and infrastructure developed for distributed computing infrastructures have varied applications in business and government and Europe is benefiting from these.

- Grid computing and e-Infrastructures have had, and will continue to have, an important and positive impact on the lives of the general public, enabling scientific breakthroughs in areas such as understanding climate change, improving health and novel IT services.

1.3 How does e-ScienceTalk measure its impact?

During e-ScienceTalk's first year, the project's outputs and outcomes were recorded through tracking various metrics and by monitoring online traffic. This information collectively provided evidence for the project's wide global reach. At the end of year one (Yr1), the project team modified the metrics and adapted the evaluation methodology to capture the significance of the project's outputs and outcomes, going beyond assessing whether the "aims of the project have been achieved," and committing to measuring longer-term impacts.

e-ScienceTalk has a diverse audience including influential policymakers in government and business, scientists and the general public, and therefore requires an extensive and varied strategy for collecting feedback. Online engagement can provide an enormous amount of data, and e-ScienceTalk has attempted in this document to judge the impact of that engagement, and the significance. Our impact capturing strategy was to evaluate and articulate effects for each product and its target audiences (see Figure 1).

Our evidence for 'Impact' ranges from broad-based quantitative measures (number of visitors, number of links to the resources, frequency of being mentioned in the mainstream media, etc.) to more richly-detailed qualitative measures (gathered via focus groups, interviews, user feedback etc.). No single measure reflects "the impact' of all products; instead the combination of empirical evidence can be used to provide a broader idea of the various types of impacts these resources are having as a collection. Also, many measurement tools are geared towards advertising or e-commerce.

Two resources have helped us improve our strategy this year. JISC is the UK's expert on information and digital technologies for education and research. e-ScienceTalk has followed JISCs guidance for measuring and reporting impact, which recommends using a combination of statistics, metrics, case studies, illustrative examples and attributed testimonials, and to accumulate evidence throughout the process [R2]. A report developed by the museum sector in the UK, Culture 24, Let's Get Real: 'How to Evaluate Online Success?' [R3] was also helpful in providing guidance on website analytics. Members of e-ScienceTalk also attended the British Science Association Conference in May 2012, to gather ideas for evaluating the impact of online engagement.

The project routinely carries out formative and summative evaluations during both conception and development of its online services using a number of different technologies and methodologies. Our online resources have been built based not on assumptions about potential uses and users, but on substantive input from our stakeholders and audiences.

1.4 Quantitative Methods: Overall Project Metrics

A summary of the overall project metrics for year two for e-ScienceTalk is listed below (see Figure 1) adapted from last year's *D1.3 Annual Impact and Sustainability Report* [D4]. All metrics can be found in the *D4.4 Annual Report on Feedback and Metrics* [D5], and are monitored on a three-month basis and are reported in quarterly reports. The metrics were reviewed last year for the *D4.3 Annual Report on Feedback and Metrics* [D6] as the project had exceeded many of its final project end targets. Quantitative data is valuable as it provides numerical data allowing for yearly comparisons. This report compares the first nine months of PY1 to the same period in PY2. Figure 2 shows an overview perspective on other activities for measuring impact.

Figure 1: Table to show Year 2 e-ScienceTalk main metrics.

Work Package	Metric no.	Description	Target Metric	Comments
WP1	1.1	Projects covered	30 per year	Increased from 20
	1.2	Reports and briefings published	4 per year	Adjusted to number of reports published not printed
	1.3	Countries where reports or briefings are distributed	30 per year	Unchanged
WP2	2.1	Sites on GridGuide	75	Unchanged
	2.2	Bloggers contributing to GridCasts	5 per GridCast	Unchanged
	2.3	GridCasts per year	4 in Europe per year, 1 outside Europe	Increased from 2 in Europe
	2.4	New areas in GridCafé	3, one new area per year	Unchanged
WP3	3.1	iSGTW subscribers	30% increase	Including social media followers
	3.2	Articles on European projects	50 per year	Unchanged
	3.3	Projects in the iSGTW/GridCafé resources section	150 in total	Increased from 100
	3.4	iSGTW printed materials distributed	1000 in total	Unchanged

e-ScienceTalk gathers data via a number of different methodologies such as surveys, website analytics and various social media measurement tools.

1.4.1 Surveys

Online surveys captured quantitative data using both close-ended and ranking-type questions. As e-ScienceTalk largely provides online communications channels and products, web-based surveys are an appropriate mechanism for capturing responses. However, there are various disadvantages to online surveys. For example, there can be technical issues, problems of partial responders, or general online survey fatigue from responders. Online surveys have been incorporated into Volunteer Garage and GridCafé. ISGTW has also sent out a Readership survey to its users.

1.4.2 Website analytics

Google analytics is an easy to implement, broad-brush measure of the impact of a website that will provide evidence of changing patterns, and hopefully growth in use. Since September 2010, website traffic data has been closely monitored through Google analytics for all websites within the e-ScienceTalk project (e.g. GridCast, GridCafé, e-ScienceCity, GridGuide, iSGTW). This open-source measurement tool provides a wealth of information, not just about reader numbers for individual pages but also the paths readers take through the website, geographical location, technical information, and many other metrics. Website statistics can also offer an insight into users' behaviour and therefore provides e-ScienceTalk with data for enhancing visitor experience and formulating marketing campaigns. In 2012, Google analytics has added a variety of features (Real Time Reporting and Mobile Reporting). Flow visualization is also a highly sophisticated tool for graphically showing how visitors navigate through your site.

1.4.3 Webometric tools

Webometrics is another quantitative measure that relies on counting how many pages and domains link to a particular website. "Incoming links" provide a snapshot of the visibility of a website. Google's PageRank algorithm, a webometric indicator, suggests it is a good tool for achieving the goal of evaluating performance and activity.

1.4.4 Social Media Measurement Tools

The global adoption of social media tools and platforms has increased dramatically over the last two years. Twitter claims that activity has increased from 27 tweets per day (January 2010) to over 340 million Tweets per day (March 2012). Keeping up-to-date with this trend, e-ScienceTalk has grown its social media presence in the last year. Twitter tools (such as Tweetreach[1]) and Facebook Insights have been used to monitor our activity. Due to the fact that social media channels make direct engagement possible by users, feedback is encouraged and inevitable, and can be used as a basis for making improvements and for discovering users' preferences.

Off-site web analytics refers to web measurement and analysis regardless of whether you own or maintain a website. It includes the measurement of a website's potential audience (opportunity), share of voice (visibility), and buzz (comments) that is happening on the Internet as a whole. The project team assesses e-ScienceTalk's social network's true reach (*numbers influenced*) and amplification (*a*

[1] http://tweetreach.com/

measure of your influence) using various online tools such as Socialmention[2] and Klout[3]. e-ScienceTalk can also examine social engagement through a number of Google analytics reports.

Figure 2: Overview Perspective on Programme Activities for Measuring Impact using quantitative analysis

e-ScienceTalk product	Metric
e-ScienceTalk	• *Google analytics* – page views/unique visitors, referrals from the e-ScienceTalk website to other e- ScienceTalk sites • *Twitter* – number of followers, mentions and numbers and types of tweets • *Klout* – monthly scores • *Email*- Deliverables submitted, milestones agreed, late Deliverable and Milestones • *Production*- e-ScienceTalk materials produced • *Alphagalileo*-Media releases issued • *Google Alerts*- Press cuttings • *Counting*- Events attended, media partnerships at events, number of MoUs signed • *Twitter/Facebook*-Social media subscribers
e-ScienceBriefings	• *Counting*- projects covered, reports and briefings published, countries where reports or briefings are distributed, policy articles published, printed policy reports circulated per briefing, policy events organised, attendees at e- ScienceTalk organised policy events, policy events attended by e- ScienceTalk
GridCafe/e-ScienceCity	• *Google analytics*- page views/unique visitors, demographics • *Calculations*-Change in unique visitors to the GridCafé website, ratio of page views to visitors for the GridCafé website, • *Counting*-sites on GridGuide, areas of GridCafé
GridCast	• *Google analytics* – page views/unique visitors, demographics, unique visitors to the GridCast (% new), length of time spent on the GridCast • *Counting*-bloggers on GridCast, GridCasts per year, total blog entries, podcasts, • *YouTube* number of subscribers and viewers
GridGuide	• *Google analytics* - page views/unique visitors • *Counting*-sites on GridGuide (EU and US), GridGuide sites on RTM

[2] http://www.socialmention.com/

[3] http://klout.com/home

Real Time Monitor	• *Google analytics* - page views/unique visitors • *Counting*-countries on the RTM, numbers of delegates at events demo-ing the RTM
iSGTW	• *Counting* - iSGTW subscribers, articles on European projects, projects in the iSGTW/GridCafé resources section, iSGTW printed materials distributed, issues published, US articles published, worldwide articles published, marketing materials distributed • *Google analytics* – page views/unique visitors, demographics, social engagement (shares, G+), countries or territories visiting the iSGTW website, time spent on the site per visit • *Klout* – monthly scores • *Social mention* – comparison with competitors etc. • *Facebook analytics* - numbers 'Likes'/followers, growth rate • *Zoomerang*-survey responses • Twitter/Facebook, Google+- Social media subscribers, stories shared on social media

1.5 Qualitative methods for assessing feedback

Qualitative methods can be helpful for both formative and exploratory evaluation. e-ScienceTalk used a number of different approaches accounting for the strengths/limitations of each perspective. Our assessment toolkit included focus groups, feedback sessions, in-depth interviews, open-ended questions in surveys, and both unsolicited and solicited feedback. Figure 3 shows some of the questions we hope to answer and some of the qualitative research methods. Some of our methods are outlined below:

1.5.1 – Feedback sessions

During the project's second year, one-to-one feedback sessions were organised with participants at several e-science and computing conferences. On an *ad-hoc* basis, additional informal anecdotal feedback from delegates was also recorded by e-ScienceTalk to help improve the individual resources.

1.5.2 – Surveys

An annual survey of iSGTW's readership was conducted in July 2012 to give readers a chance to share their opinions on the online magazine's layout, navigation and content. Participants filled in a multiple-choice survey and provided commentary in open-ended questioning using an online tool called Zoomerang[4]. For the last six years, iSGTW has conducted an annual survey of its subscribers to keep up-to-date with its readership's evolving interests, and to develop the scope of the publication. Short surveys were also developed for both Volunteer Garage and GridCafé.

[4] www.zoomerang.com

1.5.3 – Expert advisory panels

e-ScienceTalk consults with expert advisory boards, and the project team values their collective expertise in facilitating decision making on coverage of controversial or complex technical topics. An international advisory board (comprised of representatives of the funding partners with expertise in communications and management) oversees iSGTW. The Editor of iSGTW regularly liaises with the Advisory Board, which directs the content balance and mission for the publication. The panel also previews the online magazine before the publication date. The e-ScienceBriefings policy advisory board includes policy experts from the e-Infrastructure Reflection Group, and representatives of major e-infrastructures such as the European Grid Infrastructure and GÉANT.

1.5.4 – Unsolicited feedback

Throughout the project's first year, unsolicited feedback has been gathered from a variety of sources. This type of commentary provides meaningful examples of how individuals in the community are using e-ScienceTalk products and how each service is making a difference. For example, unsolicited emails or comments to the iSGTW editors can give an indication of how articles are perceived, and if any actions were taken as a result or knowledge gained (e.g. discovery of new products or tools). Feedback and insights have also been gleaned through regular monitoring of website comments, Google+ shares, and recording both 'unsolicited praise' and 'constructive criticism' from email correspondence.

1.5.5 Interviews

e-ScienceTalk has also set up a number of interviews with MoU partners and also users of some of our products such as iSGTW. Interviews are planned for late July/early August, and are not be included in this analysis.

Figure 3: Our qualitative methods for capturing intended and unintended impacts.

		Year 1	Year 2	Year 3
	e-ScienceBriefings			
	How do briefings aid policy makers in European science, government and business?	**Face-to-face at meetings**		**Final year survey to policymakers (email)**
	To what extent respondents are aware of e-ScienceTalk's policy documents. How do readers use the briefings?	**Canvassing at meetings**	**Canvassing at meetings/ mailing list survey**	**Final year survey to policymakers (email) /In-depth interviews**
	Do the briefings increase visibility for projects? How has it helped the projects?			**Survey case studies**
	GridCast/@e_scitalk			
	Is the blog/twitter helping to build a sense of community? In what ways is the blog helping the e-science community?	**Unsolicited/Solicited feedback**	**Survey (June)/EGI Community Forum focus group**	**Focus groups/Survey (March)**

	RTM and GridGuide			
	Is the GridGuide helping to foster cross pollination of expertise?	**Unsolicited feedback**	**Solicited feedback**	**GridGuide survey/feedback**
	How is the RTM helping with outreach?		**RTM user analysis**	**RTM User Interviews/Surveys at meetings**
	e-ScienceCity/GridCafe			
	Are our products deepening the understanding of grid and cloud technologies amongst researcher?	**Feedback scientists/science communicators**		**Grounded user test**
	Do people find the website(s) useful?		**Volunteer Garage/GridCafe online surveys**	**Focus groups**
	iSGTW			
	Journalists from mainstream media will have established relationships with those within e science through iSGTW		**iSGTW media 'pick' up analysis**	**Interviews with media sources**
	Centralises the communication effort and increase the visibility of e-science		**MoU Thanks you emails**	**MoU interviews**
	Does iSGTW provide assistance to the community in finding future partners /collaboration?		**iSGTW Survey**	**Interviews with authors (Top 10)**
	Does iSGTW help scientists informed on the latest technologies in e-science?		**iSGTW Survey**	**Interviews with readership**

1.6 Building our strategy for sustainability

There are many factors to consider when planning for sustainability. At the end of our first year, we developed a comprehensive impact measurement strategy.

- Evaluate the impact of each product. Quality assurance, measuring impact and continuous evaluation throughout the project of each product ensures that the finished resource is of value and relevance to its users, and will help to identify further development or re-purposing opportunities. It will be important to establish which products are of most value. The project has also identified barriers for increasing our impact, and some recommendations for overcoming these obstacles.
- Examine the practical steps we can take to help ensure each e-ScienceTalk resource is sustainable. Identify similar projects and how they became sustainable.
- Investigate the level of on-going maintenance that will be required to sustain the resource.

- Examine the options available for financing sustainability and partnerships. Clearly, the question of finance is the factor that will have most influence, and that will ultimately determine sustainability.
- The project also aims to produce an overview guide to dissemination for EU projects, based on the extensive experience gained and lessons learnt during both phases of the project.

2 E-SCIENCETALK PRODUCTS: BACKGROUND, METRICS AND IMPACT

2.1 GridCafé

2.1.1 Background

The GridCafé website (gridcafe.org) was re-designed by the GridTalk project after being inherited from CERN (gridcafe.org/version1/index.html). The website was designed with the aim of explaining to a non-expert audience in a simple and stimulating fashion 'what grid computing is and what it could soon be.' e-ScienceTalk has expanded GridCafé's scope and appeal through new media channels keeping it up-to-date and at the cutting-edge of grid and e-Science dissemination.

The content of the site has also been expanded to cover the interactions between grid computing and other forms of e- Infrastructure, including clouds, supercomputing and networks. The e-Science City (e-sciencecity.org) website was launched at the 9th e-Infrastructure Concertation meeting in Lyon in September 2011, and includes new content areas such the Cloud Lounge (cloud-lounge.org) and Volunteer Garage (volunteer-computing.org). Work also continues on the 3D pilot of the GridCafé in collaboration with Virtus / New World Grid.

2.1.2 Product metrics

The e-ScienceTalk Description of Work [R1] recommended measuring a number of key metrics to evaluate the impact of GridCafé. Our output target was to cover new content areas, such as cloud computing in the Cloud Lounge and to develop a new citizen cyberscience area within e-Science City, in Volunteer Garage (described in Section 2.1.4).

Google analytics software was used to keep track of unique visitors and page views. The number of unique visitors provides a useful metric, as an indicator of 'reach', or size of the site's audience. Page views provide an indication of how interested people are in the site. e-ScienceTalk also analysed the ratio of page views to visitors, which gives an indication of the website's appeal in encouraging visitors to stay longer. Other data that could provide insight was monitored, including time spent on site and visitor demographics, among other factors. We also have taken into consideration that there is a redirection from the old GridCafe site (gridcafe.org/version1/index.html) to the current version, and this could have an effect of traffic.

One key metric is the number of new areas developed for e-ScienceCity. Before developing new content sections for e-ScienceCity, a formative evaluation was undertaken to understand and address the target communities' interests and needs. This was usually carried out through regular face-to-face discussions and focus groups. We also used a post-development web-based survey to evaluate the impact of the educational resource on its target audience. e-ScienceCity has also been assessed via a post-development focus group carried out with Physics A-level students from Simon Langton Grammar School for Boys in Canterbury. All unsolicited comments have also been gathered from

emails to the 'Contact Us' page. In June 2012, we also set up a drop-down survey on the GridCafé site to gather feedback[5].

2.1.3 What has been the impact of GridCafé?

As one of the few places where grid computing is presented without bias to a specific grid or project, GridCafé (gridcafe.org) continues to be widely used as a reference by grid project websites. Its Google PageRank is 7.0, due to the high number of links to the site: 4,959 (Source: backlinkwatch.com). The number of backlinks is one indication of the popularity or importance of that website.

The primary focus this year has been on developing content for the other accompanying websites (Cloud Lounge and Volunteer Garage) that fall under the e-ScienceCity umbrella. Content for the newest area, HPC Tower, has also been prepared but will not be live until August 2012.

If you carry out a simple comparison of site traffic to gridcafe.org for the first nine months of year two (Yr2) to the same period during year one (Yr1), there has been a decrease in the number of unique visitors visiting the site (11,405 people to 6,866). However, this can be explained by the fact that visitors also travelled to the CERN website (https://gridcafe.web.cern.ch/gridcafe/). If you include traffic to this website in the analysis (20,347 page views and 1,380 unique visitors), the figure is far greater. We have excluded these analytics as this landing page redirects visitors to gridcafe.org. Last year, this was included in the analysis.

How interested are people in the site?

For the gridcafe.org site, the number of page views has increased (21,929 vs. 34,385). Also, the average time people spend on the site has increased from one minute twenty-six seconds to nearly nine minutes (8:56). Figure 4 shows the increase since February 2012. The bounce rate has also decreased from 72% to 65%. Bounce rate is the percentage of single-page visits or visits in which the person left your site from the entrance (landing) page. This metric can be used as a measure of visit quality.

The lesson of having ways for new users to experience quick successes once they arrive on site is invaluable. A number of projects see unacceptably high bounce rates- numbers of people who come to their site because of some interest, but only stay a short time before leaving the site. Some of these may have simply found their way to your site by mistake, and genuinely have no interest in the content. However, many others do have a real reason for visiting the site, and GridCafé is a 'sticky' site. A 'sticky site' is a website so rich in content and features, and so well organised, that visitors feel compelled to stick around for quite a long time and come back often. GridCafé is keeping people on site for longer. The Engagement report within Google analytics reveals that 53.69% (18,461) of our page views last longer than 30 minutes (1801 seconds). There is also a good ratio of new to returning visitors (65% to 36%) indicating that the site's reach is growing.

[5] http://www.gridcafe.org/survey.html

Figure 4: Average Visitor Duration

During Yr1, the length of time spent on the site was significantly lower (1.13 minutes), and visitors viewed only 1.41 pages per visit. This result could be interpreted as indicating that GridCafé is attracting a more loyal audience as it matures. People, who are recommended to use the site, visit and stay because they find what they are looking for.

How do people discover the site?

Over 15% arrive at GridCafé after using search engines. Only a small percentage arrive via social media referrals (2.1%). Most visits have been through Blogger, Facebook and Twitter. On 27 April, there was a small increase in average traffic (over 111 visitors). This could have been due to the Baryon discovery at CERN on the same day. On the 4th July, there was another increase due to the CERN announcement of the discovery of the Higgs Boson (over 104 visitors). GridCafé web statistics also reveal that a large percentage of traffic is direct (see Figure 5). Most visitors, around 43%, come to the site directly through typing the URL (gridcafe.org) into their browser's address bar. People who visited the site directly spend a long time on site (18.19 minutes) and visit more pages (5.5 pages per visit) with a very low bounce rate (55.64%). Our most popular foreign language site is the French site (9.08% of total visits).

What are the demographics of visitors?

GridCafé has a global audience from four continents. The top ten visiting nations are Switzerland, France, USA, India, UK, Italy, Germany, Columbia, and Brazil.

Figure 5: Top ten referrers to GridCafe.org in first three quarters of Year 2 e-ScienceTalk.

	Source/medium	Visits	Pages/Visit	Avg. visit duration	% New visits	Bounce rates
1	(direct) / (none)	4,527	5.50	00:18:19	48.62%	55.64%
2	google / organic	1,612	1.84	00:02:37	65.51%	69.23%
3	en.wikipedia.org / referral	647	1.32	00:01:06	83.15%	79.91%
4	fr.wikipedia.org / referral	508	1.46	00:01:20	86.42%	69.09%
5	lcg.web.cern.ch / referral	345	1.61	00:01:37	84.64%	73.33%
6	public.web.cern.ch / referral	235	1.77	00:01:17	89.36%	65.11%
7	gridcafe.org / referral	231	1.34	00:01:09	80.09%	77.49%
8	eu-emi.eu / referral	218	1.53	00:01:19	84.40%	69.27%
9	sagrid.ac.za / referral	135	1.39	00:00:57	94.81%	71.85%
10	e-sciencetalk.org / referral	134	2.04	00:03:27	61.94%	59.70%

How useful is the site?

e-ScienceTalk carried out an online survey[6] for a two month period (May–July 2012). The questions were similar to a previous survey carried out by GridTalk[7]. Further information on the methodology and results is discussed in the Year 2, D4.4 *Annual Report on Feedback and Metrics* [R5]. One question that was asked, which relates to impact, was whether people were satisfied with the website's content. Although so far the response rate has been low, the preliminary analysis indicates that 16 out of 19 people said they had found what they were looking for. Two individuals, who didn't find what they were looking for, gave their reasons. One person had been looking for games and podcasts and the other was looking for people on the grid. This survey has revealed some areas for improvement (for example, more links to GridGuide). Most people said their main reason for visiting the website was to find out what grid computing is about. Most responders said the website was either useful or very useful (73%). Results from the survey also reveal people are interested in other areas of e-science, and so there is an impetus to develop e-ScienceCity (see Figure 6).

Figure 6: Would you be interested in finding out more about the following areas?

Area	*Numbers*
High performance computing/ supercomputing	9
High throughput computing	8
Information on data management	9
News and science enabled by e-science	4
Training/multimedia materials	5
Cloud computing	9
Volunteer computing	9

2.1.4 Projects: e-Science City, CloudLounge, Volunteer Garage, Virtual World

e-ScienceCity has had 1,404 unique visitors and 5,021 page views. However, as the site is still being developed, it has not been promoted heavily yet. The site has received traffic mostly from referrals (43%). Figure 7 shows the traffic sources for e-ScienceCity for the first three quarters of year two of the project. Traffic has been directed from various e-ScienceTalk products. Of interest is the high visit time for referrals from both Volunteer Garage (8.05 minutes) and Cloud Lounge (5.05 minutes). This shows that people are sufficiently interested in the content to stay for a long time. The greatest page views are to the Virtual World Portal (4.82% of total visits) and CloudLounge page, 'Where is my data being stored' (3.82% of total visits).

Figure 7: e-ScienceCity traffic sources for 1 September 2011 to 31 May 2012

	Source/medium	**Visits**	**Pages /Visit**	**Avg. visit duration**	**% New visits**	**Bounce rates**
1	google / organic	733	1.93	00:01:45	74.90%	69.30%

[6] https://docs.google.com/spreadsheet/viewform?formkey=dGw5ZWFwY2hnVTI2Wk02WEdDSVdXVkE6MQ
[7] http://www.gridtalk.org/deliverable/Documents/GridTalk-D3%202.2-223534-V1.pdf

2	gridcafe.org / referral	463	2.72	00:03:09	63.07%	58.32%
3	(direct) / (none)	438	2.63	00:02:50	73.29%	57.99%
4	e-sciencetalk.org / referral	124	3.03	00:02:32	41.94%	45.97%
5	e-sciencecity.org / referral	69	3.17	00:04:22	11.59%	50.72%

A formative evaluation of the e-ScienceCity website (e-sciencecity.org) was conducted after the initial launch date to evaluate first impressions from its main audience - young student scientists. On 16 November 2011, five A-level physics students were recruited for a face-to-face focus group. Two moderators, Zara Qadir and Manisha Lalloo at Queen Mary, University of London, conducted the session. Students were asked to review certain criteria with a view to accessing their interest in the overall concept, as well as to discover their opinions on content, layout, functionality and navigation of the e-ScienceCity website in its current form. The results of this analysis will be included in *D4.4 Annual Report on Feedback and Metrics* [R5]. The team also set up a feedback poll on the Volunteer Garage[8] site with five questions, and advertised it during the Citizen Cyberscience summit. We have had some feedback and comments. In total, five people have completed the form. All said that the content on the website had led them to information and other sources that were useful. The results are discussed further in the Year 2 feedback report [R5].

2.1.5 Recommendations

During the third year of the project, we will aim to address our barriers to impact. For example, even though our audience is more engaged in the contents, we have seen a decrease in traffic, which can be amplified by a more pro-active marketing of GridCafé and e-ScienceCity. To increase traffic to e-ScienceCity (and the individual websites), a marketing strategy is currently being devised with the help of a summer intern at Queen Mary, University of London.

Other cross-marketing activities are planned such as increasing links in iSGTW to GridCafé. Partnerships are an important way to build traffic because of the link structure of the Internet. Being linked from a more a widely seen source can be an important source of new users. The team is planning on adding other applications used on volunteer platforms, such as renderfarm.fi and KOPI. After marketing the site, e-ScienceTalk will carry out an inventory of backlinks next year for Volunteer Garage and Cloud Lounge.

GridCafe still has two sites (gridcafe.web.cern.ch and gridcafe.org/). People are still visiting the CERN site (5,951). Backlinks for gridcafe.web.cern.ch should also be reviewed to see if any websites are linking to the CERN site, and let them know the newer address, gridcafe.org.

Over the next year, e-ScienceTalk would like to improve discovery of this resource through search engine optimisation, and seek to understand how people use the site, what problems they have with it, and how they think it could be improved. This can often yield a deeper insight into how users understand the resource, and it would also be interesting to find out what additional information they

[8] http://www.volunteer-computing.org/EN/feedback.html

would like us to provide. We intend to carry out a usability test to empirically evaluate the effectiveness of e-ScienceCity websites, to ensure delivery of relevant content in an intuitive way.

It would be also interesting to monitor traffic on the site more meticulously on a weekly basis. Creating and automating Google analytics alerts for spikes in traffic, say over 100 unique visitors per day/300 page views, is key to measuring the success of our campaigns. For example, there was a spike in number of page views (21 January; 452, 18 February; 530, 18 May, 524). However, it is difficult to assess this spike retrospectively. e-ScienceTalk will also carry out a Google Analytics health check[9].

For most of the new content sections, we have produced a post-development web-based survey to evaluate the impact of the educational resource on its target audience. In year two (Yr2), we will ask website visitors for Cloud Lounge to complete a thought-listing item exercise both pre- and post-visit. For example, visitors could be asked to write down five words/phrases that come to mind when they think of 'Cloud Computing'. e-ScienceTalk will then compare words/phrases used through coding analysis to gauge if there has been any change in knowledge.

e-ScienceTalk has also organised three visits to the Virtual World Portal. Two visits were during the New World Grid Open Day and the last visit was during the VWBPE 2012 conference (Virtual world best practice in education conference) with about 40 people. e-ScienceTalk would like to explore the potential of this resource further. Advancements in Hypergrid technology[10] will allow users to travel through different virtual worlds with the same avatar and the same account.

2.1.6 Sustainability

As GridCafé originated at CERN it has already been shown to be sustainable having been transferred from organisational to project-based international funding. Several investigative strategies could be undertaken to fund this product. e-ScienceTalk through its impact strategy is building a case based on the value of e-ScienceCity. Success drivers would be offering attributes to potential funders (high quality content, Open Access, cross-disciplinary appeal). Further development would be dependent on what funding is available.

At the end of the project, all sections of e-ScienceCity should have been built and marketed. If only limited funding was available, e-ScienceTalk could adopt a low maintenance strategy. Maintenance of the website in terms of updating content is envisioned to be relatively low after the City is developed. The cost of domain name and web registration is currently €71.64 per year. It is estimated that a few days per year would be allocated to keeping the content updated. We could also examine creating plain static versions of the websites that do not use databases/scripts that can be stored indefinitely by a project partner so that the resource remains online in an archive. Estimated commercial freelance costs for website maintenance are €500–€700 per day. However, support from a partner with extensive resources the actual maintenance for the site would be more cost effective.

Part of the project's long-term strategy could be to continue to build reciprocal and lasting relationships with supporting organisations, which could eventually lead to sponsorship, co-sponsorship or in-kind support. We would approach a partner in order to secure a long-term

[9] http://www.keepandshare.com/doc/3151421/google-analytics-healthcheck-list-pdf-september-20-2011-2-33-pm-68k?da=y

[10] http://opensimulator.org/wiki/Hypergrid

commitment to cover the cost of hosting the site and marketing. CERN, as the original developer, of the site, would be the first contact. The project would gain a supportive host institution with resources substantially greater than required by the project to continue the upkeep of the website after its completion.

The site makes clear that material should be freely reused, distributed and disseminated subject to the Creative Commons Copyright notice. GridCafé by e-ScienceTalk is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License. It is recommended that a less restrictive Creative Commons licence, that of Creative Commons-Attribution-ShareAlike be adopted to maximise dissemination and re-use potential, as non-commerical restricts e-ScienceTalk content being used by any commercial enterprise (including many written publications and even fee-paying schools). The ShareAlike element will ensure that derivative content continues to be freely available for further use to others.

An alternative approach would be to investigate Google AdSense to keep the site operational. Google AdSense is a free program that empowers online publishers to earn revenue by displaying relevant ads on a wide variety of online content. Website owners can sign up to host ads and share revenue, with the ability to filter out ads they do not want. This is a prevalent business model for commercial content, and the trend is increasing for educational sites. If we were able to go down this route, it would be wise to investigate the worth of the site and whether this is possible based on both our current and previous funders. According to sources, Gridcafe.org has the potential to receive $3.2 in advertisement revenue per day or around $1200 per year (Source: websiteswift.com and websitelooker.com/).

e-ScienceTalk has identified one website, Vision of Britain through Time (http://www.visionofbritain.org.uk) that uses an income generation model based on a combination of open access, free-to-user content combined with Google AdSense to generate revenue. This revenue covers the running cost of the site, and thus contributes to the site's sustainability, but also provides useful data about the impact of various parts of the site in terms of income generation. This historical site receives 96,759 visitors per month and 366,730 page views generating revenue of approximately $12,000 US Dollars (April 2010- Feb 2011). GridCafe receives less traffic, but could be sustainable through advertising revenue if maintenance costs are kept very low, and visitor numbers could be increased during the third project year (Yr3).

In addition to the areas described for e-ScienceCity, there has been interest in creating more new sections, such as a *Data Garden* in collaboration with the EUDAT project. The most popular sections on e-ScienceCity, are on data management, 'Where is my data being stored[11]?' and 'Who own the data?[12]' This suggests there is a demand for more independent information on data and its management. Although there is a wealth of information in cloud computing for example, a Google search returns 302,000,000 results, Cloud Lounge still provides an unbiased perspective independent of commercial providers. Three new central sections of e-ScienceCity are planned for development next year – Communication Centre (news feed aggregator), The Forum (in debate sections aggregator) and People Bay (profiles of people in grid and distributed computing). An additional content area is

[11] http://www.cloud-lounge.org/EN/where-is-my-data-being-stored.html

[12] http://www.cloud-lounge.org/EN/who-owns-the-data.html

also planned on the underlying network layer, Network Park. e-ScienceTalk could approach GEANT as a co-sponsor for 'Network Park.'

e-ScienceTalk partners are also investigating the viability of using the Virtual World Portal as an e-learning/training tool for the N4U project, building a global neurology e-Infrastructure. Online tutorials, study guides, simple screencasts in either the virtual world or in a multimedia section/Volunteer Garage, could potentially widen our audience to students and teachers meeting various pedagogical needs. e-ScienceTalk plans to investigate this possibility with the help of our new collaborating project, Global Excursion.

2.2 GridCast

2.2.1 Background

GridCast (gridcast.org) combines blogs, videos and interviews from major grid computing, e-Infrastructure, and policy-related events providing scientists with an opportunity to blog and record podcasts about their experiences. The site was initially created before the start of GridTalk, and was redesigned and re-launched in September 2009. GridCast is now more heavily promoted at conferences through Twitter. New features have been added this year. GridCast now also contains a widget that shows our tweets in real-time.

2.2.2 Product metrics

In order to measure the impact of the GridCast blog several key metrics and targets were outlined at the start of e-ScienceTalk. We measured the average number of bloggers contributing to GridCasts (target: 5 for each GridCast) and the number of GridCasts each year (target: 2 in Europe per year and 1 outside Europe). In addition, e-ScienceTalk also tracked the number of bloggers, blog entries and podcasts, which are all meaningful, as they show the quality of the relationships being built online. These engagement metrics provide an indicator for measuring the level of GridCast visitor involvement, attention or commitment. General activity metrics such as page views and site visitors were also tracked through Google Analytics. YouTube analytics has also been examined this year.

e-ScienceTalk also implemented a more coherent strategy for gathering feedback from GridCast bloggers. The GridCast team sent out an email titled, '2012 Year-end Summer Update' to 100 GridCast bloggers. We asked whether they enjoyed the experience and if anything had happened as a result of their blog post (e.g. contacts made, comments, feedback etc.). The email also provided the blogger with their page view statistics. e-ScienceTalk also organised a focus group during the EGI-Community forum to gain feedback. Details on methodology will be provided in D4.4 *Annual Report on Feedback and Metrics*. Some of the questions related to impact ("What sections do you like most in GridCast?")

2.2.3 What has been the impact of GridCast?

What is GridCast's reach?

GridCasts have been important for community building within the grid and e-science community. From 1 September 2011 until 31 May 2012, the blog itself (http://gridtalk-project.blogspot.com) attracted 7,384 unique visitors and 15,302 page views. Comparing these figures to the same period in year one provides evidence for GridCasts longevity and popularity. In Year one (Yr1), GridCast attracted 6,401 unique visitors and 16,585 page views (see Figure 8). There is also a larger percentage of new visitors (62% vs. 73%).

What's happened this year?

GridCast has more than met its targets in the first two years and held more than the planned two GridCasts in European and two GridCasts outside of Europe. Each major GridCast attracted six bloggers on average. Major GridCasts were held at the European Grid Infrastructure (EGI)-Technical Forum 2011 (25 posts, 9 bloggers) in Lyon in September and eChallenges in Florence in October (16 entries). In 2012, GridCasts were organised at the International Symposium of Grids and Clouds ISGC2012 in Taipei (20 entries, 6 bloggers) and the EGI Community Forum 2012 in Munich (32 posts, 9 bloggers). Small GridCasts were organised for Citizen CyberScience Summit, London and CloudScape IV in February 2012, and through May to July, at the ERF Workshop "The Socio-Economic Relevance of Research Infrastructures" in Hamburg and e-IRG-Workshops. Other small events that either the team have attended or our bloggers have written about include the Digital Agenda Assembly on Europe's digital future, Science: It's a girl thing, EDEN2012, International SuperComputing, HealthGrid and EMI@Hands. In addition to the metrics outlined, we have also had an increase in the length of blog posts for the larger conferences (see Figure 9).

Figure 8: Comparison of unique visitors from Year 1 and Year 2

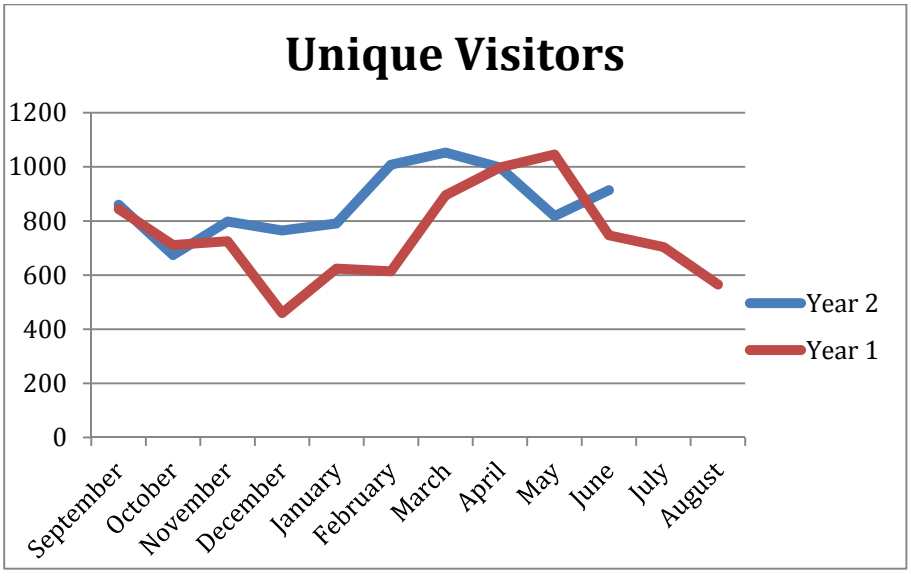


Figure 8: Comparison of post numbers and word analysis

Major Events	**Posts**	**Words**	***Words increase %***
User forum 2011	21	4045	**24.5**
Community Forum 2012	20	5035	
Technical Forum 2010	20	3854	**49.7**
Technical Forum 2011	20	5769	
ISGC2011	20	3981	**19.8**
ISGC2012	17	4771	

GridCast has partnered with a number of organisations this year, and has been to several new conferences. After signing a Memorandum of Understanding with N4U, GridCast was invited to an outGRID- ITU High-Level Workshop, 20–21 February 2012, Geneva, Switzerland. Our first major virtual GridCast was also coordinated in Mexico for the Joint GISELA-CHAIN Conference. At the co-hosted, EGI Technical Forum, from the 22nd to the 23rd of September there were a total of 249 visits to the GridCast blog, from 176 unique visitors. On average visitors spent 3.48 minutes on the site when visiting and 51% of these visits were from new visitors. During the EGI-Community Forum, there were 594 visits to the blog from 364 unique visitors. On average, visitors spent four minutes on the site. e-ScienceTalk sent out the most tweets at the meeting - a total of 86 tweets.

Who is tuning in?

In our first year, most people who tuned into GridCast were from United States (1,794) or the United Kingdom (1,290). However, there is also a growing interest from other countries. The audience is becoming more diverse and international with readers in Brazil, Columbia, and India. The ratio of new visitors to returning is 1:3 approximately. This shows the website is attracting new visits, but retention of loyal return visitors is a good indication of a successful blog. Around 4.3% of visitors are checking GridCast through their mobile phone devices.

One of the project's unique selling points are the video clips. During GridTalk a YouTube channel was set up. The channel has attracted 101subscribers and the cumulative number of video views is a overwhelming, 204,924. The most popular video, published in May 2011 (FET11 - ECCE Human Robot presented by Hugo Gravato Marques[13]), has received so far, 165,124 views, 178 shares, 78 comments, and 234 likes. Interest in the channel is ten times higher than at the end of GridTalk (20,000 downloads). The top rated video 'neuGRID, A Grid Brained Infrastructure to understand and Defeat Neurodegenerative Diseases[14]', has had 1,511 views (as of 2 July 2012).

[13] http://www.youtube.com/watch?v=1dpB1yHxkuA&feature=plcp

[14] http://www.youtube.com/watch?v=fpfD6GZ90tQ&list=FLSo5MMmlLUADpfdU-DDk4zg&feature=plcp

How do people find us?

One important question that can be examined with Google analytics data is how people find the site. Around 37% of the people search for the site through search engines, 43% come from referral websites and 19% are direct traffic. If you examine traffic sources at a deeper level (see Figure 9), the greatest referral traffic is through blogger, followed by CERN, Twitter, Facebook and iSGTW.

Figure 9: GridCast referral traffic e-ScienceTalk Year 2 for 1 September 2011 to 31 May 2012

	Source / Medium	Visits	Pages / Visit	Avg. Visit Duration	% New Visits	Bounce Rate
1.	google / organic	3,621	1.51	00:01:09	81.47%	70.73%
2.	(direct) / (none)	1,953	1.38	00:00:58	81.52%	81.93%
3.	blogger.com / referral	1,251	1.59	00:02:13	72.34%	78.50%
4.	gridcast.web.cern.ch / referral	927	2.04	00:03:26	32.04%	58.04%
5.	t.co / referral	439	1.44	00:01:54	54.44%	75.85%
6.	google.com / referral	333	1.70	00:00:48	85.29%	52.25%
7.	facebook.com / referral	223	1.43	00:01:46	58.74%	82.51%
8.	isgtw.org / referral	104	1.27	00:01:03	34.62%	83.65%
9.	google.de / referral	46	1.74	00:01:39	93.48%	47.83%
10.	gridpp.ac.uk / referral	46	1.17	00:00:10	63.04%	86.96

At meetings, delegates are generally aware of GridCast. Posters are produced to advertise the blog to delegates. The poster is also published as a visual in iSGTW during the event. One question asked of delegates after the EGI Community Forum 2012 was whether delegates used any of the social networking and communication channels at the event. A third (around 30%) had accessed GridCast. There have been some obvious peak days in activity (23 Sept – 154; 9 Feb – 209; 29 March – 381 and 29 February –254) during conferences. However, feedback from focus groups held at the EGI Community Forum did reveal a slight reduction in visibility this year in printed promotion.

The email to ex-bloggers (see Appendix 5.1) also revealed that many did not know they had access to blog after the event they had been recruited for. Some bloggers are still unaware of GridCast's wide scope in that it covers all e-science and distributed computing events, not just grids. However, several expressed an interest in blogging next year and in recent months we've had a number of unsolicited blog entries (e.g. Carlos Jaime Barrios Hernandez at SCCAMP'12).

How does GridCast help bloggers?

Some of the advantages of blogging were noted at conferences. People find that having a shared resource to promote their work increases dissemination. Blogging communities also give participants the chance to make new connections with other people in their area. Writers also use the blog to test bed ideas for more in-depth articles. GridCast blogger has 100 registered users i.e. people are registered as bloggers. We surveyed those users in June 2012 (see Appendix 5.1). The project was able to gather this effect by asking whether anything has happened as a result of their blog post(s). Agnes Szeberenyi from the MTA SZTAKI project in Hungary received two inquiries (from a US project and an EU-based research team) after blogging, both proposing possible collaborations. She also

mentioned that a joint paper is being written that was inspired by her blog about the GLOBAL excursion project at the EGI Community Forum, *Never too early to start science!*[15]. Another GridCast blogger, Carlos Jaime Barrios Hernandez, said that people contact him about his posts directly. Beatrice Bressan, outreach coordinator of the TOTEM experiment, said she's blogged a few times during two conferences, and has had some positive feedback from readers.

How is GridCast influencing mainstream media?

This year, one blog post was also picked up by HPC Wire − a commercial publication with a large subscriber-base. During CloudScape IV, Morris Reidel discussed some take-away messages in his blog entitled, 'Interesting Discussions at CloudScape IV[16]'. An extract from this particular blog post was included in an article for HPC in the Cloud, entitled 'Cloudscape IV Spurs Discussion[17]' on 28 February 2012. Figure 10 shows a screen capture of the article.

Figure 10: Screen shot of blog 'pick up' in *HPC in the Cloud*

2.2.4 Recommendations

There is good evidence for impact of GridCast as an important resource for the niche audience it serves. However, the project has identified a few barriers to impact that we would like to address. Unlike resources aimed at the wider public, which can sometimes be measured by the overall popularity and traffic, the audience for GridCast is more specialised.

e-ScienceTalk will investigate other ways of tracking YouTube interaction, designed for use with the Blogger platform, and possibilities of using javascript programming to see when visitors scroll below a certain point on the page (tracking how many visitors view below the fold) or when controls on embedded videos are pressed (allowing you to track how many visitors not only start viewing your videos, but finish watching them). The project also plans to explore visitors' activity further through YouTube.com analytics.

[15] http://gridtalk-project.blogspot.co.uk/2011/09/never-too-early-to-start-science.html
[16] http://gridtalk-project.blogspot.co.uk/2012/02/interesting-discussions-at-cloudscape.html
[17] http://www.hpcinthecloud.com/hpccloud/2012-02-28/cloudscape_iv_spurs_discussion.html

e-ScienceTalk acknowledges that the percentage of people who know about GridCast (especially at an EGI event) should be higher and each GridCast needs greater publicity. Next year, we will improve its visibility, and plan to increase promotion and marketing of GridCast through posters, e-mail signatures and materials. One of the main ways we would like to increase impact is by contacting delegates prior to the event and providing ideas to on self-promote their contributions. Next year, GridCast also intends to survey its participant bloggers more regularly, and provide a sustained support base, for example inviting bloggers to get together at the start of an event and meet each other. This in turn, should build the community and provide the feedback to improve the blog, and its visibility.

An evaluation of competing blog platforms will be made to assess whether the current platform, the Google platform Blogger, is the most appropriate for the purposes of GridCast. This recommendation has a number of motivations, including the limitation on Blogger of having a maximum of 100 bloggers at any one time. Another limitation is in evaluating blog entries.

However, the main recommendations for year two relate to marketing GridCast rather than to evaluations. The project will also investigate whether we should rebrand the site (e.g. '*e-ScienceTalk'*) to reflect the widening of content from all aspects of distributed computing and computational science. If we were to rebrand GridCast, it would be wise to implement this before the next EGI Technical Forum in September 2012.

2.2.5 Sustainability

GridCast is building a strong sense of community through publicising the outcome of events. As with GridCafé, GridCast was originally produced by CERN and therefore has already been shown to be sustainable, having been transferred to GridTalk and then e-ScienceTalk. As the site relies on voluntary blogging by people outside the e-ScienceTalk project and building an online community of regular contributors, there is a sustainable model for maintenance in terms of contributions and updates. The blog has developed a loyal volunteer base over the last five years.

One of the unique selling points of GridCast is the integration of professional quality videos. Onsite filming at events, editing, sound design and promotion of video content is a valuable service. The YouTube channel and its video production, curation and editing are valuable making it one of the strong drivers of success. Estimated commercial freelance costs for this service are €500–€700 per day.

During busy periods when there are multiple events, the team are often in demand from multiple partners and the decision to attend an event is often based on location. For example, as some of our e-ScienceTalk members are based in Geneva, they were able with short notice to cover the outGRID-ITU High-Level Workshop. Some MoU partners have expressed a willingness to cover the cost of travel to community events. Suggested costs have been proposed to MoU partner CRISP and accepted for up to 2 events (3 days per event; a suggested rate of €500 per person for a European event; up to €2000 per person for a non-European event).

To foster a network of bloggers next year, GridCast will also cultivate 'Star Bloggers.' Star Bloggers are people, who blog from a number of events and blog multiple times. We have identified a number of people in the community, who fit this category (Elizabeth Leake, Agnes Szeberenyi and Carlos

Jaime Barrios Hernandez). Carlos intends to blog at number of events in Latin America, most recently the Super Computing and Distributed Computing Camp (at the Universidad de Los Andes, Mérida, Venezuela, July 8-14, 2012). GridCast will also continue to record all metrics and continually update our bloggers with both the blog and their own statistics. e-ScienceTalk also intends to monitor the average number of posts per event, number of page views, and monitor the average number of words per post. This would be good for identifying future 'Star Bloggers!'

Another way of increasing our exposure and in-kind support would be to identify and approach other blogs in the e-science arena. For example, there is an e-Science portal for New England Libraries (http://esciencecommunity.umassmed.edu/about/) and other bloggers (e.g. Blog of too many things[18], VizWorld Science[19], EGI Blog, Software Sustainability Blog[20] and Ask Steve![21]). e-ScienceTalk has built up relationships with scientific communities. MyScienceWork[22] is a network of researchers and scientists in France, and Community Manager, Célya Gruson-Daniel MSW, reposts many of our blog articles. Other people, who could be contacted, are those, who have added expert profiles to iSGTW. Six people have recently added their profiles to this section.

GridCast is aware that even after cultivating Star Bloggers to promote sustainability, the site will still need a moderator to administer the site. Over the last year, GridCast has built community links and fostered relationships with online bloggers and with our partners (SHIWA, N4U, We-NMR, CHAIN). It is envisioned that a moderator could look after the site during the event. We have also estimated that one day a month should be allocated to each event by the moderator. Work would involve recruiting bloggers and promoting blog posts through Twitter. It would also involve handling comments, reading feedback from visitors; handling polls and managing the blog from a mobile device. We still envisage that with a greater number of posts from voluntary bloggers and individual event moderators, GridCast would also need a coordinator for at least two days per month.

2.3 GridGuide and Real Time Monitor

2.3.1 Background

GridGuide (gridguide.org) is the youngest of the e-ScienceTalk products and gives a human face to the grid, showing the sites and sights of grid computing. Users can listen to podcasts from grid sites worldwide, read about the on-going work and watch interviews with researchers. As well as giving a visual overview of current grid work, GridGuide enables users to drill down to more detail about an individual scientist's work and how the grid has produced results. The GridGuide complements the GridCafé by providing a more in-depth guide to institutions across the globe that are involved in grids and distributed computing.

[18] http://itnomad.wordpress.com/
[19] http://www.vizworld.com
[20] http://www.software.ac.uk/blog
[21] http://asksteve.software.ac.uk/
[22] http://blog.mysciencework.com/en/

GridGuide has become increasingly interactive and accessible through co-development with the Real Time Monitor (RTM), which shows traffic on the worldwide grid in real time. The RTM (http://rtm.hep.ph.ic.ac.uk/) is a 3-D virtual globe that shows a live version of the job traffic on the grid, and the current integration with GridGuide allows a visitor to click on a site and view both the technical statistics from the RTM as well as the pages from GridGuide. The RTM is widely used for demonstrating the grid at conferences and events and is an accessible and engaging way to understand more about the grid.

2.3.2 Product metrics

One of the main aims of e-ScienceTalk was to increase the number of sites featured in the GridGuide including a higher proportion located outside Europe, representing work both in the grid arena, but also in related areas such as the network layer, supercomputing, volunteer and cloud computing. The e-ScienceTalk Description of Work [R1] outlines a target of 75 sites in total, to be achieved by the end of the project. The number of EU sites and non-EU sits are also recorded. As with other e-ScienceTalk products, we also monitored unique visitors and page views for the year.

e-ScienceTalk's aim is for the RTM to be available on a wider range of platforms and to show jobs from more sources. The two metrics used to examine the impact of RTM are countries in the RTM, number of delegates at events demo-ing the RTM. However, a number of other methods were used to assess the RTM this year, including an investigation into RTM users and their reliance on the RTM for outreach, funding and dissemination. Also, anecdotal evidence from demos at various events has been gathered.

2.3.3 What has been the impact of GridGuide and RTM?

GridGuide

At the end of the first year, there were 38 sites on GridGuide. The team have been liaising with EGI.eu and the National Grid Initiatives to increase on site users. Since September 2011, 28 sites have been added to GridGuide, and there are now 66 sites in total. There is now a greater geographical spread with ten North America sites, four South America, 36 Europe, one Africa, five Asia and three from Oceania. A campaign in April and May 2012 to improve the quality of content on existing sites was carried out but did not generate much activity by GridGuide site editors. The e-ScienceTalk team sent an email to all existing GridGuide site administrators encouraging them to contribute more information to their guide with the opportunity to win a special e-ScienceTalk-branded PaperNomad gadget case, or a runner's up prize of an e-ScienceTalk laptop sleeve. Only four grid hosts updated their sites. One site expressed an interest in joining the site after a message request in a Grid Computing group on Linked In[23]. José Miguel Franco Valiente from CIEMAT (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas) added a site in March 2012. Nineteen sites[24] were also added by the team in March 2012. The project is 88% on the way to achieving its

[23] http://www.linkedin.com/groupItem?view=&gid=50849&type=member&item=97500973&qid=60aef039-cb11-43cd-89a9-8b4df7a3ccaf&trk=group_most_popular-0-b-ttl&goback=.gmp_50849

[24] List of new guides:

1. Universitat Autònoma de Barcelona (UAB) 2. Niels Bohr Institute, Copenhagen University 3. University of Salerno 4. University of Indonesia, Depok, West Java and Salemba, Jakarta, Indonesia (inGRID would be a science article or something else) 5. Cornell 6.

target. Although the content and resource is useful, it is not fulfilling its creator's original intentions and motivating site administrators to generate and update their guides spontaneously.

The website traffic statistics for the first three quarters of PY2 were 1,178 unique visitors, and 1,875 page views, which are low in comparison to the other e-ScienceTalk sites. The pages per visit were 1.33 and the average time spent on site was 3 minutes and 11 seconds. This is an increase on last year's September to May figures (visits 1,260; unique visitors 917; page views 1,694; avg. visit duration 01:08) but is lower than anticipated. There were four days when traffic peaked, but this was modest (over 20 people). Visits are from Spain, France, UK, US and Switzerland. Figure 11 shows the geographical spread for GridGuide. Most traffic was via organic Google searches (46%) and 23% was direct traffic. The top referrers are all e-ScienceTalk websites - gridcafe.org (12%), e-sciencetalk.org (10%), RTM (1%) and GridCast. There was a very small percentage of traffic from social media (1.5%) of which Blogger and LinkedIn were the top social media referrers.

Real Time Monitor

During the last nine months, a number of new features have been added to the RTM (a GÉANT network layer and CMS file transfer history). Work has been done on integrating the RTM code with the most recent version of the WorldWind[25] software. During the EGI Community Forum, Richard Hughes-Jones from GÉANT asked about displaying the GÉANT network layer on the RTM. This was implemented soon after, in November 2011. A new layer for volunteer computing is also being investigated for the RTM. During the year, Janusz has been contacted by a number of individuals, who would like their site displayed on the RTM. The most recent request was from Kuwait. There are now 66 countries within the RTM (Date: 24 July 2012).

Tracking code for Google analytics was added to the RTM on the 14 December 2012 to gain a better understanding of who is accessing the website. e-ScienceTalk analysed the data available (from 14, December 2011 to 17, July 2012). During this period, there were 4,914 visits, 3,856 unique visitors, and 10,835 page views. The average visit duration was 2 minutes and 20 seconds. The bounce rate is the lowest out of all e-ScienceTalk products at 55%. However, this may be due to the fact that users keep the RTM browser open after downloading the application.

Most RTM visitors originate from the UK (571), the US (506) and France (428). However, there are a substantial number of visitors from India, Germany, Lithuania, Italy, Switzerland and Spain (see Figure 11: Geographical Spread of Visitors). Over a quarter (26%) of traffic to the site is via direct traffic from people who are actively looking for the site and know the URL. Half (51%) are through organic searches via search engines while 23% are through referrals. About 3% of visits were from the mobiles. The top referrer is the GridPP[26] website (205), GridCafé (108) CERN (89), e-ScienceTalk (75), Wikipedia (72) and GridGuide (61). Only a few visits were via social referral (1.2%); the RTM has not been substantially promoted through iSGTW/e_scitalk Twitter. However, it is interesting to note that the top social media referrers is Facebook. Over the last few months, there has been two small peaks in activity (February 28th: 60 people) and (Wednesday 20 June: 58 people). The first can be explained by e-ScienceTalk's presence at the ISGC meeting and the second spike is possibly due to the recent mail-out to users.

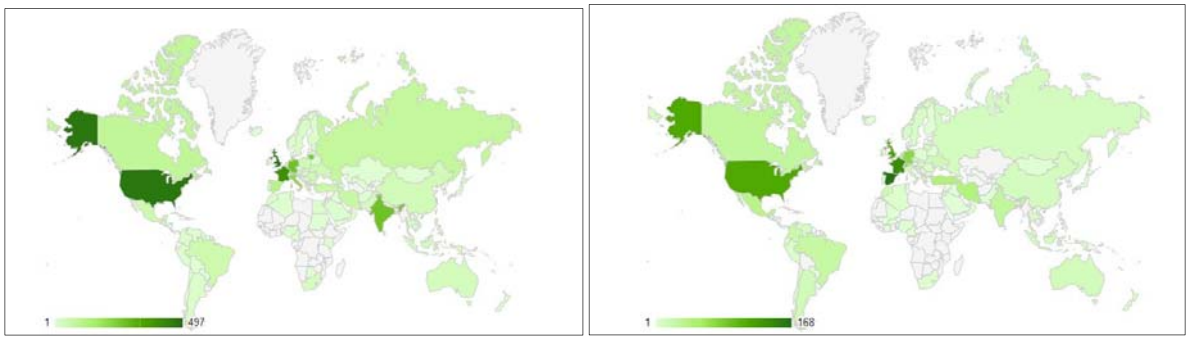
U.Michigan 8.University of Groningen 9. University of Utrecht 10. University of Amsterdam 11. Universidad Federal de Campina Grande, Campina-Grande, Brazil 12 Universidad de Los Andes (ULA), Merida, Venezuela 13. Brookhaven National Laboratory 14. Triumf 15. Texas A&M 16. Texas Tech University 17. Purdue 18. University of Florida 19. White Rose Grid

[25] http://www.worldwindcentral.com/wiki/NASA_World_Wind_Download

[26] gridpp.ac.uk

Figure 11: Geographical Spread of Visitors to the RTM and GridGuide website visitors

RTM *GridGuide*



In the last nine months the RTM has been used by numerous partners worldwide as a permanent fixture in their institute or as a part of tours given by them to visitors. Alongside this the e-ScienceTalk team, EGI and others have use the display at 10 meetings with almost 12,000 attendees. These have included teachers, students, the press, politicians and members of the IT and grid communities.

After the first year, it was noted that not much was known about users who actually download and run the RTM on a regular basis. This is because new subscribers are not requested to fill out their institutional or personal details. Although a lack of registration procedure encourages greater accessibility and anonymity for users, it hampers e-ScienceTalk's ability to gather feedback from users.

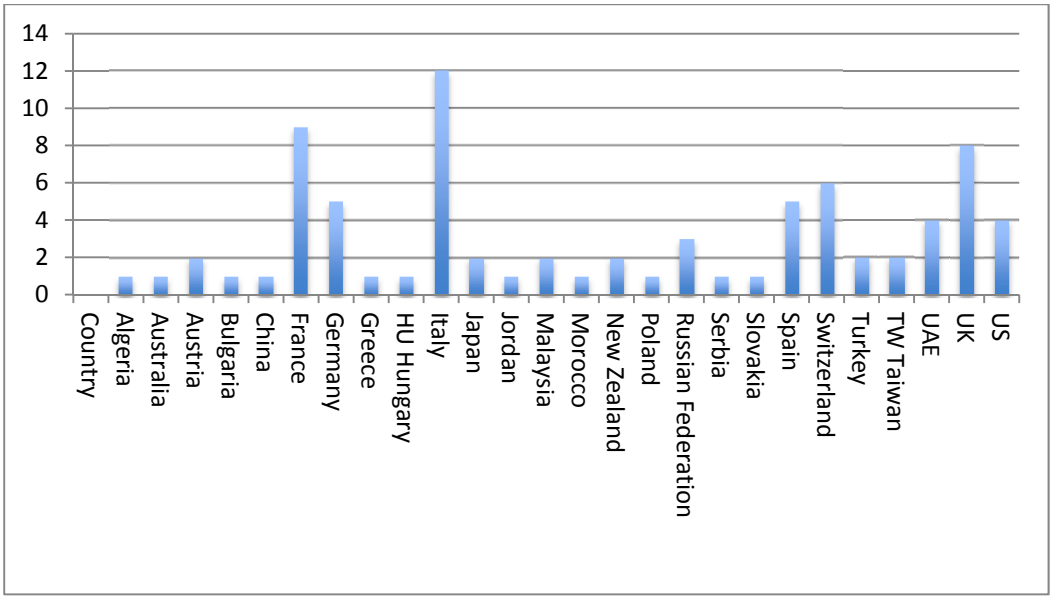
In the project's second year (PY2), e-ScienceTalk set out to examine how people were utilising this unique resource and that impact. In June 2012, the top 100 Internet Protocol (IP) addresses were obtained from the RTM for analysis (see Appendix 5.2). An IP address is a unique number that every computer connected to the internet is assigned. This data went back to 6 May 2010. From these numbers, the country of origin and institute of origin was acquired using various online tools (iptrackeronline.com/). The top five users are based in Italy, UK, Germany, France and Spain. IP analysis revealed a number of important institutions are running the RTM including some highly-recognised worldwide establishments (Österreichische Akademie der Wissenschaften, Istituto Nazionale di Fisica Nucleare - Sez. di Catania, Roma Tre University, Oxford University, University of Glasgow, Max-Planck-Institut für Physik, the CC-IN2P).

Forty emails were sent to various institutions to solicit information on how the RTM is being used (see Appendix 5.2). Further feedback is included in *D4.4 Annual Report on Feedback and Metrics*. From these investigations, e-ScienceTalk found that the RTM is being utilised for both outreach, educational and demonstration purposes over a wide geographical spread (see Figure 12). For example, two RTM monitors are installed by the Academia Sinica Grid Computing in Taiwan. Here, the RTM is used to demonstrate global grid traffic (for both infrastructure and applications). ASGC is part of this backbone and functions as a Tier-1 Center for the Worldwide Large Hadron Collider Computing Grid (WLCG) making it one of only eleven such centers around the globe. One RTM monitor can be found at the operation shift seat and the other is installed at the demonstration screen-wall in the data center. Eric Yen, the technical manager at ASGC, explained that, "The purpose of the RTM for us is mainly

for demonstration, training and education purposes. The RTM is used once in a week".

The Instituto de Fisica de Cantabria (IFCA) use the RTM especially on school visits, in order to show them the grid's "live" status, which happens either a couple of times per month or during special "open doors" weeks. Another user of the RTM is Fairouz Malek from the Centre National de la Recherche Scientifique and LCG-France (which is also part of the WLCG). The LHC France use the RTM to demonstrate the functioning of WLCG or when they have to showcase the grid to countries not yet involved. The RTM runs continuously, with minor breaks. e-ScienceTalk has also confirmed that the University of Alberta (UoA), a WLCG Tier 2 site that is supporting ATLAS, also runs the RTM. Erming Pei is the System Analyst/Grid Specialist at UoA and is also a RTM enthusiast: "We set up some displays for local/global WLCG site monitoring in University of Alberta. RTM is in one of those displays. It's basically running all the time, except some breaks due to desktop sleeping". David Britton from Glasgow University uses the RTM about 5 to 10 times a year to demonstrate the worldwide computing Grid when he gives a talk to a public or non-specialised audience.

Figure 12 shows the geographical distribution of RTM users.



The RTM has been recognized by software experts. In early September 2011, an editor from Softpedia[27] emailed the team, as the Real Time Monitor had been added to their database. It is featured with a description text, screenshots, download links and technical details[28]. The entry includes the editor's own opinions on the program itself. In early June 2011, we received an email from Harry Cliff (a physicist) at the Science Museum, UK. The Science Museum is developing a major new temporary exhibition on the Large Hadron Collider, which will open in autumn 2013. The Real Time Monitor was "something we've looked at and been impressed by" said Dr Cliff.

2.3.4 Recommendations

[27] http://www.softpedia.com/

[28] http://mac.softpedia.com/get/Utilities/Real-Time-Monitor.shtml.

GridGuide

Developing and editing content for new GridGuide sites by members of the e-ScienceTalk team was carried out in PQ5 and PQ6. The site needs heavier promotion if it is to be utilised fully and GridGuide is atill the least known e-ScienceTalk product. As most traffic to GridGuide comes from other e-ScienceTalk products, cross-marketing with more internal links in GridCafe and iSGTW could help increase the visibility of this resource. Currently, there are no referrals from iSGTW, and the newsletter could be used to promote the resource to e-Science researchers. We will also set up an automatic alert through Google analytics if the site receives more than 20 visits in one day.

For the RTM, it would be useful to set conversion goals, to see what percentage of visitors launch the RTM. Other methods for measuring impact also call for a marketing strategy to advertise the RTM and gather feedback via Google+ or a more targeted approach (possibly through an activity) at conferences and meetings. The six or seven flagship users identified could be contacted with a more in-depth questionnaire or interview to find out more detailed feedback. It would be useful to compare sites on the RTM (393 sites[29] accessed on July 1st) to those using the RTM for demonstration purposes.

2.3.5 Sustainability

GridGuide is an innovative and attractive product but its audience is as yet not as well defined as the other e-ScienceTalk products. There was a low response to our campaign to increase the content on existing guides. Our strategy this year will be to investigate whether the information on GridGuide could be incorporated into another e-ScienceTalk product. For example, the information provided by the site is essential but could be transferred to a more popular and well-used site such as the iSGTW self-generated Community hub[30] section or the People section of e-ScienceCity. People do look for this time of information as our GridCafe survey results show (section 2.1.3).

The RTM has previously received development funding from GridPP, the UK's grid for physics. For maintenance and core development, 0.5FTE effort per year is required. e-ScienceTalk could investigate shared supporting options with existing or new partners or users, as part of national or international project proposals. It is unlikely that the RTM could be maintained using best effort or volunteer effort.

We asked what extra information people would like to see on the RTM (e.g. a breakdown of what fraction of the jobs are running in which country). There were a number of detailed responses to this question. The fact, that people have such strong opinion on the RTM, suggest it is well-used and is serving its purpose. More information will be supplied in *D4.4 Annual Report on Feedback and Metrics* [D5].

29 http://gridportal-ws01.hep.ph.ic.ac.uk/dynamic_information/egee-locations.xml

30 http://www.isgtw.org/community

2.4 e-Science Briefings

2.4.1 Background

e-ScienceTalk continues the successful series of GridBriefings, renamed e-ScienceBriefings in Q2 which are aimed at policy makers in all layers of government and industry, describing for a non-technical audience how long-term investments in e-infrastructures have led to concrete results. The reports provide useful policy metrics, in terms of investment, manpower and spin-offs in science and industry, and also put results into the context of the overarching research themes supported by the European Commission. e-ScienceBriefings have covered a range of issues that were relevant to this year's agenda (Desktop grids, Research Networks, Visualisation and Open Science/Open Data).

2.4.2 Product metrics

The e-ScienceTalk Description of Work [R1] for Work Package 1 (WP1) recommended analysing three key metrics to measure our audience. During year two, some of the metrics were increased to reflect the project's achievements during year one, including the number of projects covered (target: 30 per year; an increase of 10), the number of reports printed and published (target: 4 per year) and number of countries where reports and/or briefings are distributed (target: 30 year). In addition to the top-line project metrics, we also examined a number of other metrics at work package level, including the number of policy events organised and the number of attendees at policy events. Three new metrics were incorporated; policy events attended by e-ScienceTalk, number of delegates at policy events attended by e-ScienceTalk and the number of downloads of policy documents.

Assessing how the e-ScienceBriefings have impacted upon or influenced their intended audiences in concrete ways is challenging. The project sent a questionnaire in Zoomerang[31] after releasing the e-ScienceBriefing on Visualisation. The survey was short (including six questions), and asked what people like about the briefings and an opportunity to give suggestions for improving and a poll of future topics. Question two was particularly relevant for evaluating impact, as briefing recipients were asked how they make use of the briefings. Comments, compliments and suggestions from the various policy events were also recorded by e-ScienceTalk WP1 members.

2.4.3 What has been the impact of e-ScienceBriefings?

E- ScienceTalk has increased circulation and broadened the scope of the e-ScienceBriefings. Four briefings have been published since September 2011. The first was published in Q1 on the important subject of citizen science, 'Desktop grids: Connecting everyone to science[32]'. The briefing was well received at the Citizen CyberScience Summit in February 2012 at University College London. A second briefing was published in February on GÉANT research networks[33] and a third on visualisation of data[34]. The fourth briefing was published in July 2012, and is on the topic of Open Science/Open Data. Each briefing covers a number of different projects, institutions and collaborations. For example,

[31] http://www.zoomerang.com/Survey/WEB22EXEWE5XUQ
[32] http://www.e-sciencetalk.org/briefings/EST-Briefing-19-DesktopGrid-w.pdf
[33] http://www.e-sciencetalk.org/briefings/EST-Briefing-20-Network-Final-cc.pdf
[34] http://www.e-sciencetalk.org/briefings/EST-Briefing-21-Visualisation-v07.pdf

within the four page spread, the Desktop grids briefings included 19 projects and the Research Networks briefing mentioned 18 projects[35]. The number of projects included per year in briefings will exceed the target of 30.

A newsletter manager allows us to add and manage users along with creating and email newsletters. Currently, there are 134 registered subscribers to the electronic mailing list. However, we have observed that more people receive the briefings, as a number of list members' forward the briefings on, acting as multipliers. Their roles are as Dissemination Officers or individuals in charge of outreach for their organisation. Although, the email list has limited circulation through the subscriber list, many people, when asked at conferences, recognize the format. e-ScienceTalk has also been tracking its campaigns through Twitter and URL shortening services[36].

Printed briefings were also physically distributed at meetings, and the team attended a number of policy meetings this year (the 9th e-Infrastructure Concertation meeting, ERF Workshop "The Socio-Economic Relevance of Research Infrastructures" in Hamburg, CloudScape IV and e-IRG-Workshops).

The technical team have implemented two methods for gauging online interest. AddThis[37] media sharing functionality data was added to the briefings page in May 2012. The combination of the social plugins and real-time analytics has enabled e-ScienceTalk to both increase and monitor its engagement across multiple social media platforms. Since implementation, e-ScienceTalk has noticed that people are increasingly sharing the documents. On 1 July, we noted how many people had shared the page on social media platforms (1 'Like on Facebook; 12 tweets, 1 share on Google+ and 5 Shares). Many people have also downloaded the PDF version, and this can be verified by tracking the number of downloads. This feature was implemented in September 2011, and allows the team to see the country of origin of the download. In total, there have been 5766 downloads of e-ScienceBriefings. This year, two briefing topics proved particularly popular (Desktop grids [574] and Visualisations [379]). The number of downloads could be due to the fact that projects included in the briefings, often add the publication to their press page (see the DECIDE project)[38] increasing the each individual briefing's reach.

The Zoomerang survey of subscribers received a low response rate of five out of 123 subscribers. The results, however, were encouraging with two people acknowledging that briefings helped them explain e-science topics to those new in the field. Two people had printed off copies for meeting, and one had emailed it on to others. All five were already subscribers of iSGTW indicating that there is some cross-over between the two lists. More detailed feedback on each of these products – which areas are useful and interesting, what could be improved, the quality and balance of content – is included in the *D4.4 Annual Report on Feedback and Metrics* document (R5).

Another Zoomerang survey has demonstrated the popularity of e-ScienceBriefings. The EGI Community Forum Feedback Survey asked delegates to tick which free publications they would like to receive. Delegates were given a choice of seven publications including HPCWire, GlobusWorld,

[35] 1. GEANT 2. JIVE 3. WLCG 4. TEIN3 4. European Bioinformatics Institute 5. TERENA 6. DANTE 7. AfricaConnect 8. DECIDE 9. LHC ops 10. Edinburgh University 11. CAREN 12. RedClara 13. SurfNet 14. ASTRA 15 GILDA 16. OGF 17. Internet2 18. EGI

[36] http://v.gd/stats.php?url=esciencebriefings

[37] http://www.addthis.com/

[38] https://www.eu-decide.eu/index.php/documents/cat_view/15-press-coverage

Datanami and the EGI-InSPIRE newsletter. The survey subsequently collected their email addresses, and 17 people answered this question. The majority (over 73%) requested a subscription to the briefings, and out of the seven it was the most requested publication.

Although, the email list has limited circulation through the subscriber list, many people, when asked at conferences e-ScienceTalk regularly attend, recognize the format. However, we have also noted that in an ad-hoc poll at two policy-related meetings this year (e-IRG Workshop and ERF's *Socio-Economic Impact of Research Infrastructures*) eight out of nine respondents were unaware of the e-ScienceBriefings. However, the feedback on reading the briefings was good. Nick Jones of BeSTGRID in New Zealand said that our briefings were very interesting and covered the subject areas well, and Keith Rochford of the Dublin Institute for Advanced Studies in Ireland said that he enjoyed reading the briefings because they summarized key issues succinctly.

Over the course of the year, e-ScienceTalk has uploaded comments/unsolicited emails to an 'e-ScienceBriefings' feedback log. All responses are included in *D4.4 Annual Report on Feedback and Metrics document (R5*).

2.4.4 Recommendations

While a full survey investigating to what extent respondents are aware of e-ScienceTalk's policy documents is recommended, it should also be realised that assessing feedback from policymakers, the Briefings' target audience, is best achieved face to face at events, rather than through surveys. Next year, our impact evaluation will continue with a similar approach. However, we will modify the Zoomerang survey for our next topic on Open Science/Open Data. A further question will be incorporated asking for more detailed feedback via an in-depth interview. e-ScienceTalk will also approach our MoU partners for feedback on briefings.

One of the main goals of e-ScienceBriefings is to publicise project results through case studies. e-ScienceTalk would like to survey all projects that have been included in the briefings – whether they have been quoted or included as case studies – to see if there has been any indirect or direct effects from the increase in visibility. Projects could potentially be followed up one-to-two months after the briefing is circulated to see if anything has happened as result. This could potentially be carried out for our latest Visualisation briefing. We will prepare a short questionnaire or a direct email asking whether there have been any impacts that could be attributed to the briefing. We intend to survey whether projects feel e-ScienceBriefings have been successful in showing funders that the work has an impact. It would be of interest to know if inclusion in the briefing has helped raised awareness of the project to potential users, collaborators, or prospective funders, or whether the project has had an increase in queries as a result.

Next year, e-ScienceTalk would like to increase the numbers on our subscriber list. An audit would help us gain a valuable insight into the demographics of the list. For example, it would be interesting to see what percentage have industry, media and political backgrounds. It could feed into a marketing strategy to boost numbers. To increase visibility of the briefings, e-ScienceTalk will ask all its MoU partners to link to the briefings page from their websites. e-ScienceTalk would also like to work with partners on translating the briefings into Spanish to increase the publications reach.

After the September 2012 briefing, e-ScienceTalk will send a compilation of all the previous e-Science Briefings and GridBriefings from the lifetime of e-ScienceTalk to policy makers in Europe. We will include a survey, but we would first like to investigate which office within the European Commission is reading the documents. We have identified a publication with a similar format/intent but much broader scope in the UK. Parliamentary Office of Science and Technology publishes 20–30 POSTnotes[39] (short briefing notes) each year, along with occasional longer reports.

2.4.5 Sustainability

e-ScienceBriefings again provide an independent voice and shared platform for projects to show-case their work under a collective brand. The briefings continue to be well-regarded by the community, and the quote below is indicative of the continued positive feedback:

> *"I have contributed to e-ScienceBriefings. It is a beautiful publication and I love that it is printed. It is so important because it is a very graphical snapshot of what's important today for the hands of legislators and policymakers. I actually stole one to show the National Science Foundation."*

The e-ScienceTalk project will need to find a suitable project or partner to continue producing the briefings. Next year's impact strategy, outlined above, should help support our case for continued publication in terms of impact on policy makers. Finding a main supporting partner for the briefings may, however be difficult, unless e-ScienceTalk works alongside a partner with a policy agenda (e.g. e-IRG, EUGridPMA or Open Grid Forum).

During the last year, three different people have been responsible for producing briefings. We have estimated that each briefing takes approximately three weeks to develop (one week of research case studies and source images, one week to write and edit and the final week to gather feedback and make corrections). The time and effort would have to be funded, as content curation is a key component. Printing and design costs are minimal per briefing, but this would still need to be funded, as would the design effort in laying out the briefings, which typically takes 1-2 days per briefing with edits.

If the e-ScienceTalk project does not receive additional funding to publish further briefings, the e-ScienceBriefings that are currently archived on the e-ScienceTalk website can be potentially uploaded and monitored in an archived repository. This would ensure the resource is available to all those who need it, whenever they require it. Most partners already upload the e-ScienceBriefings on their websites (e-IRG). If further funding were unavailable, next year, it would be good to have commitment from partners and MoU collaborating projects on uploading all briefings to their website.

2.5 iSGTW

2.5.1 Background

[39] http://www.parliament.uk/mps-lords-and-offices/offices/bicameral/post/publications/

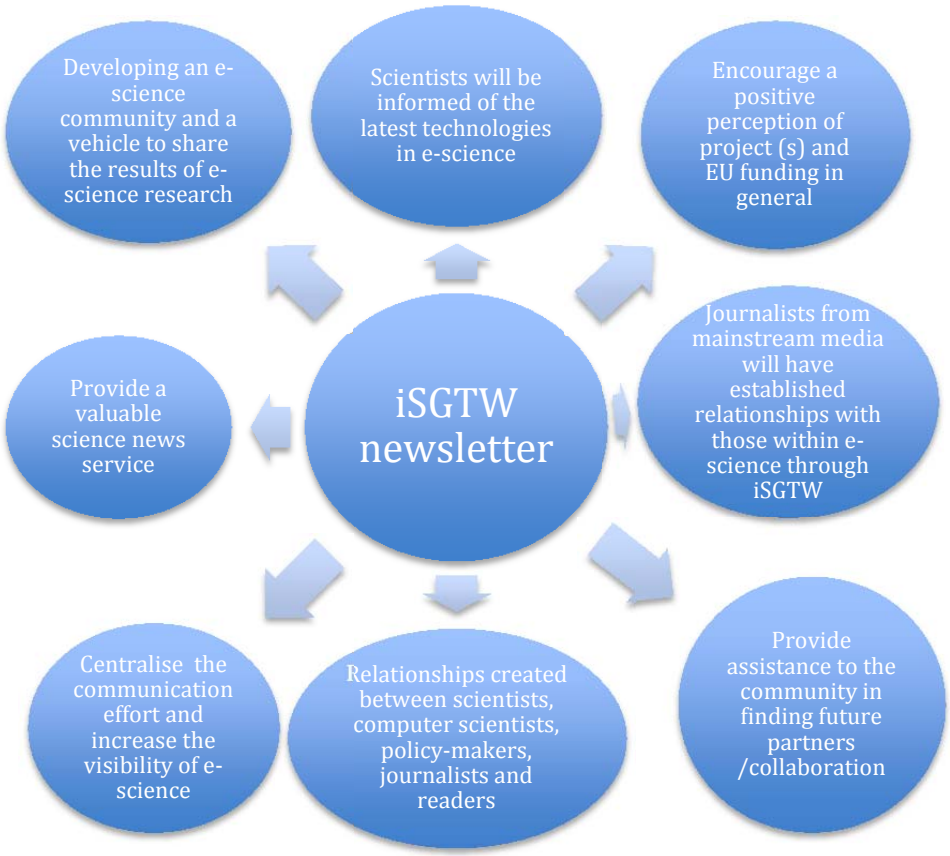
During e-ScienceTalk, the weekly online newsletter, *International Science Grid This Week* (www.isgtw.org) has broadened its scope significantly to cover e-Infrastructures such as supercomputing, distributed computing, networks, data, cloud and volunteer computing, other forms of distributed computing and their impact on grid development. The newsletter now covers a broad range of international, national and regional grid projects, as well as related developments in the wider world of modern science and research.

In May 2011, we started a more aggressive campaign to promote iSGTW through branded social media and news aggregators. Social media has the advantage of providing a real-time voice for iSGTW and an opportunity to share content from other industry sources. In addition, more people can discover iSGTW content (@isgtw and iSGTW Facebook), and this therefore increases the exposure/reach of the project. iSGTW regularly tweets its articles daily, as well as stories around distributed computing and the science it enables and e-ScienceTalk project/partner events and announcements.

2.5.2 Product Metrics

To assess the impact of iSGTW, a number of key metrics are being tracked during the project. Both the number of subscribers (target: increase by 30% by close of project) and the number of articles in iSGTW on European projects (target: 50 per year) have been monitored. e-ScienceTalk is also monitoring social media subscribers (Twitter, Facebook etc.). Subscribers are readers who have signed up to receive the publication each week by email. Other metrics that have been examined include the number of projects in the iSGTW/GridCafé resources section, which has been increased by 50 since last year (target: 150 by close of project) and the number of iSGTW printed materials distributed to European projects (target: 1000 by close of project). At the start of our second year, e-ScienceTalk listed our intended outcomes and also some impact goals (see Figure 13).

Figure 13: Possible Impacts for iSGTW



Social media/media influence

This year, e-ScienceTalk has continued to monitor the impact of these strategies in attracting our target audiences and promoting iSGTW. Part of the impact evaluation process was to measure the effects of social media. This was done through examining the percentage of referrals from social media with Google Analytics, and a number of other third party tools. Social media can also help us gain insights into audiences and issues, and solicit feedback to enhance the editorial experience. e-ScienceTalk reports the most popular articles and media pick-ups in monthly reports to the iSGTW Advisory Board. iSGTW uses a number of tools to measure success and impact on its audiences (iSGTWs reach, engagement, influence and significance).

- Reach. How many people are listening? Counts and analytics (e.g. 'Friends', 'Followers', RSS feeds)
- How many people are engaging with content (it's Resonance).How many people are actively participating? Counting, Google analytics AddThis (e.g. bookmarking, sharing) and interactions (e.g. Twitter retweets and mentions). How many people are forwarding our messages? Twitter tools (e.g. Retweetrank[40], Tweetreach[41], Topsy[42]), Google Analytics AddThis, Googling pick-ups, Social Mention
- Influence and significance. How influential is iSGTW and iSGTW's editor? iGSTW examines Klout scores. iSGTW has also examined its followers via a Twitter website called

[40] http://www.retweetrank.com
[41] http://tweetreach.com
[42] http://topsy.com/

Twiangulate[43] that analyses your followers and their connections. iSGTW is comparing its social media statistics to HPC Wire (hpcwire.com/) and Datanami (datanami.com) on a monthly basis.

Media analysis

iSGTW has carried out a comprehensive media analysis of its exposure for three quarters of the second year of the e-ScienceTalk project (from September 2011 until May 2012). The archive gives an indication of the types of media (blogs, websites, computer magazines) that have 'picked up' iSGTW stories. In this context, a 'pick-up' is defined where content has either been republished, translated or commented on by bloggers or journalists. The methodology for analysis included googling for both the magazine acronym (iSGTW), full magazine title (International Science Grids This Week) and also for individual article titles. Any mentions/pick-ups relating to projects directly linked to the story were removed. This type of republishing is more reciprocal.

Readership survey

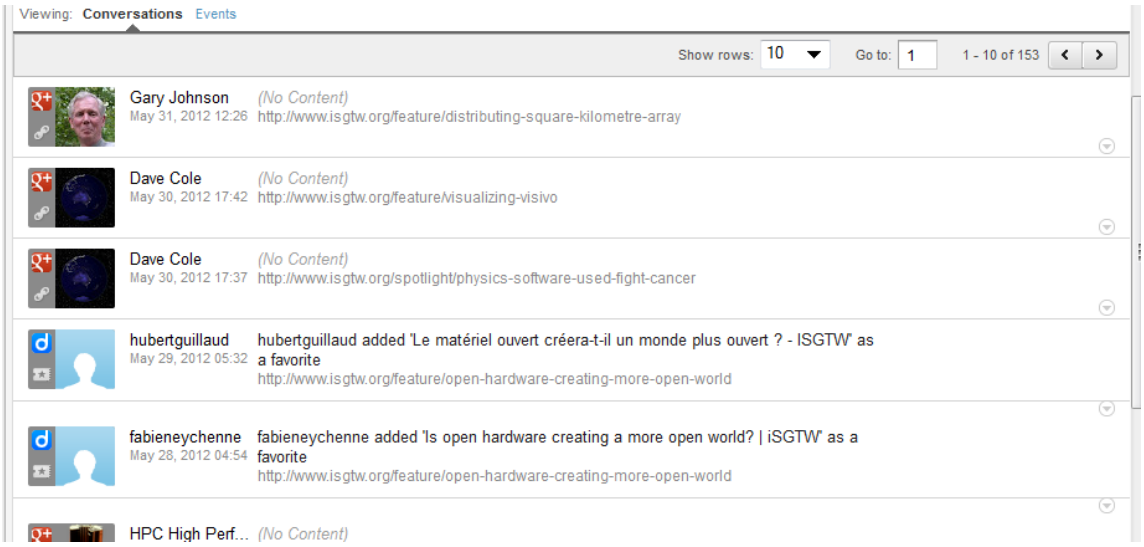
In this report, we will also analyse some of the preliminary findings from the iSGTW Readership Survey. Fourteen questions were emailed to the entire subscriber list, and there have been 252 responses to the survey. Two questions relating to the impact of the magazine were incorporated into the iSGTW Readership Survey. Question 10 asks readers, "What actions have you taken as a result of reading iSGTW?" iSGTW would like to find out whether people discuss or forward an article or issue (emailed, tweeted etc.) and whether people recommend the newsletter to a colleague. This is a good way of finding out how subscribers use the content and tackles the question of impact.

Articles/interactions

Other parameters that were investigated include analysing the geographic spread of articles published. iSGTW has also gathered other information and data on its interactions/conversations such as comments on posts. The activity stream in Google analytics allows you to see how people engage with, share, and discuss content on social networks. Over 80% of interactions with content take place on sites other than the content owner's website. This is difficult to track in the social media landscape. Typically, people see your video or blog post and share it because it's interesting, inspiring, or controversial. The Activity Stream in Google analytics shows the URLs they shared, how and where they shared (via a "reshare", a "post", or a "comment" on Google+, for example), and what they said (see Figure 14). iSGTW is also recording content topics (e.g. numbers of grid computing, HPC articles), and recording all comments. iSGTW also track the number of comments on the website.

Figure 14: Google analytics: Engagement report.

[43] http://twiangulate.com/search/



Website traffic

iSGTW is also keeping track on a monthly basis on its page views, unique visitors, website stickiness (average number of page hits per visitor), referral traffic, demographics, most popular articles and top five searches etc.

Focus groups

During the EGI Community Forum 2012, a small focus group was carried out. Some of the questions help us to understand iSGTWs impact.

2.5.3 What has been the impact of iSGTW

What is our current reach?

e-ScienceTalk aims to increase subscriber numbers by 30% (to 8,529) by May 2013. Currently, e-ScienceTalk has 8169 subscribers so it is only 360 subscribers off its target. Figure 15 shows the number of monthly subscribers. We acknowledge that e-ScienceTalk was more active in its first year in driving up subscriptions. However, in June this year, we had a campaign to increase our followers by promoting through our partnering projects (WeNMR, SHIWA, Global Excursion and N4U).Our main focus this year was on increasing our social media followers.

There is a growing trend for readers to consume media differently and through different channels. We now have an increasing number of people following iSGTW on Facebook and Twitter. In our last *D1.3 Annual Impact and Sustainability Report* we reported 100 'Likes'. On July 14th 2012, we have a total of 574 'Likes'. In May 2011, iSGTW had only 274 Twitter followers, but now has 1,171 Followers (see Figure 16). There is an average increase of 79 followers per month. This trend shows that a greater number of people are listening and our reach is increasing. iSGTW reach can be estimated by counting a sum of subscribers, 'Friends' (578), 'Followers' (1171) and RSS feeds (900), and this has grown over time. We have 2649 followers through social media (Facebook+Twitter+RSS feeds).

Figure 15: Monthly newsletter subscriptions

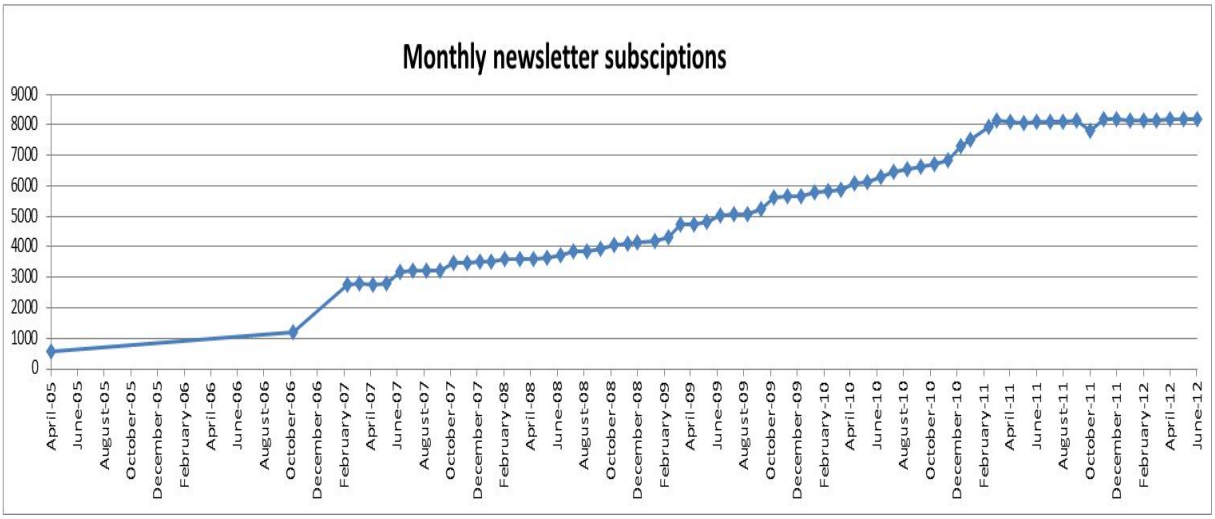
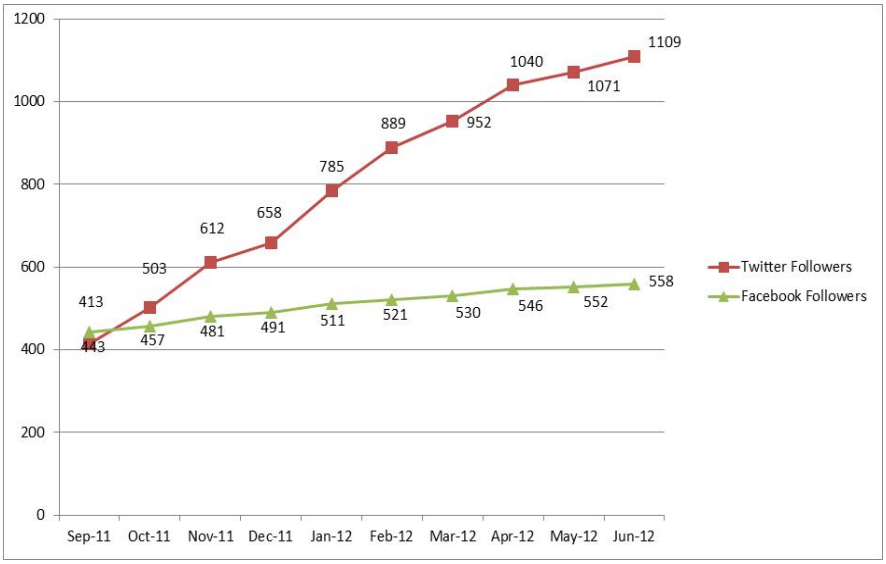


Figure 16: Twitter and Facebook followers



The statistics from Google analytics indicate that time investment has been effective as referrals from social media have increased in a year (Q1 vs. Q5). Since Q1, Facebook referrals have increased by 300% (538 to 1,721) and Twitter referrals have increased thirteen-fold (from 385 visits to 5,120). Also, the average time on the site has increased for these social media visitors (see Figure 17). In April 2011, almost all of the traffic to the iSGTW website can be attributed to three sources: the newsletter (approximately 37% in April 2011), search engines (36%), and social media sites (about 7%). In Feb 2012, traffic comes from a variety of sources: the newsletter (23.22%), search engines (50.3%) social media sites (about 20.6%) such as Twitter, Facebook, Stumbleupon, Slashdot, Wikipedia and LinkedIn. In less than a year, there has been a 13% increase in social media referrers. From September 2011 until end of May 2012, over 31,022 visits (16.84%) have been via social referral sites (17, July 2012).

There is therefore a good return on our investment for iSGTW time spent on social media which adds up to approximately six hours a week. Using social media to promote iSGTW stories has been particularly useful during the winter holiday and summer holiday period when online traffic typically falls. For example, iSGTW has used Twitter and other social media tools to publish during the 2011 winter holiday period which helped increase our website traffic.

Figure 17: Sept 2010 to Nov 2010 [Q1] vs. Sept 2011 to Nov 2011 [Q5]

Source	Visits	Av. Duration on Site		Source	Visits	Av. Duration on Site
(direct)	15,027	01:58		google / organic	18,535	01:08
google / organic	14,718	01:18		(direct)	14,703	02:22
google.com	4,417	00:39		**t.co**	5,120	01:23
google.co.in	985	00:29		**stumbleupon.com**	3,725	00:35
google.co.uk	687	00:35		**facebook.com**	1,721	01:49
facebook.com	538	00:28		google.com	855	01:01
google.de	489	00:26		**reddit.com**	671	00:22
google.ca	388	00:36		public.web.cern.ch	564	01:55
twitter.com	385	00:28		boinc.berkeley.edu	481	01:44
yahoo	363	01:07		**twitter.com**	363	02:27
	48,552	01:18			53,229	01:37

Who is visiting?

During the first nine months of e-ScienceTalk (Sept 1st 2010 until May 30th 2011), there were 81,941 unique visitors to the website, and 181,436 page views of the website. During the same period in 2012 (1, Sept 2011 until 30, May 2012), unique visitors increased by a third to 128,329, and page views increased to 247,412. Figure 18 and 19 shows the increase in page views and unique visitors since the final year of GridTalk.

Figure 18: Unique visitors for first three quarters

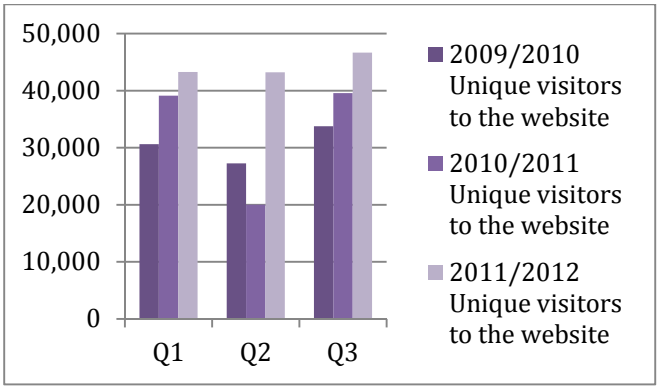
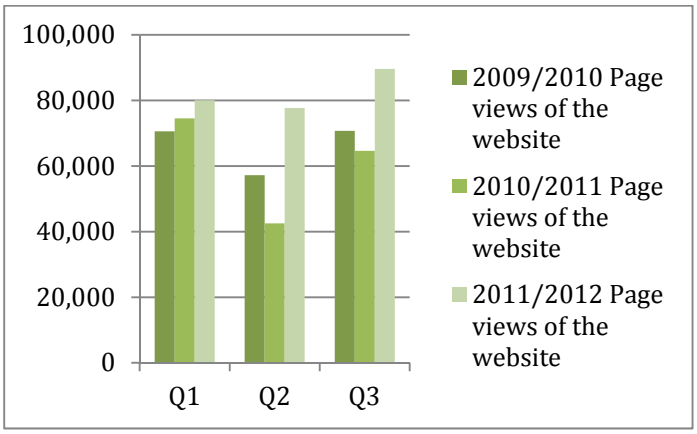
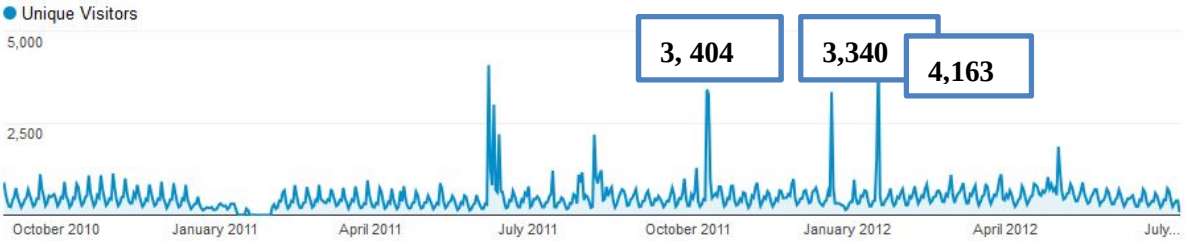


Figure 19: Page views for first three quarters



Three noticeable increases in traffic occurred this year with over 2,500 unique visitors (see Figure 20). All spikes can be directly linked to popular articles. The first spike occurred on [1.] 12 October 2011 (3,404; *Accelerate physics with your own computer*[44]) and the [2.] second on 23, December 2011 (3,340; *The Tevatron's enduring computing legacy*[45]). [3.] On Thursday, January 19th, 2012, iSGTW had a third spike in traffic with 4,163 unique visitors due to a Spotlight feature (*The Royal Society opens up permanently*[46]). The articles received 212 'Likes' on Facebook. In our first year (PY1), there were only two occasions when noticeable increases in traffic occurred. Both were from the same article. On the 8, June 2011 (4,070; *CERN lends a hand to the origin of life*[47] with 261 'Likes'*)* and two days later, there was another spike on 11 June, 2011 (2,998). This shows our content is generating more buzz, with a growing readership.

Figure 20 shows iSGTW traffic to the website over the first three quarters of e-ScienceTalk PY2 (observe three peaks in traffic)

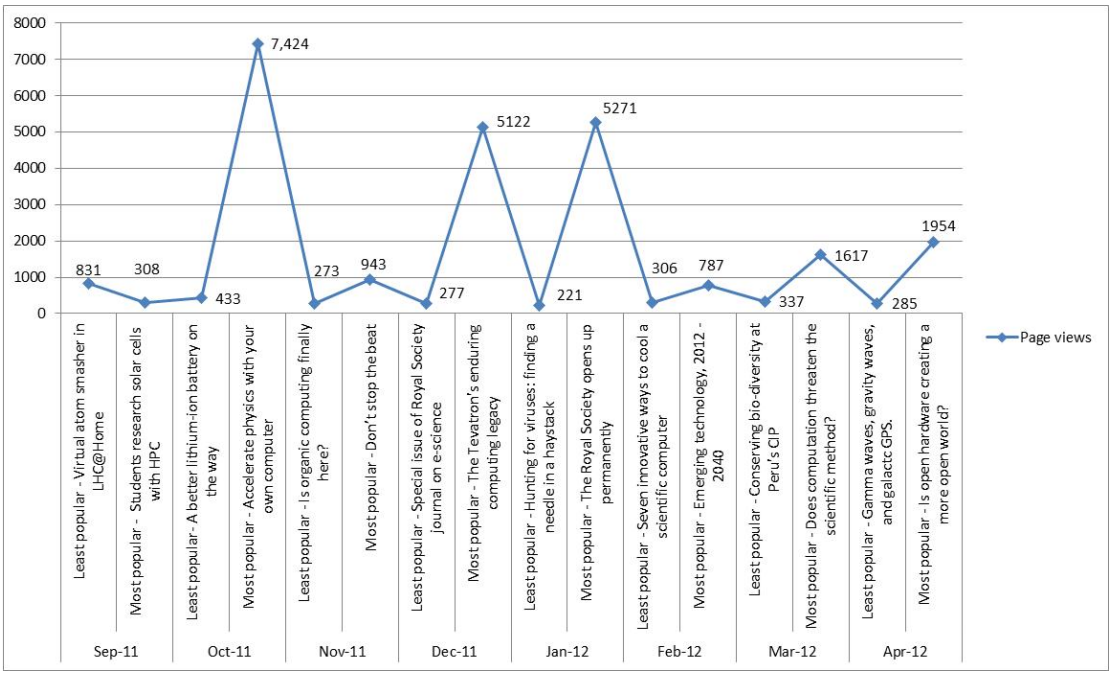


[44] http://www.isgtw.org/feature/accelerate-physics-your-own-computer

[45] http://www.isgtw.org/feature/tevatrons-enduring-computing-legacy

[46] http://www.isgtw.org/spotlight/royal-society-opens-permanently

[47] http://www.isgtw.org/feature/cern-lends-hand-origin-life



How are visitors discovering iSGTW?

In PY2 during Q5,Q6 and Q7, the largest percentage of visits are from the US (56,223) and the UK (14,016), but there are people coming from Germany, Canada, India, France, Switzerland, Italy, Spain and the Netherlands. A larger percentage of people read iSGTW on a mobile device (8.9%), which is higher than for other e-ScienceTalk products. In quarter six (Q6), we had the highest geographical diversity with visitors from 173 countries.

Most of the traffic is via searches (38.2%). However, iSGTW does receive 25% through direct traffic, most likely via the weekly newsletter. Over a third (35.93%) of traffic is through referrals. Most search words are not provided. We have received some internal referrals from e-ScienceTalk (181) and a number from other online magazines (133 from Inside HPC and 455 from Symmetry). The top referrer is the Twitter shortening t.co (10,047; 16.95%) and Facebook (5,406; 10.99%). Figure 21 shows referral traffic from September 2011 until May 2012. This again supports our investment in developing our social media strategy. People, who visit through social media channels, Facebook and Twitter, also visit for long periods of time than for direct traffic.

One interesting trend that we noticed was that brand recognition influences how long visitors stay on the site. For example, we noticed an interesting trend when looking at data for Q5 on Google Analytics data. It shows that when you search 'iSGTW' there were 897 visits with visitors viewing 4.16 pages per visit, and taking 4.16 minutes on site. There was also a very low bounce rate (38.02%).This suggests that if you are intentionally looking for content from iSGTW, you stay longer on the site.

Figure 21 shows referral traffic from September 2011 until May 2012

	All referrers	Visits	% of total
1.	t.co	10,047	16.95%
2.	google.com	6,514	10.99%
3.	facebook.com	5,406	9.12%
4.	stumbleupon.com	4,929	8.32%
5.	reddit.com	4,586	7.74%
6.	slashdot.org	3,038	5.13%
7.	science.slashdot.org	1,475	2.49%
8.	public.web.cern.ch	955	1.61%
9.	lwn.net	835	1.41%
10.	en.wikipedia.org	628	1.06%

How many people are engaging with content? Resonance

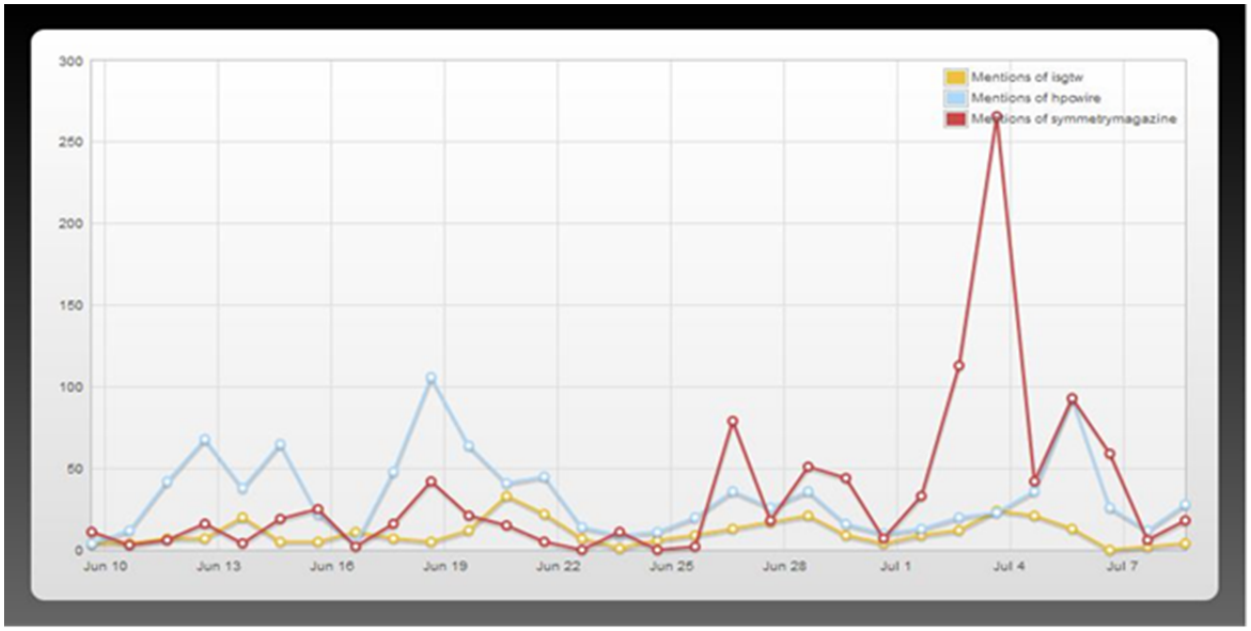
We recently added AddThis analytics to Google plus. Google has partnered with several social networks to provide Google Analytics users with off-site activity data including +1s and comments. This activity stream shows who has interacted with your content. This feature is segmented by Conversations and Events. Conversations include content reshares, comments and new posts by anyone on the specific social network. Events include +1s, bookmarks, votes, saves, etc. [*However, note this does not include Facebook and Twitter, as these channels have cannot yet be integrated into Google analytics*]. iSGTW has had 251 events and 148 conversations since this feature was implemented. The most popular articles in terms of interactions were 'Open Hardware creating a more open world,' which received 71 'likes' on Facebook, 21 Google+ clicks. Since the start of year two, 56 new user accounts opened on iSGTW. On average, 19 users per month have accessed their accounts. Several people have updated their profiles. A more detailed analysis will be included in *D4.4 Annual Report on Feedback and Metrics.* Since the start of PY2 to end of June 2012, there have been 90 comments on the iSGTW website; so on average one in three articles receive a comment. However, some articles receive a lot of comments. User generated content such as this, shows the magazine is provoking reactions and creating an impact on its readership.

From February to May 2012, the iSGTW stories that received the most mentions on Twitter by people were 'Accelerate physics with your own computer', 'Following the 'red brick road' to data management', 'The forecast: no fire for tomorrow', 'A new take on simulating planet formation' and 'Seven innovative ways to cool a scientific computer' (Source: Topsy.com).

We also compared iSGTW with HPC Wire in February 2012. Even though HPC Wire has over four times our followers, they only tweet two to three times per day. ISGTW tweets around three to seven times per day. There were nine times during February that mentions by other twitter users of iSGTW stories equalled or surpassed HPC Wire's. In June, the top mention for iSGTW was for the story, 'The known and unknown pioneers of modern computing[48]'. This story was re-tweeted more times that stories from other publications (HPC Wire and Symmetry Breaking). Figure 22 shows a retweet analysis for June 2012.

[48] http://www.isgtw.org/feature/known-and-unknown-pioneers-modern-computing

Figure 22 shows retweets of iSGTW articles compared to HPCWire and Symmetry magazine (June 2012)



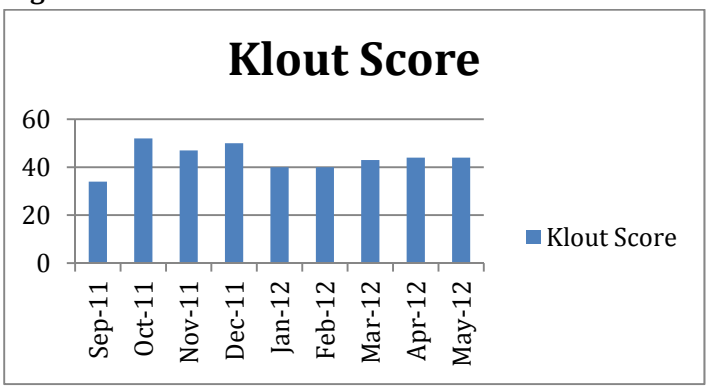
What is ISGTWs sphere of influence?

Since October 2012, we have monitored iSGTWs Klout score, which measures online influence. When you create content or engage, you impact others, and Klout analyses that impact to find your Klout Score, influential topics, and your influencers. The average Klout Score is around 20. iSGTWs score has hovered between 46 and 52 in the last year (see Figure 20). Klout only analyses content on Facebook and Twitter, and therefore is not a realistic picture of iSGTW's influence. However, it provides a good reference for comparison within these social networks. iSGTW also monitors its followers through Twiangulate. @iSGTW has 33 big names (CERN, Nature, Newswise, Astroparticle, Fermilab Today, Symmetry etc.).

Our biggest followers are:

- @CERN: 602,776 followers.
- @NatureNews: 380,751 followers.
- @TheRealDaphne: 48,365 followers.
- @scalextremeinc: 34,657 followers.
- @IdeasGate: 23,226 followers.

Figure 22: iSGTW Klout score



How has iSGTW helped the e-science community?

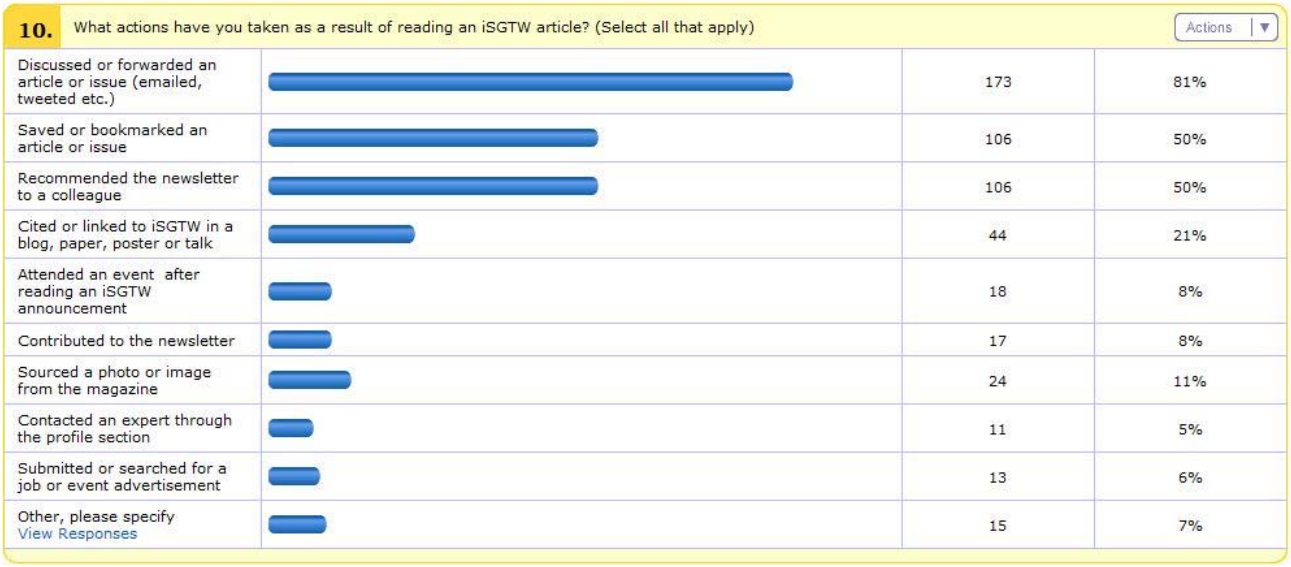
European Grid Infrastructure surveyed delegates at the EGI Community Forum 2012 asking whether people were using any of the social networking and communication channels at the event. Twenty seven percent of those surveyed said they had been reading iSGTW articles.

ISGTW has been media partner to a number of organizations (SHIWA, N4U, EGI) providing expert assistance, at the two EGI annual events the Community and Technical Forums, Healthgrid'12 and XSEDE'12 in Chicago.

Measuring the magazine's impact in terms of how many people read it, and what actions they take as a result is challenging. e-ScienceTalk incorporated questions in the Summer Readership survey on this topic, which was deployed to our entire subscriber list and advertised online. We asked subscribers 'which sections of the iSGTW website do you regularly read or visit.' In our analysis (n=226), most people said they either read all or most of the articles (60%). Only 2% visit the archive and 9% visit the Community Hub or The 'learn' section. This information is valuable in regards to sustainability of the sections within the website.

When asked what actions people take as a result of reading an article, 81% of those surveyed have discussed or forwarded an article and 50% said they saved or bookmarked an article. Fifty percent said they would recommend the newsletter to a colleague, ad 21% have cited or linked an iSGTW article in a blog, paper, or talk. Figure 22 shows actions people have taken as a result of reading iSGTW. We asked people to fill in whether they have taken any other actions as a result of reading an article. Respondents mentioned that they had posted to Facebook, given an interview, and one person even mentioned that they had received a grant ("Gotten a grant"). One individual said that they had featured an article in their newsletter, and another said they had even had "a new idea for research". Another individual cross referenced vendors mentioned in articles to learn the latest insight on the vendors' innovations.

Figure 22: What actions have you taken as a result of reading an iSGTW article?



Question 11 in the survey asked individuals whether readers agreed with a number of statements. A number of statements related to the impact and sustainability of the magazine. We asked our readers whether they would consider writing for iSGTW. Of those who responded, 40% of people would consider writing, which is encouraging for sustainability of the magazine.

We were also interested to find out whether people subscribe to keep up with the latest technical developments, and 68% of people said they use iSGTW for this purpose. We also wanted to find out whether people find the events listing service useful, and 52% said they use iSGTW to keep informed about events and announcements and 67% of people said they had found out about tools, services, resources, projects, initiatives, and/or potential collaborators which they were previously unaware of. Although this is a relatively small sample, it gives an indication of the ways that iSGTW has impacted on its users.

These findings suggest that iSGTW is having an impact:

- **Provides assistance to the community in finding future partners /collaboration**
- **Scientists are kept informed of the latest technologies in e-science**

iSGTW also regularly analyses the comments it receives on the website, and will provide a formal analysis in *D4.4 Annual Report on Feedback and Metrics* [R5]. Below are some comments.

A new comment has been posted to the Feature "The grand vision of the Cherenkov Telescope Array".
----- Comment -----
Title: In-depth article
Hi Adrian,
You have greatly informed me on this subject.
Thank you.
You can also view this comment at the Feature at http://www.isgtw.org/feature/grand-vision-cherenkov-telescope-array.

A new comment has been posted to the Feature "Gamma rays, gravity waves, and
galactic GPS".

----- Comment -----
Title: Einstein@Home

Great article, and thanks for the complete treatment of BOINC. It is rare that we get such a well-articulated description.

I spread the article on my blog

<a href="http://sciencesprings.wordpress.com/2012/04/25/fgrom-isgtw-einsteinhome-gamma-rays-gravity-waves-and-galactic-gps/" title="http://sciencesprings.wordpress.com/2012/04/25/fgrom-isgtw-einsteinhome-gamma-rays-gravity-waves-and-galactic-gps/">http://sciencesprings.wordpress.com/2012/04/25/fgrom-isgtw-einsteinhome-...

You can also view this comment at the Feature at http://www.isgtw.org/feature/gamma-rays-gravity-waves-and-galactic-gps.

These findings suggest that iSGTW is having an impact:

- **Provide a valuable science and e science news service**
- **Centralise the communication effort and increase the visibility of e-science**

How is iSGTW influencing the wider media?

When media and bloggers pick up a story, it can spur conversations among influential online audiences, and create greater visibility. ISGTW has key media relationships with a number of publications including Symmetry, Discovery News, Datanami and HPC Wire. Our analysis showed that a number of organisations also backlink to the iSGTW website, approximately 1000 in total (April 14th 2011). iSGTW content has been used by various online sources (see Appendix 5.4 for more details). Many university computer departments feature iSGTW news on their website, and some commercial companies have featured iSGTW in their media section. A number of projects include a reference to iSGTW and most of e-ScienceTalk MoU partners have RSS feeds link directly from iSGTW. The US Library of Congress includes the magazine as a reference on their e-science page (e-sciencetalk.org/). Some articles have also been picked up and translated into other languages. iSGTW content has also been cited in Wikipedia entries, and a number of images from iSGTW have been re-used by others.

This year, the magazine has been cited by a number of scientific writers. In September 2011, Trudy Bell (a science journalist and former editor for Scientific American and IEEE Spectrum) wrote an article and referenced iSGTW article, 'Knowing me knowing you'[49] (September 7, 2011) in an article 'Deluged by a Data Tsunami[50]. Another recent article, 'How fast could a T. rex run?[51]' was the only reference in a story 'Could you outrun a Tyrannosauraus rex?[52]' which featured on io9.com. This is a daily publication that covers science, science fiction and the future), and the article by Robert Gonzalez article had 223 likes (May 2, 2012). 109.com has a readership of 8,561.

iSGTW has also had a number of media pick-ups from HPC Wire, Cosmos Magazine, Wired and Symmetry. Of note, is the pick-up recently for the article 'The smallest music in the universe[53]' which was published in several publications including Symmetry[54], Discovery News[32,] Wired UK[55] and Wired US[56]. Unfortunately, Wired UK placed the wrong link in the story which meant that the publication didn't receive as many website visitors as we potentially could have. Topsy reveals there were 66 tweets about 'The smallest music in the universe' article. This story was also tweeted out to 1.5 million combined followers on Symmetry Magazine, Discovery News, Wired UK and Wired US. Other articles that have been published by Symmetry include '*Happy 10th Birthday,* WLCG!', '*Tevatron to shut down, but science continues'* and '*Gamma rays, gravity waves, and galactic GPS'*. Popular science blogs such as Science Springs and Vizworld often republish our stories (see Appendix 5.5 and 5.6).

These findings suggest that iSGTW is having an impact:

[49] http://www.isgtw.org/feature/knowing-me-knowing-you

[50] http://www.tbp.org/pages/publications/Bent/Features/W12Bell.pdf

[51] http://www.isgtw.org/feature/how-fast-could-t-rex-run

[52] http://io9.com/5853758/could-you-outrun-a-tyrannosaurus-rex

[53] http://www.isgtw.org/feature/smallest-music-universe

[54] http://www.symmetrymagazine.org/breaking/2012/04/18/listening-for-the-sound-of-science/

[55] http://www.wired.co.uk/news/archive/2012-04/19/particle-physics-music

[56] http://www.wired.com/underwire/2012/04/positron-trails-music/

- **Journalists from mainstream media will have established relationships with those within e science through iSGTW**
- **Better links created between scientists, computer scientists, policy-makers, journalists and readers**
- **Centralises the communication effort and increase the visibility of e-science**

What value do people place on iSGTW?

During the EGI Community Forum, a small focus group was carried out with four National Grid Infrastructure Liaison Officers. A list of focus group participants can be found in appendix 5.6) and a further analysis is provided in the e-ScienceTalk *D4.4 Annual Report on Feedback and Metrics*. When asked about the value participants place on iSGTW, most use the publication for finding out what's going on in e-science, and they all felt that it offers both an information-gathering and filtering service. The publication can also be useful for internal communications providing researchers with an 'inspirational' message: iSGTW provides an unbiased message. Two out of four of the participants said they regularly shared articles with colleagues and institutional mailing lists. The science writers that have been in this field for a very long time felt that one of the main unique selling points of ISGTW is that it is unbiased and is in support of all science. This person mentioned that there is an enormous competition in the field for readership and people are bombarded with so much information, and it is important to filter.

> What are your initial thoughts on reading iSGTW?
>
> *"In a general sense, e-science is covered more than grid. It's one of my main sources to see what's going on in e-science. There is filtering taking place, as we are inside all these projects, and iSGTW provides the means for those outside to look on. Sometimes, I read something and it's hilarious to see how it's presented and how it's put, but it's very factual. You get stories about how good the grid is but when you work with it, on a day-to-day basis, the view can be different. Sometimes it can be slightly propagandistic, but at the same time, it can be inspiring for others to see that it works, and what is possible."*
>
> How has iSGTW helped you in your work?
>
> *"There are a lot of layers to getting in touch with other projects. Sometimes, you see that in France, they are doing something with digital humanities libraries, and that makes you think what are we doing here, and why aren't we doing those type of projects here. That's my angle when I am reading iSGTW."*

One member of the focus group did also mention that he regularly sends emails related to the Life Science grid to his mailing list. Tom Visser, Consultant High Performance Computing and Visualization at SARA, recalls emailing an article published in January 2012, 'Hunting for viruses: finding a needle in a haystack ' to an internal list 50 persons and a national list of 50 persons, as well as thousands of Twitter and network followers. This shows how one influential subscriber can act as a multiplier.

These findings suggest that iSGTW is having an impact:

- **Developing an e-science community and a vehicle to share the results of e-science research**
- **Encourage a positive perception of project (s) and EU funding in general**
- **Provide a valuable science and e-science news service**

2.5.4 Recommendations

e-ScienceTalk has developed a plan to address some of the barriers of impact. Next year, iSGTW would like to be more proactive in responding to its feedback. For example, we will set up an automatic email to the editors when the website receives a lot of traffic (i.e. more than 2,500 unique visitors in one day). We also plan to set up an email alert for conversations in the Google analytics activity stream. The Activity Stream is real-time to the minute, and you can see here the most recent interactions and have the ability to respond immediately. iSGTW will also regularly track click throughs from our tweets. The magazine will continue to investigate new channels for increasing our reach through working with Web 2.0 (Mendley, CiteUlike, Academia.edu). We will also take a more proactive approach in encouraging our users to contribute iSGTW content to Wikipedia in order to encourage discovery of the publication by new readers.

We will also investigate ways in which we can market iSGTW at conferences (billboards, slide presentations, media partnerships). The organisers of US supercomputing conference, XSEDE'12 spontaneously added iSGTW as media partner, on a par with commercial publication HPCwire. iSGTW has also been approached to act as media partner for the ISC in the cloud event in Mannheim in September 2012. To grow our subscriber numbers and increase our impact, iSGTW would like to be able to attend smaller and commercial events (e.g. Cloud Computing World Forum)[57]. Media influence is sometimes outside of our control. However, iSGTW is building relationships within the computing media and popular science publications worldwide. Our former editor, Jacqui Hayes, who is online editor now at *Cosmos* magazine, still remains an active freelancer for iSGTW. Our new Editor, Andrew Purcell, also joins the team from one of the world's leading science and technology weekly magazines, *New Scientist*, so brings with him a wealth of new contacts, ideas and knowledge.

The impact and significance of articles will also be analysed. Over the next few months, we will analyse five to six in-depth case studies of popular iSGTW articles to measure the significance of their impact. This type of qualitative analysis will hopefully include detailed examples of how content is used, re-tweeted and re-shared and how this sparks further discussion and insights, etc. Ideally, these case studies would include some online interviews with downstream 'users' or influential people on Twitter or other social media channels.

Currently, there are no standards available online for measuring social media. However, the Web Analytics Association is actively pursuing a set of standards for measuring social media. Next year, iSGTW would like to organise its entire social media activities through a single dashboard, such as If This Then That/NetVibes or paid professional options. There are also paid ways we can push our

[57] www.cloudwf.com

content such as 'Promoted us' posts on Facebook. iSGTW will investigate tracking how social traffic helps drive website conversions. This would involve setting up micro-conversions such as video views or blog visits, and non-ecommerce goals-email subscriptions, events postings and downloads of content for example such as posters.

2.5.5 Sustainability

Prior to GridTalk, *International Science Grid This Week* already existed as *Science Grid This Week*, a publication produced by Fermilab in the US. This subsequently became International Science Grid This Week through collaboration with CERN, and the EU Editor post was then funded for two years by GridTalk. iSGTW continues to be a successful product for e-ScienceTalk, and ensuring its long-term sustainability for its loyal subscribers is important as an example of a truly global collaboration between editors in the US, Europe and Asia Pacific.

e-ScienceTalk will continue to explore in-kind support from collaborating projects and has developed good relationships with many of our MoU partners through media partnerships. One partnership that has developed over the last year is with CRISP (The Cluster of Research Infrastructures for Synergies in Physics). e-ScienceTalk is aiding the project with a number of key tasks, which include production of an e-newsletter template. iSGTW will also be providing communication and media training and media outreach at CRISP Annual Meeting.

Our sustainability plan had discounted exploring more commercial topics in return for advertising revenue as it could risk alienating the audience we have built so far, and is also not permitted by the US funders, the National Science Foundation. One of unique selling points is our independent voice in support of all areas of science and e-science. The commercial space covering high performance/supercomputing and grid computing is crowded at the moment, and further additions this year have included *Datanami* (datanami.com) and *HPC in the Cloud* (hpcinthecloud.com).

Due to its partnership with the Fermi National Laboratory in the US in the past, iSGTW could not accept advertising revenues. Part of its unique selling point is that iSGTW is not a commercially motivated magazine. Instead, we plan to explore positioning iSGTW as the preferred channel for the research community and major e-infrastructures in Europe (such as GÉANT, EGI, DEISA/PRACE as well as the ESFRI projects) and in the US (such as OSG and TeraGrid, which is now XSEDE), which is already being pursued through media partnerships and collaborations with Indiana University and Texas Advanced Computing Center.

Up until recently, one person on a part-time basis (0.5) was employed by Fermi National Laboratory in the US. We have also, this year, secured contributions of editorial effort from other institutions around the world, including in the Asia-Pacific region. There has also been continued interest from Academia Sinica Grid Computing in supporting iSGTW. A new Asia Pacific editor, Vivian Chang at ASGC joined the team in January for five months. Unfortunately Vivian left the team in April. Currently, ASGC is trying to recruit a new editor. The National Science Foundation has also expressed an interest. Indiana University is also awaiting approval for NSF funds for an iSGTW US editor.

It is hard to place a value on iSGTW as a product, but estimated freelance costs for content writing for newsletters, brochures and printed materials are at €400 to 500 per day). ISGTW continues to nurture a network of unfunded contributors from a wide range of projects in all its contributing regions.

Some sections of the website are not as well-used as others. User-generated content is still low (under 30 active users).

2.6 e-ScienceTalk project

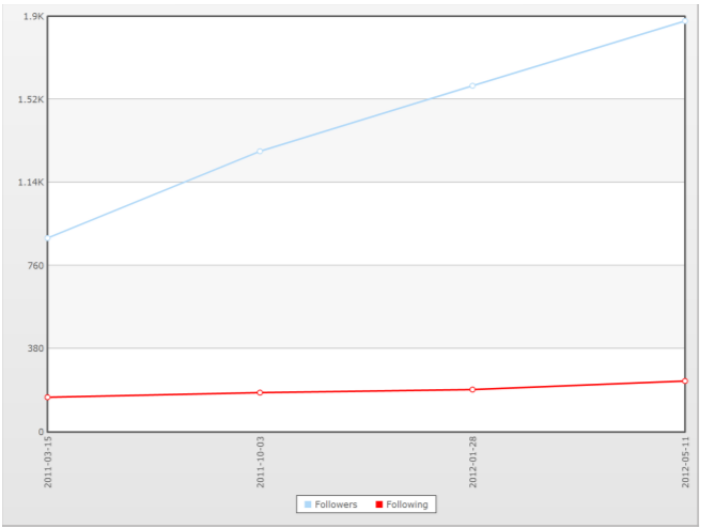
2.6.1 What has been the impact?

e-ScienceTalk as a project has been successful in establishing a number of strong relationships with partners through signing Memorandum's of Understanding. Since September 2011, eight MoUs have been signed with projects including EDGI, SHIWA, N4U, EUDAT, ERINA+, Global Excursion, Virtus and CRISP. The project now has a total of 14 MoUs. The project has provided some letters from our MoU partners (see Appendix 5.3). e-ScienceTalk has e-ScienceTalk is building relationships with scientific social media networks (e.g. mysciencework.com). e-ScienceTalk has 1,937 followers (see Figure 22. Increase in Twitter followers). The project 'curates' content from policy related news, and e-science news.

On example, of a successful tweeting campaign occurred on 8th March retweeted by@womensday [Followed by 14,736 followers] and Followed by @RichMcCourt [12,256 followers]:

@e_scitalk RT @iSGTW Happy International @WomensDay! Excellent article by Jacqui Hayes in iSGTW: http://v.gd/isgtw_iwd

Figure 22. Increase in Twitter followers



e-ScienceTalk has also been successful in building its profile as a project. The project has had its first academic paper (*e-ScienceTalk: Measuring the impact of online outreach for e-Infrastructure*[58]*s*) published at e-Challenges in Florence in October 2012.

WP1 and WP4 coordinated the 9th e-Infrastructure Concertation meeting, which took place during the EGI Technical Forum in Lyon in September. The two-day event attracted 150 delegates including representatives from the e-Infrastructure landscape, policy makers and funding agencies. The presentations were webcast live by the Trust IT service, and participants were also able to follow the event on Twitter using a dedicated hashtag. The event was publicised on GridCast, the e-ScienceTalk website and through iSGTW twitter feeds. The webcast amassed a wide global audience attracting 454 unique visits from 57 different countries. Members of the e-ScienceTalk team have also participated in high level EC meetings, such as the Digital Agenda Assembly's workshop on social media, and presented at the ISGC event in Taipei.

2.6.2 Sustainability

The sustainability strategy focuses on evaluating all e-ScienceTalk products on their impact, maintenance overhead (costs/effort) and likelihood of attracting future funding or in-kind support. Attracting one partner to fund for the whole project, e-ScienceTalk is more difficult, simply because there are a number of different stakeholders, and audiences. e-ScienceTalk has suggested various avenues for funding parts of the project separately.

e-ScienceTalk's business benefit lies in sustaining activities that will promote the vision of Europe2020, and support the development of Europe's e-Infrastuctures. e-ScienceTalk has multiple stakeholders within the e-science and e-infrastructure field and disseminates the results of a host of FP7 funded projects. e-ScienceTalk has signed MoUs with policy bodies (e-IRGSP2/3), collaborations with organisations outside of Europe (LinkSCEEM2, CHAIN) and user communities (WeNMR, EMI, EGI-InSPIRE). In year 2, e-ScienceTalk has developed relationships with EDGI, SHIWA, N4U, EUDAT, ERINA+, Global Excursion, Virtus and CRISP.

By monitoring the collaborative activities agreed within the project's higher level collaboration framework, its Memoranda of Understanding, a collective business case can be developed for the products and services that prove to be most valuable to the community (see Appendix 5.3). The project team therefore carefully markets, monitors and audits the impact of each individual activity, for all its MoU partners. The project will also produce an overview guide to dissemination for EC projects, based on the extensive experience gained and lessons learnt during all phases of the project. The project will present a paper at eChallenges 2012.

Sustainability is always an issue for digital resources, but evidence of impact can be part of a business case for continued development and support. e-ScienceTalk is working with other partners, and is often contacting about support for new projects. For example, in May, Francois Grey contacted us about the Citizen Cyberlab project (3.4M Euros over three years) and discussions are underway with ESFRI cluster projects ENVRI, BioMedBridges and DASISH.

[58] https://documents.egi.eu/public/RetrieveFile?docid=1253&version=1&filename=eChallenges_eScienceTalk_final.pdf

As a dissemination support project to the European Strategy Forum on Research Infrastructures (ESFRI) projects, e-ScienceTalk can increase effectiveness and efficiency in communication. This leads to a potential cost saving, and also the filtering of information provided gives news items or content greater credibility. In developing new audiences and helping projects, we are potentially attracting new users. e-ScienceTalk has secured NSF funding and travelling costs from ASGC. We have also been acknowledged as preferred dissemination service by our MoUs collaborating projects and recently by CRISP. To achieve the digital future requires work, vision, funding and cooperation. An area the project could develop further is e-learning with our recent interest from N4U project, and Global Excursion.

The term e-science is not widely known outside the community. e-ScienceTalk products have succeeded in increasing the visibility of e-science to its audiences, such as policy makers, the general public, journalists and scientist, succeeding in communicating research supported by distributed computing beyond the IT community. The project has enhanced the knowledge that current and future e-science researchers have of the infrastructure. Around 4,959 websites link to GridCafe, as it provides an easy introduction to grid computing. Over half of views last longer than thirty minutes indicating a highly engaged readership, and there is potential to develop this resource further for e-learning/multimedia. The project also brings increased impact for researchers' work. Videos can offer a visual and concise conceptual understanding of e-science research and there is a high price tag associated with successful video production and promotion. e-ScienceTalk provides these services as part of the project scope. The GridCast YouTube channel has in its lifetime attracted over 204,924 video views. Our online newsletter, iSGTW, provides unbiased information on project know-how and successes, and evidence from readership surveys indicates that being published in the newsletter can directly help in fostering collaborations, and attract new users and funding. As well as providing a space for sharing scientific knowledge, the newsletter also offers areas for discussions that have assisted collaborations and spurred innovation. Fifty percent of those surveyed said they would recommend the newsletter to a colleague, and 21% have cited or linked an iSGTW article in a blog, paper, or talk. Analysis of RTM users has shown that numerous partners/institutions worldwide have it as permanent fixture in their institute or use it during tours for visitors or to showcase grid computing to potential funders.

e-ScienceTalk is contributing to scholarly impact and its reports, publications and presentations are accessible through the EGI document repository[59]. The project is building a library of grey literature resources. Scientimetrics or bibliometrics refers to, at its simplest, the process of counting the number of citations in the academic literature to a prior work. In the past, impact metrics were limited to citations and journals. Today, usage metrics offer new opportunities to measure impact of a large scale of digital resources, also on the individual item level.

Whilst the short-term benefits of the project are more straightforward to articulate, directly assessing the longer-term business benefits is more challenging. However, the socio-economic value added by e-ScienceTalk is currently being evaluated externally by the ERINA+ project. Our users will have the opportunity to review our services. The need for dissemination is recognised by the European Commission for FP7 e-infrastructure projects, and is therefore a major part of the of the ERINA+ value chain. The value chain describes how the success of any research project depends on its ability to communicate its results to its marketplace and clearly demonstrate how these results will benefit its

[59] Document.egi.eu

end users. e-ScienceTalk provides a set of specialised communications consultancy services that can potentially benefit a range of stakeholders, including FP7 project coordinators, e-infrastructure providers, European Strategic Forum Research Infrastructure (ESFRI) projects and Research Infrastructures themselves. For example, the GridCast team provides professional multimedia support, while iSGTW's unbiased, non-technical and engaging style of reporting serves both individual projects in meeting their communication aims, but also raises the awareness of e-science (and of its important role in research) to those outside the community.

3 CONCLUSION

Measuring impact is a considerable challenge, particularly since the diversity of e-ScienceTalk resources means that they cannot be measured in the same way. Unlike peer-reviewed journal articles, which all follow the same basic rules, and allowing for disciplinary differences in citation habits, e-ScienceTalk has a variety of resources have a wider variety of audiences, uses, re-uses, and this potential ways in which impact can manifest itself.

e-ScienceCity/ Grid Café

- e-Science City's virtual conurbation of interconnected educational websites covers important aspects of distributed computing.
- GridCafé continues to be used by educators and individual students wanting to find out about the 'grid', the global network of computers whose combined processing power is delivering important results in many areas of science.
- Google analytics analysis shows that the audience accessing GridCafé is becoming more focused: users spend more time reading individual pages and more time on the site in general.
- The average time people spend on the site has increased from one minute twenty-six seconds to nearly nine minutes (08:56).
- Traffic for these two new locations in e-Science City is lower than for GridCafé, although it is noted that they have not received as much marketing as GridCafé did (that being reserved for year three, after the remaining locations have been launched).
- Going forward, strategies for sustainability are proposed based on two models of continuation: a low maintenance model based on minimal web administration with funding for web hosting paid for by supporting organisations and in-kind support; and a medium-level strategy based on cost recovery funded by web advertising.
- A virtual 3D learning environment has also been developed, allowing users to explore e-Science City by navigating the 3D world with an avatar. This has been picked up as a potential learning environment that could be used by individual e-infrastructure support projects.

GridCast blog

- The GridCast blog enhances the sense of community for researchers and policy specialists working in distributed computing by reporting 'from behind the scenes of grid computing'. It is written by and for people working in grid computing, and reports from meetings all over the world.
- In year two of e-ScienceTalk, the blog has been more heavily promoted using social media and has subsequently steadily attracted greater numbers of visitors, of whom a higher proportion are new. Bloggers have reported from new locations, including south east Asia and Latin America, and this report also reveals that the audience segment from these new locations is increasing, indicating the growing reach of the blog.
- The GridTalk YouTube channel has attracted 101subscribers and the cumulative number of video views is 204,924.
- Bloggers have received proposals to collaborate and have developed peer-reviewed papers from ideas first discussed in blog posts, using the blog as a test-bed for ideas in an open, informal setting.

- As the blog is built on the Blogger platform, the costs for its continuation are low. Several bloggers are regular contributors, and it is suggested that the long-term sustainability of Gridcast could be promoted by putting 'star bloggers' in charge of the blog.

GridGuide and RTM

- GridGuide and the Real Time Monitor (RTM) are both used by researchers to promote their projects to their peers, and find out about other grid sites around the world.
- In PY2, substantial efforts were made to increase the number of sites around the world, and to update existing sites with relevant information. GridGuide is the least well-known e-ScienceTalk product, and it is suggested that in PY3 it should be more heavily marketed.
- The RTM is a more popular tool, with many grid sites and distributed computing demonstrations worldwide making using of its graphical representation of data flowing around a 3D globe.
- Impact analysis for Year 2 shows that many institutions are running the RTM.
- Development and maintenance of the RTM requires significant time investment (0.5FTE) and a funding source and supporting partner is yet to be identified.

e-ScienceBriefings

- e-Science Briefings' policy guides are intended for policy makers in industry and European governments, providing introductory snapshots of key concepts and projects that summarise the technical developments and policy issues around e-science.
- Supporting partners are very positive in regard to the briefings.
- However, the subscriber list is not as large as it could be, and more effort needs to be dedicated to promoting the briefings, especially among government policy makers.
- Briefings have been downloaded 5,766 times.
- A compilation of previous briefings to be delivered in Y3, to be submitted to government science and technology offices in European states.
- Going forward, the briefings would be made publicly available free on an archive.

iSGTW

- International Science Grid This Week (iSGTW) is e-ScienceTalk's most popular product. Since the last review, the weekly web-based publication has experienced a sharp increase in unique visitors to the website, and a rise in social media subscribers, and features written for iSGTW have subsequently been picked up by the popular technical and scientific press. Our reach has increased (e.g. 'Friends', 'Followers', RSS feeds).
- The impact for those working in the field of distributed computing is substantial. Influence of the publication itself within the realm of social media has been analysed using web-based analysis tools, such as Klout. Scores are high and comparable with some very well-known publications. iSGTW is influential and has a number of high profile media followers.

e-ScienceTalk as a whole has established an umbrella under which the individual products have been allowed to flourish. Anecdotal evidence suggests that product audiences are aware of sister products even if they are unaware of the project name. However, the product brands themselves are much more visible. This is reassuring in terms of assessing the viability of sustainability strategies, which can be tailored to each product according to what is required for the individual project

3.1 Recommendations

e-ScienceTalk would like provide some easy, short-term steps that other projects can take to enhance their impact, as well as suggestions for improving measurement and engage the community on an international scale. How are we succeeding in big and small ways to influence research, learning, and the wider public? In order to increase the impact, so resources resonate more widely, from the evidence from this report suggests a number of approaches.

- Plan to explore methods to measure impact from the start.
- Make you reduce your barriers to impact by making your resources easy to find. This can be done by search engine optimisation (SEO), partnership with other organisation, and inclusion in Wikipedia and other sources.
- Ensure your content is easy to copy or download, and provide the ability to export citations
- Try and standardise your reporting measures but adapt them through on-going feedback.
- Centralise hosting-easier to measure.

4 REFERENCES

R 1	e-ScienceTalk Description of Work https://documents.egi.eu/document/233
R2	Meyer, E.T. (2011). Splashes and Ripples: Synthesizing the Evidence on the Impact of Digital Resources. London: JISC. Available online: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1846535
R3	Let's get real (2011). Report from the Culture24 Action Research Project http://www.keepandshare.com/doc/3148919/culture24-howtoevaluateonlinesuccess-bw-pdf-september-19-2011-11-15-am-2-1-meg?da=y
R4	D1.3 Annual Impact and Sustainability Report https://documents.egi.eu/public/RetrieveFile?docid=712&version=2&filename=e-ScienceTalk_D1.3_Impact_Sustainability_Report_final.pdf
R5	D4.4 Annual Report on Feedback and Metrics [To be published on https://documents.egi.eu/ by end of August 2012]
R6	D4.3 Annual Report on Feedback and Metrics (2011) https://documents.egi.eu/public/RetrieveFile?docid=792&version=2&filename=e-ScienceTalk_D4_3_Annual%20Report%20on%20Feedback%20and%20Metrics.pdf
R 7	D4.3 Feedback on GridTalk http://www.gridtalk.org/deliverable/

5 APPENDIX

5.1 GridCast blog Summer Update

Dear Danielle,

Thanks to all our bloggers contributions, GridCast has had a successful year racking up 104,253 page views over entire its history (Source: Blogger) and 9,657 unique visitors in the past year and our YouTube channel has had a total of 201,199 video views.

However, we always striving to improve our blog, and I just have a couple of questions that I hoped you might answer for us:

- Are you (provisionally) planning to attend any events next year that you would like to blog from? If so, please do let us know.
- Do you have any suggestions on how we could improve the blog?
- Stefan and I were wondering whether anything has happened as a result of your blog post(s). Or in what ways has blogging for GridCast helped you? For example, has anyone contacted you after blogging etc...?

Looking forward to hearing from you.

Best wishes,

Zara

5.2 Real Time Monitor Survey June 2012

From: "Zara Qadir" <z.qadir@qmul.ac.uk>
To: burcu@ulakbim.gov.tr
Sent: Tuesday, 19 June, 2012 6:42:46 PM
Subject: Looking for Real Time Monitor users

Dear Dr Ortakaya,

I work as a Dissemination Officer for e-ScienceTalk. Neasan O'Neil from EGI.eu kindly gave me your details.

I am currently trying to gather feedback on one of products (the Real Time Monitor), and I thought you might be able to steer me towards the right person (s).

The Real Time Monitor is a visualisation tool used to demonstrate the global reach of various e-Science technologies and grid computing infrastructures. The application displays information from various grid projects including the European Grid Infrastructure (EGI) and the worldwide LHC Computing Grid (wLCG).

We have noticed some activity from Turkey. As the NGI International Liaison (NIL) from Turkey I wondered if you might be using it yourself or know someone else who is using this resource?

I am looking for users to briefly answer the questions below.

- How often do you use the RTM?
- How easy is the RTM to use?
- What do you use the RTM for? (i.e. displaying this resource at
- conferences or in the department)
- What features are you using?
- What extra information would you like to see on the RTM?
- What do you like (and don't like) about the RTM?

Looking forward to hearing from you.

Kind regards,

Zara

5.3 Thanks from our Memorandum of Understanding Partners

From: Niobe Haitas <niobe.haitas@idgrilles.fr>
Subject: Re: Feedback for e-ScienceTalk and a small request...
Date: 6 July 2012 11:50:12 GMT+01:00
To: Zara Qadir <z.qadir@qmul.ac.uk>
Cc: Romier Genevieve <genevieve.romier@idgrilles.fr>, "corentin.chevalier@gmail.com" <corentin.chevalier@gmail.com>
Reply-To: niobe.haitas@idgrilles.fr

Collaboration with eScienceTalk has been very fruitful! we are very happy with your support and wish to thank you warmly!

More specifically:

e-ScienceTalk has been very useful in publishing through your channels news and events related to N4U (as seen in the audit report that you shared) and especially social media and tweets.

For the outGRID project, filming, taking the interviews and contributing in communicating workshop results was very important.

Very helpful is also the support in setting up the N4U presence in the virtual world with New World Grid, but also the general idea of your project to organise a virtual world dedicated to science and research.

I found very helpful also that you have shared resources, documents, ideas (e.g. on e-learning), and we have had the chance to interact, including participating at communication training events organised at the last EGI forum in Munich.

How could e-ScienceTalk better service your dissemination needs?

1. as done so far (iSGTW, tweets, publications, support at events including interviewing, filming, distributing material)
2. support in setting up the N4U presence in the virtual world
3. potentially support in organizing citizen science
4. potentially support in organizing e-learning

-------- Original Message --------

Subject: Thanks!

Date: Mon, 02 Jul 2012 18:44:14 -0430

From: Ysabel Briceño <ysabelbr@ula.ve>

To: Stefan Janusz <s.j.janusz@qmul.ac.uk>

CC: Zara Qadir <z.qadir@qmul.ac.uk>, Herbert Hoeger <hhoeger@ula.ve>, Bernard Marechal <marechal@if.ufrj.br>, Philippe Gavillet <philippe.gavillet@cern.ch>

Dear Stefan:

On behalf of the GISELA Project and its WP2 (Dissemination and

Outreach), we communicate you our appreciation for supporting the dissemination of the GISELA-CHAIN Conference , mainly by providing us with space in the GridCast Blog and joining us on Twitter with the hashtag #GISELACHAINMx.
Your contributions were important and teamwork was really productive.
Hopefully see us at the next opportunity.

Sincerely,

Herbert Hoeger
Ysbael Briceño

-------- Original Message --------
Subject: Re: Feedback for e-ScienceTalk and a small request...
Date: Mon, 2 Jul 2012 14:41:43 +0200
From: Kitti Varga <vargaki@sztaki.hu>
To: Zara Qadir <z.qadir@qmul.ac.uk>
CC: Stefan Janusz <s.janusz@qmul.ac.uk>

Hi Zara,
Thanks for contacting me about the summer school. It would be great if someone from the participants could blog about it, but I am not sure who is interested. You can check the names of the registered participants here: http://www.lpds.sztaki.hu/summerschool2012/?m=12 maybe you already know some of them and can contact them. If not, then probably I can ask around who is interested and send a few email addresses to you.
Answers to your questions:
- For SHIWA, the most important message is to communicate that the project reached the point when we have an infrastructure ready to serve users who are interested in sharing and re-using workflows with different communities in order to ease their work and speed up their research. The SHIWA project ends at the end of September, but a follow-up project has been already accepted, called ER-Flow, that will take over the results of the SHIWA project. These two projects are looking for communities to introduce them to the technology delivered.
- The target audience for SHIWA is those research communities who are doing similar work but using different workflow systems and would like to work together to extend their research.
- e-Science Talk is already helped us a lot, thanks a lot for it. Disseminating our brochures at events and sending out information at online media is a great help.
About advertising ISGTW: I will send out emails to project mailing lists (SHIWA, SCI-BUS, DEGISCO, ER-Flow) and can also send out a few words at Facebook and Twitter, just please give me a few days after the summer school ends.

Many thanks,
Kitti

5.4 iSGTW Media Analysis

1. Many university computer departments feature iSGTW news on their website.
   - Berkley Lab Computing services: http://www.lbl.gov/cs/CSnews/CS_in_the_news.html)
   - Indiana University features iSGTW in its Knowledge Base repository: http://kb.iu.edu/data/azrh.html
   - University of Amsterdam Computational Dept picked up Stefan's story on MAPPER. http://uva.computationalscience.nl/news/glueing-together-a-multi-scale-world

2. A number of projects include a reference to iSGTW and most of e-ScienceTalk MoU partner's have RSS feeds linked to iSGTW.

- Worldwide LHC Computing Grid includes iSGTW on their further information page: http://lcg.web.cern.ch/lcg/public/further-info.htm
- Stefan's MAPPER story also appeared in PRACE"s RSS news feed: http://www.meltwaternews.com/magenta/xml/html/23/64/rss/69168_hitsentence.rss.XML
- EUIndiaGrid: http://www.euindiagrid.eu/index.php/news/news-feeds/25-media-partners/1-isgtw
- TERENA picked up the story: 'A big cloud for big science'. https://www.terena.org/mail-archives/tf-msp/msg00480.html http://www.terena.org/activities/clouds/activities/
- WeNMR: http://www.wenmr.eu/wenmr/computing-and-cone-snail-create-new-painkiller

3. The US Library of Congress include iSGTW as a reference on their e-science page: http://www.loc.gov/rr/scitech/tracer-bullets/esciencetb.html

4. Some commercial companies feature iSGTW in their media section:
   - isgtw is in the media section of Wham cloud: http://www.whamcloud.com/2012/02/the-maturation-of-the-lustre-community/
   - isgtw is featured in Nokia app website **(**http://nokiapp.com/what/what-is-a-grid-isgtw.html)
   - Seven innovative ways to cool a scientific computer was picked up by http://computationalsciencesolutions.com/

5. iSGTW has been cited by scientific writers:

- In September 2011, Trudy Bell (a science journalist and former editor for Scientific American and IEEE Spectrum) wrote an article and referenced iSGTW in an article: http://www.tbp.org/pages/publications/Bent/Features/W12Bell.pdf
- Another recent article, 'How fast could a T. rex run?' was the ONLY reference in a story 'Could you outrun a Tyrannosauraus rex?' which featured in 109.com. This is a daily publication that covers science, science fiction and the future), and can be found here. This article had 223 likes (02.05.12) 109.com has a readership of 8,561.

6. Images from iSGTW have been re-used by others:

- The GlycoTrainer Organization (a group of social entrepreneurs that spans the globe and operates in countries all over the world) used an iSGTW photo for an article (http://www.glycotrainer.com/intercellular-communication/) on their website.
- A photo was sourced for a recent blog post in Urban Veggies (http://urbanveggies.blogspot.co.uk/) from the article (http://www.isgtw.org/feature/conserving-bio-diversity-perus-cip)

7. iSGTW has been cited in Wikipedia entries:

- An entry on 'Many Task computing' (http://en.wikipedia.org/wiki/Many-task_computing) has a reference (http://www.isgtw.org/feature/isgtw-opinion-many-task-computing-bridging-performance-throughput-gap

8. Some articles have been picked up and translated into other languages:

- *Spanish*- http://concienciamusical-plataforma.blogspot.co.uk/
- *Thai*-http://www.e-science.in.th/infra/index.php/20120302126/cooling-hpc
- *Italian*- http://www.labarduino.eu/blog/isopenhardwarecreatingamoreopenworld

9. A number of news aggregator sites pick up a number of iSGTW stories:

- http://portal.eqentia.com/alznews/source/22633-International-Science-Grid-This-Week
- http://www.futurenewsnetwork.com/index.php?option=com_content&view=article&id=63937:a-big-cloud-for-big-science&catid=59:science&Itemid=186&lang=en
- http://www.4-traders.com/LOGICA-PLC-9590122/news/Logica-Plc-The-Eurovision-Cloud-Contest-Big-Data-Big-Science-Big-Business-14196051/

10. Astronomy Computing Today published an article on iSGTW's name change (http://astrocompute.wordpress.com/2011/01/15/introducing-the-digital- scientist/)

11. Media pick-ups

HPCWire pick-ups

- Merging black holes (VISUAL | June 29, 2011) was picked up by HPCWire (http://insidehpc.com/2011/07/04/video-spec-simulation-of-black-holes-merging/)
- CERN lends a hand to the origin of life (Feature | June 8, 2011 | By Jacqui Hayes) was mentioned in a story for HPC Wire (CERN Centers Origin of Life Research) http://www.hpcwire.com/hpcwire/2011-06-13/cern_centers_origin_of_life_research.html
- 08.11.12. An extract from the 'Students research solar cells with HPC was used by HPC Wire in their story here. (Article had 33 'likes' on Facebook).

Cosmos magazine

- 'Something for everyone' was published in Cosmos (scroll to the bottom of this page) http://www.cosmosmagazine.com/issues/2011/42

Wired

- The smallest music in the universe was published on April 19, 2012 in Wired UK article and on April 20. 2012: Wired US article. You can also see more information about number of retweets about this article in Topsy. Also, Wired UK put the wrong link in the story which meant we didn't get as much website visitors as we should have. They eventually updated the link later. Topsy says there were 66 tweets about this 'The smallest music in the universe' article. This story was also tweeted out to 1.5 million combined followers on Symmetry Magazine, Discovery News, Wired UK and Wired US.

Symmetry

- The smallest music in the universe was republished on April 18. 2012 Symmetry magazine (here).
- Happy 10th Birthday, WLCG! was published on 21.12.11 by Symmetry magazine, here.
- Tevatron to shut down, but science continues was picked up and reprinted in Symmetry on 18.01.12 here.
- Gamma rays, gravity waves, and galactic GPS was picked up on the 26th April here.

Discovery News

- The smallest music in the universe was republished on April 19, 2012. Discovery News article

12. Blog pick-ups

Science Springs

- Science Springs Richard Mitnick posted a piece on July 28, 2011 (http://sciencesprings.wordpress.com/2011/07/28/from-isgtw-virtual-atom-smasher-in-lhchome-2-0/) and commented "wonderful article about a new project being birthed from the ground up".
- Science Springs Richard Mitnick posted a piece on October 14, 2011 (http://sciencesprings.wordpress.com/2011/10/14/from-isgtw-accelerate-physics-with-your-own-computer).

VizWorld

- GPUs versus CPUs, Part 1 (Feature | April 6, 2011 | By Jan Zverina) was picked up by Randall Hand (http://www.vizworld.com/2011/04/gpus-cpus-part-1/). Vizworlds cover visualization and graphics news from around the internet, including Scientific Visualization, Visual Effects, and Graphics Hardware) According to their website, there has been 13 shares and 13 bookmarks for this article.

Others

- War and GamesNo time like the present (Feature | March 30, 2011 | By Adrian Giordani) was picked by Mitch Williamson (a technical writer with an interest in military and naval affairs who writes a blog post: http://warandgame.com/2011/04/02/no-time-like-the-present-isgtw/
- This is a rare pickup on Google+ of the story 'Q&A - Dan Fraser on HTPC': https://plus.google.com/101977671396488643735/posts/737HDK9pEvC
- Just a Theory: Feature (author is a technology reporter for the New Scientist - The Lost Sounds Orchestra (http://justatheory.co.uk/category/inventions-and-technology/) Posted on Wednesday 26 August 2009 at 4:12 pm by Seth B
- The smallest music in the universe was published on April 18, 2012. Picked up by Physics4me blog, here.

- Another blog picked up Francois Grey's story, Citizens vs. geniuses: http://www.zeeba.us/pg/view/10065
- Towards a pan-European collaborative data infrastructure was picked up by http://exaviz.simlab.ibpc.fr/index.php/18-towards-a-pan-european-collaborative-data-infrastructure
- http://www.twylah.com/coolcatteacher/tweets/150623609453420544

5.5 Focus Group Write Up

This memo documents a focus group conducted at the EGI Community Forum in Munich, to explore the sustainability and solicit feedback on International Science Grid This Week (iSGTW).

Focus Group Participants:

- Shaila Roessle-Blank is a biologist and a self-proclaimed newbie to grids. Shaila has been working in a dissemination role for EDGeS for less than one month.
- Elizabeth Leake is from the HPC realm, and was previously external relations coordinator for the TeraGrid project. In the past year, she has been working as a consultant, and a freelance writer. She has been a regular contributor to iSGTW for the last four years.
- Tom Visner has worked for the last four to five years at SARA as a NGI International Liaison (NIL). His role involves him helping people make use of grids, clouds, supercomputing etc. SARA participates in projects all over the Netherlands. His background is in social informatics.
- Niobe Hiaitas works at CRNS (French National Research Centre) in Lyon. She is currently involved in the N4U project which focuses on Alzheimer's disease. Previously, she worked for Lifewatch. Niobe doesn't have a technical background, but is responsible for communication, dissemination, networking and outreach. She has been involved in the community for three years.