



## **D5.2: Initial Report on the Assessment of Online Access**

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## Document History

- 29.09.2014 – Draft Version 0.1 covering first 18 months.
- 29.01.2015 – Draft Version 1.0 of D5.2 (M1-M24).
- 23.02.2015 – Final Version 1.0 of D5.2 (M1-M24)

# 1 Executive Summary

This report is an initial assessment of online access to the services offered through the ARIADNE Infrastructure based on an analysis of the web statistics for the websites in question (the main ARIADNE website and the three online transnational access data providers) and taking into account the impact of the dissemination (and other) activities of the project which may contribute to the number of people who both visit the services to see what is available and who also are, or become, end users (i.e. repeat visitors).

The ARIADNE Infrastructure has provided access and promoted four online services which are managed by three of the partners, these being:

1. The Archaeology Data Service (ADS) is based in the UK and provides online access to federated queries for archaeological data from a variety of data providers via ARCHSEARCH, and direct access to archaeological datasets through the ARCHIVES sections of the ADS website. The ADS also provides extensive resources for working with archaeological data via its Guides to Good Practice, and access to over 30,000 unpublished archaeological reports from its Grey Literature Library.
2. AIAC, the International Association for Classical Archaeology based in Rome, provides Fasti Online, an online database of archaeological excavations undertaken across the Classical World.
3. DAI and the Institute of Classical Archaeology in Cologne, Germany, provide ARACHNE, which is a free object database of more than one million images of finds, architecture and excavations with meta information as well as digitised historical literature.
4. ZENON is the basic online card index of all institutions of DAI, providing information about all books available in the DAI libraries worldwide and access to several digitized and digital monographs and journals.

The key data used for this analysis are the visitor rates and whether this increased during and just after the key dissemination events, from where the website visitors originate and which browser language they use. Data provided for the ARIADNE website also includes outlinks and file down loads relating to the Services page.

The analysis has shown that ARIADNE project events have had a noticeable impact on the ARIADNE website visitor rates, and consequently on the data services. Social media is playing an increasingly influential role in disseminating information, especially Facebook, which is the favoured channel for bringing visitors to both ARIADNE and the online data services. Twitter is also effective for ARIADNE and ADS employ several social media channels which have a large following. Wikipedia is also an important source of referrals for Fasti Online, less so for ARACHNE. However, what is noticeable is the number of academic institutions and archaeology-related websites (“partners”) that provide referrals to ARACHNE. The online Stakeholder Survey was widely promoted on Twitter and other social media channels and this also had a very positive effect for the project website. Likewise, traffic from the online services can be traced back to ARIADNE. The increased involvement of Italian and other European users is

particularly noticeable for the German-hosted ARACHNE service. Likewise, Fasti Online has seen a decrease in Italian speaking users whilst English, Spanish and other European language users have grown their share.

Finally, the power of “traditional” media should not be underestimated, albeit online. The national coverage for the Research Infrastructures Conference held in Rome in November 2014 (and which also appeared in the Austrian and Greek press) provided a significant boost to new visitors to the ARIADNE website.

As the ARIADNE infrastructure is developed and becomes available to end users, the numbers of archaeology-related users from across Europe should increase and these will continue to be reflected in the increasing numbers of service end users who are from outside the national boundaries of the service providers.

## 2 Introduction and Objectives

This report is an initial assessment of online access to the services offered through the ARIADNE Infrastructure. The information presented consists of an analysis of the web statistics for the websites in question (the main ARIADNE website and the three online transnational access data providers). Taking into account the impact of the dissemination (and other) activities of the project which can impact on the number of people who both visit the services to see what is available, and who are (or become) end users (i.e. repeat visitors). Google Analytics is the online statistical tracking service used in all cases, with the exception of ADS who use Piwik, a similar application. There is no separate data available for the Zenon service so this has not been analysed, although links to and from this service appear in the website data for the other services.

The ARIADNE Infrastructure has promoted four online services, which are managed by three of the partners, these being:

1. The Archaeology Data Service (ADS) is based in the UK and supports research, learning and teaching with freely available, high quality and dependable digital resources in English, derived from UK archaeology, or UK-based (or funded) archaeology abroad. ADS provides online access to federated queries for archaeological data from a variety of data providers via ARCHSEARCH, and direct access to archaeological datasets, through the ARCHIVES sections of the ADS website, and through two specialised websites: "England's Rock Art" and "Image bank". As part of the ARENA2 project, ADS provides access to the Archaeological Records of Europe portal prototype and also hosts the Transatlantic Archaeology Gateway developed as part of the TAG project. The ADS also provides extensive resources for working with archaeological data via its Guides to Good Practice, and access to over 30,000 unpublished archaeological reports from its Grey Literature Library.
2. AIAC, the International Association for Classical Archaeology based in Rome, provides Fasti Online, an online database of archaeological excavations undertaken across the Classical World since the year 2000, including some 12,000 excavation reports and site summaries across the Mediterranean. The interface and records are in English and the content is in the local language.
3. DAI and the Institute of Classical Archaeology in Cologne, Germany, provide ARACHNE, which is a free object database of more than one million images of finds, architecture and excavations with meta information as well as digitised historical literature. The ARACHNE interface is in English (some of the context help is available in German as well) and the record metadata may be in either one of these two languages, or both. Since the 15<sup>th</sup> December, ARACHNE has a new interface that can be accessed via <http://arachne.dainst.org> ). Currently this is a beta version and ARACHNE 3.9 is still the main access point for external visitors, but it can be linked to from the main page.

4. ZENON is the basic online card index of all institutions within the DAI. It provides central information about all books available in the DAI libraries worldwide, and access to several digitized and digital monographs and journals.

A portal page on the ARIADNE website (<http://www.ariadne-infrastructure.eu/Services/Online-Services>) provides links and descriptions to all these services, along with training materials for each. This page was added in early June 2014.

Specific events have been held to promote these services to a wider archaeological audience by ARIADNE:

- The ARIADNE project sponsored a free workshop on Data Management Planning and Online Resources for Archaeology held just prior to the start of the European Association of Archaeologists (EAA) annual conference in Plzeň, Czech Republic on Wednesday 4 September 2013 from 10:00 - 13:00 on the main campus of the University of West Bohemia, and included the following presentations:

#### **Data Management Planning and Online Resources for Archaeology**

**10.00** Welcome and introduction to the ARIADNE project: Julian Richards, ADS

**10.10** How to overcome obstacles to data publication: Issues, requirements, and good practices: Guntram Geser, SRFG

#### **Data Management Planning**

**10.30** Data management planning – what it is and how to do it: Ulf Jakobsson, SND

**10.50** Data management and the online e-depot for Dutch Archaeology at DANS: Hella Hollander, DANS

**11.10** Online resources for data management planning: Julian Richards, ADS

**11.30 Break**

#### **ARIADNE: Examples of Archaeological Data Online**

**12.00** Archaeology Data Service: Holly Wright, ADS

**12.20** ARACHNE at the German Archaeological Institute: Marlene Scholz, DAI

**12.40** Fasti Online at the International Association of Classical Archaeology: Jessica Ogden, AIAC



- ARIADNE members Edeltraud Aspöck (Institute for Oriental and European Archaeology, Austrian Academy of Sciences) and Guntram Geser (Salzburg Research, Austria) organised and chaired a full-day session on archaeological infrastructures and services at the 18th Cultural Heritage and New Technologies (CHNT) conference, 11th -13th November 2013 in Vienna. Topics of the session included common documentation practices and semantics (e.g. CIDOC CRM), established and newly developed national data centres and services, and required e-infrastructure for international interoperability as well as services for geo-spatial and visual data services.
- CAA (Computer Applications and Quantitative Methods in Archaeology) Conference, Paris 22<sup>nd</sup> - 25th April 2014. A number of ARIADNE partners presented papers, held sessions and workshops on topics related to ARIADNE, and a specific workshop was held to promote the services of the ARIADNE online transnational access data providers. This workshop introduced archaeological researchers to a variety of online data resources, including those held by the three partners (ADS, DAI and AIAC) providing online access to their data as part of the EC Infrastructures funded Advanced Research Infrastructure for Archaeological Dataset Networking (ARIADNE) project. In addition to the ARIADNE partners, the workshop featured a presentation on data and data integration in the Digital Archaeological Record (tDAR). tDAR is an international digital repository based in America for the digital records of archaeological investigations. All the data providers showcased their resources and discussed how to use them, also illustrating the benefit to archaeology of making data openly available.
- 20th Annual Meeting of the European Association of Archaeologists (EAA2014), Istanbul, Turkey 10<sup>th</sup>-14<sup>th</sup> September 2014. A session entitled “Open Access” was held at EAA2014, Istanbul, 13<sup>th</sup> September 2014. The session was organised and chaired by Frank Siegmund (Heinrich-Heine-Universität Düsseldorf), Julian D. Richards (Archaeology Data Service) and Guntram Geser (Salzburg Research). Guntram Geser presented ARIADNE in “Open Data Publication - Requirements, Good practices, and Benefits” and Julian Richards gave a talk entitled “Opportunities and Challenges with Open Access and Open Data in the UK”. There were around 30 participants with 16 speakers. A workshop to introduce the offerings by the physical transnational access data providers was also offered on 11 September entitled “Opportunities within the Ariadne Network”, with following presentations by ARIADNE partners: Achille Felicetti “Mapping Existing Datasets to CIDOC-CRM”, Roberto Scopigno “2D/3D Documentation for Archaeology”, Carlo Meghini “Design of Archaeological Datasets”, and Nestor Tsirliganis “Scientific Data and Metadata in Archaeological Research”.
- The Research Infrastructures and e-Infrastructures for Cultural Heritage International Conference was organized under the Italian Semester of Presidency of The European Union, 13th-14th November 2014 at Biblioteca Nazionale, Rome. This two day event focused upon Research Infrastructures and e-Infrastructures for Cultural Heritage, and on day two, after overviews of CLARIN and CENDARI infrastructures in the morning, the afternoon session was devoted to ARIADNE, and several presentations were made by key participants to highlight the

objectives and progress to date. After an introduction by Prof. Franco Niccolucci, a series of presentations by the speakers highlighted ARIADNE's achievements and work under way.

In addition, ARIADNE Partners have presented the project at various Workshops and Conferences over the last 24 months to promote the Infrastructure and its services.<sup>1</sup>

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<sup>1</sup> The first 18 months of dissemination is reported in D4.3 Ariadne dissemination report and second period dissemination plan.

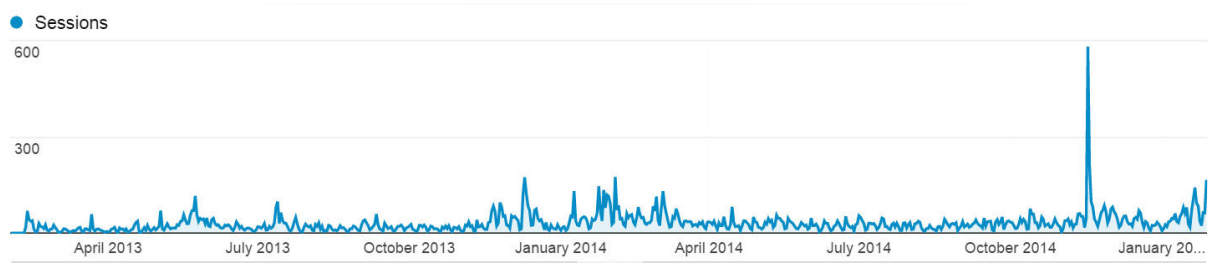
### 3 Website Statistics

The impact of ARIADNE on the use of the online services can be assessed in a number of ways. Statistics such as the visitor rates on and just after key events, and referrers and page access numbers for the ARIADNE website can provide an indication of the project's impact. Similar statistics from the individual web services can also contribute to the overall picture, along with an inspection of the dissemination activities happening during the same period in order to evaluate their impact on user numbers. Referrals can indicate where traffic coming to the services originates, and the type of referral can be meaningful, as social media plays an increasingly influential role. ARIADNE has a pan-European reach (and more recently has been forming liaisons further afield in the US and Mexico). Consequently, the dissemination activities may also result in a more diverse audience, as archaeologists in other countries learn about these services and start to use them. This will be reflected in the geo-location and browser language statistics.

#### 3.1 Visitor rates to the ARIADNE website

The statistics for the ARIADNE website are tracked using Google Analytics.

Between 1<sup>st</sup> February 2013 and 31<sup>st</sup> January 2015, there were 22,622 sessions by 14,667 unique visitors on the ARIADNE website.



Visitor numbers increased substantially from October 2013, peaking in March 2014, falling to a rate of around 800 visits per month. The peak in visitors coincides with two events; the first is the online stakeholder survey, which was launched in November and attracted a lot of attention in Social Media over the following weeks, culminating in just under 700 responses to the questionnaire. The second was the workshop at CHNT 2013 (also November), plus quite a few other dissemination events during November – March which included the Annual Meeting of the Archaeological Institute of America held in early January in Chicago, where Fasti Online received an award. The massive spike in visitor numbers in November 2014 coincides with the Infrastructures events in Rome which received a lot of media coverage and was very well attended.

### 3.1.1 Sources

Regarding where visitors come from, about 30% originate from search engines, 23% from referrers and 22% directly (e.g. via a bookmark or possibly typed in URL). Social media accounts for over 8%.

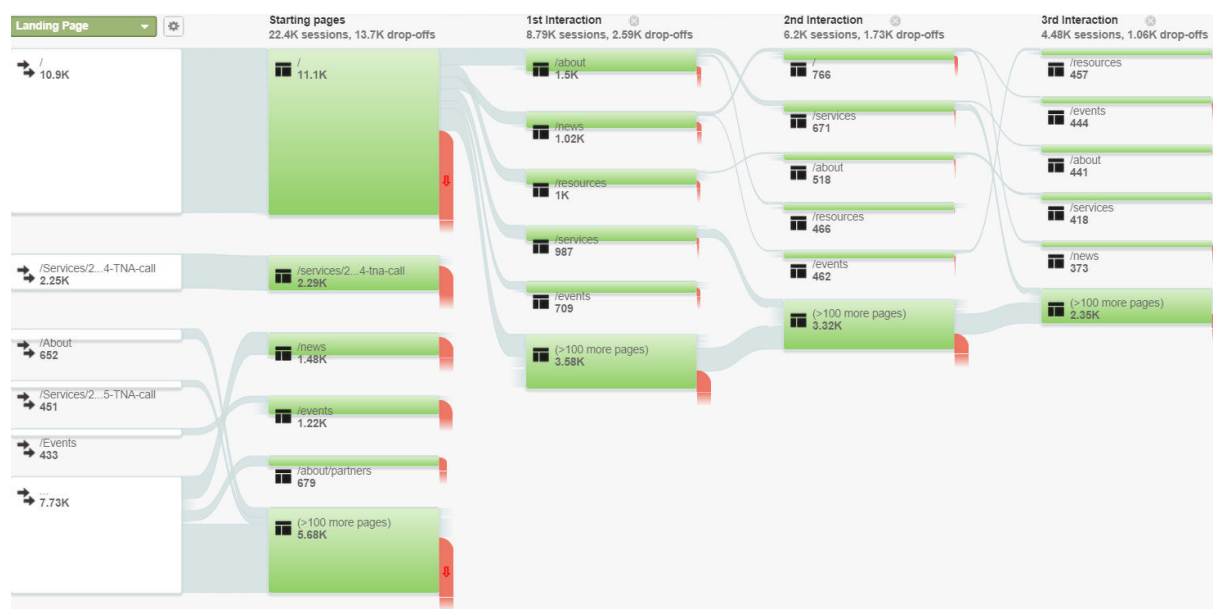
Source	Sessions	New sessions	New users
Organic Search	6,775 (29.95%)	65.12%	4,412 (30.07%)
Referral	5,109 (22.58%)	72.99%	3,716 (25.42%)
Direct	5,085 (22.48%)	66.63%	3,367 (23.09%)
(not set)*	3,545 (15.67%)	54.84%	1,944 (13.25%)
Social	1,910 (8.44%)	61.94%	1,183 (8.06%)
Email	198 (0.88%)	7.58%	15 (0.10%)

Referrals and social media account for 31% of all traffic to the ARIADNE website.

\*No information received regarding the source.

### 3.1.2 Online Services page access figures

The ARIADNE web statistics show that after the Home page and News section, the Services page was the next most popular destination with nearly 5% of all traffic to this page. From the Home page, there were 987 links through to the services with 79.3% of these visits linking on to other pages. In total, 1,867 link through to the Services pages, with 536 visits to the Online services sub-page.



Google Analytics doesn't record which URLs visitors went to after they exited the ARIADNE website but it can be presumed that some would have linked through to one of the four online services (which is confirmed by web statistics for the services websites).

### 3.1.3 Referrals

Referrals make up 25% of the incoming traffic to ARIADNE. These referrals are dominated by social media – Facebook, Twitter and LinkedIn account for over 24% of all the referrals. After this, ARIADNE project partners (not including the service providers) make up 19%, whilst the three services provide 7% of the incoming traffic. Online (traditional) media accounted for a further 12% of referrals. Referrals came from 424 different sources, which also include blogs and other cultural heritage websites, these largely accounted for the remaining 37% of referrals.

	Visits	% referrers
Facebook	1258	15.13%
Twitter	627	7.54%
LinkedIn	149	1.79%
		<b>24.46%</b>
<b>Online media</b>		
repubblica.it	697	8.38%
derstandard.at	92	1.11%
archeomatica.it	142	1.71%
archaeologie-online.de	98	1.18%
		<b>12.37%</b>
<b>Project Partners</b>	1590	<b>19.12%</b>
<b>Service providers</b>	568	<b>6.83%</b>
<b>Total</b>		<b>62.78%</b>











#### The Top 20 referrers

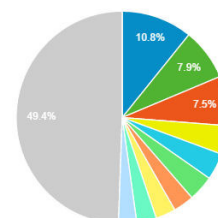
Rank	Sessions	Category	% New Sessions	New Users
1	facebook.com	Social media	<b>899 (10.81%)</b>	64.07%
2	repubblica.it	National press (media)	<b>656 (7.89%)</b>	92.38%
3	t.co	Social media	<b>627 (7.54%)</b>	54.23%
4	surveygizmo.com	Stakeholder Survey	<b>364 (4.38%)</b>	70.88%
5	archaeologydataservice.ac.uk	Data service provider (ADS)	<b>338 (4.06%)</b>	74.85%
6	york.ac.uk	Data service provider (ADS)	<b>325 (3.91%)</b>	85.85%

7	vcg.isti.cnr.it	Project partner	<b>263 (3.16%)</b>	15.59%
8	m.facebook.com	Social media	<b>253 (3.04%)</b>	85.77%
9	Fastionline.org	Data service provider (AIAC)	<b>230 (2.77%)</b>	67.83%
10	dainst.org	Data service provider (DAI)	<b>181 (2.18%)</b>	68.51%
11	dariah.eu	Associate infrastructure	<b>170 (2.04%)</b>	54.12%
12	linkedin.com	Social media	<b>149 (1.79%)</b>	61.07%
13	dans.knaw.nl	Project partner	<b>144 (1.73%)</b>	53.47%
14	archeomatica.it	CH Magazine (media)	<b>142 (1.71%)</b>	78.17%
15	orea.oew.ac.at	Project partner	<b>118 (1.42%)</b>	76.27%
16	culturalitalia.it	Project partner	<b>108 (1.30%)</b>	52.78%
17	archaeologie-online.de	CH Magazine (media)	<b>98 (1.18%)</b>	91.84%
18	snd.gu.se	Project partner	<b>95 (1.14%)</b>	70.53%
19	derstandard.at	National press (media)	<b>92 (1.11%)</b>	96.74%
20	l.facebook.com	Social media	<b>87 (1.05%)</b>	78.16%

## Notes:

- 1) Two robot crawlers (semalt.com and buttons-for-websites) were excluded from this table.
- 2) If archaeologydataservice.ac.uk and York.ac.uk are combined into one source, this accounts for 663 new sessions making them the 2<sup>nd</sup> highest referrer.

	8,316 % of Total: 36.76% (22,622)	8,316 % of Total: 36.76% (22,622)
1.  facebook.com	899	10.81%
2.  repubblica.it	656	7.89%
3.  t.co	627	7.54%
4.  surveygizmo.com	364	4.38%
5.  archaeologydataservice.ac.uk	338	4.06%
6.  york.ac.uk	325	3.91%
7.  vcg.isti.cnr.it	263	3.16%
8.  m.facebook.com	253	3.04%
9.  semalt.semalt.com	250	3.01%
10.  fastionline.org	230	2.77%



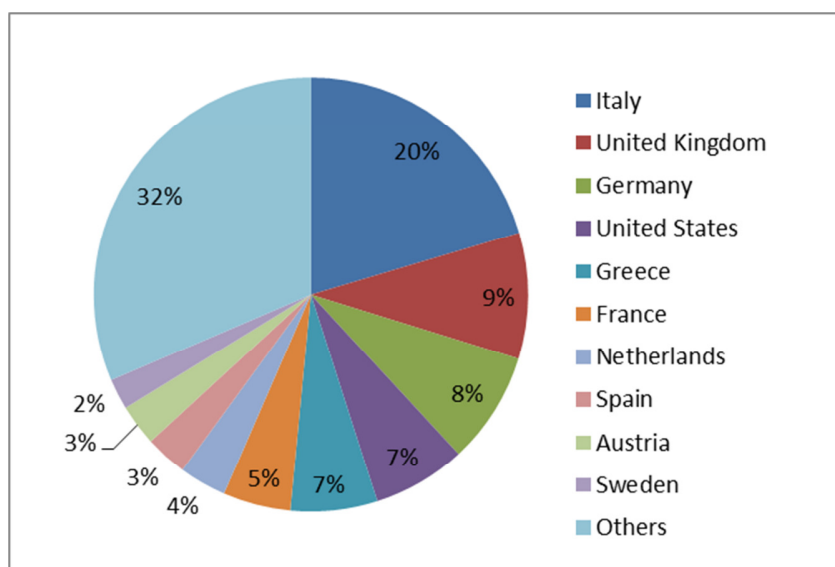
The project's online Stakeholder Survey was responsible for 4.38% (SurveyGismo) of all referrals. Fasti Online is the only service with a direct link to ARIADNE on the home page and the Archaeology Data Service has a direct link from the Research and Development page, which is accessed via the main menu. Consequently, web traffic flows in both directions so an established user of Fasti Online, for example, who visits the ARIADNE website has the opportunity to discover the other online services (cross – fertilisation).

Whilst ARIADNE does not have Facebook page (but many of its consortium members do), the project is an active user of Slideshare and Twitter which are used to help bring users to the website. Following the

Research Infrastructure event in Rome in November, the project received wide press coverage in Italy and was also featured in the Greek and German press which also helped to raise the profile of the project, as indicated by the high number of referrals from the La Repubblica website.

### 3.1.4 Browser Language of Users and their Location

Europe is the main location of ARIADNE website users at 82% with a further 9% from North America. The top 10 locations account for 71% of unique visitors with Italy making up 20% of these. As the service providers (and project co-ordinator) are based in Italy, Germany and the UK, it is to be expected that these would appear in the top 10 locations – in fact, these are the first three and make up 38% of users.

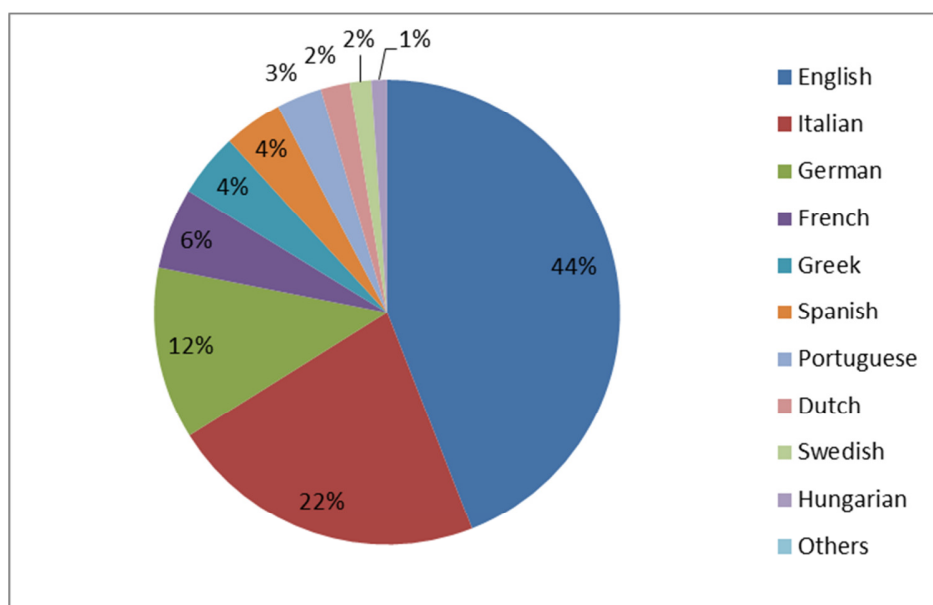


#### Top 10 locations of unique visitors to the ARIADNE website

County	Unique Visitors	Percentage of Unique Visitors
 Italy	2,993	20.4%
 United Kingdom	1,373	9.36%
 Germany	1,223	8.34%
 United States	1,019	6.95%
 Greece	949	6.47%
 France	740	5.04%
 Netherlands	516	3.52%
 Spain	459	3.13%
 Austria	451	3.07%
Others	407	2.77%



The browser language figures suggest that most visitors from Italy use Italian (as well as some users based in other countries), and the same applies to Germany. However, around 34% of users who are based outside the UK use English. Only 7% of these are based in the US. Overall, English, Italian and German make up 78% of the browser languages. A closer inspection of the location figures suggests that a good proportion of these users originate from the Eastern European Member States, in particular those represented in ARIADNE (Hungary, Poland, Bulgaria and Slovenia), and will often use English.



#### Top 10 browser languages

Browser Language	Unique Visitors	Percentage of Unique Visitors
English	5599	38%
Italian	2803	19%
German	1526	10%
French	718	5%
Greek	559	4%
Spanish	519	4%
Portuguese	401	3%
Dutch	258	2%
Swedish	188	1%
Hungarian	138	1%

### 3.1.5 File Downloads and Outgoing Links

Statistics for file downloads and outgoing links have only been available since October 2014 (when these were implemented in Google Analytics). However, the statistics for the last four months illustrate the impact that ARIADNE has had on the online services. 130 people linked through from the Online Services page to the following links provide for each service:

Rank	Event Description	Total Events	Unique Events
1	ADS Archsearch home page	48 (34.53%)	46 (35.38%)
2	Fasti Online home page (English)	36 (25.90%)	33 (25.38%)
3	ARACHNE home page (English)	25 (17.99%)	23 (17.69%)
4	ADS help page	14 (10.07%)	13 (10.00%)
5	Zenon data service page	8 (5.76%)	8 (6.15%)
6	ARACHNE FAQ page (English)	4 (2.88%)	4 (3.08%)
7	ARACHNE FAQ page (German)	2 (1.44%)	1 (0.77%)
8	Fasti Online/AIAC home page (Italian)	2 (1.44%)	2 (1.54%)

Furthermore, 29 people downloaded the presentation given about the services.

Rank	Event Description	Total Events	Unique Events
1	ADS Resources Online - presentation given at CAA, Paris 2014	18 (58.06%)	18 (62.07%)
2	Presentation about the Fasti Online service given at CAA, Paris 2014	9 (29.03%)	8 (27.59%)
3	Presentation about the ARACHNE service given at CAA, Paris 2014	4 (12.90%)	3 (10.34%)

These figures indicate a good level of interest in the online data services with the ADS portal being the most popular with end users.

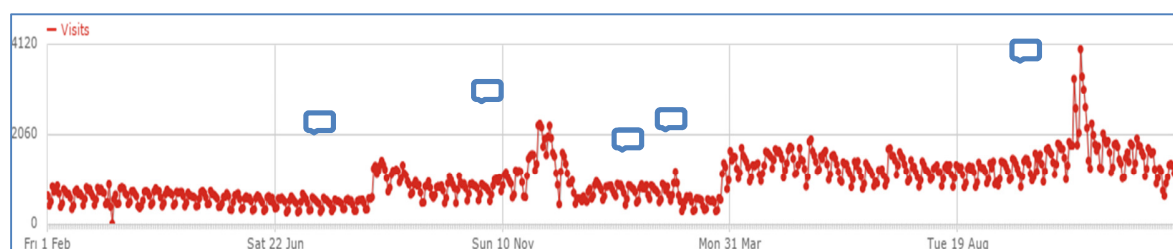
## 3.2 The ADS Services

The ADS web service was launched in 1996 and has seen a gradual increase in users year on year. The ADS uses Piwik Web Analytics to collate and study the their website metrics. The metrics were prepared from the start of the project to the end of December 2014, covering the first 23 months of the project, which is sufficient for the identification of trends.

### 3.2.1 Visitor rates to the ADS services

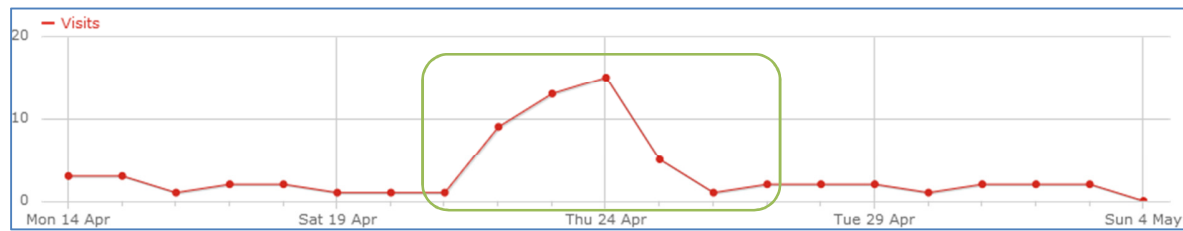
During the 23 month period from 1<sup>st</sup> February 2013 to 31<sup>st</sup> December 2014, ADS had **693,622 unique visitors** who carried out a total of **4,620,070 actions** including **324,492 downloads** and **4,244,893 page views**.

During this period ADS modified the websites direct access filter functionality, allowing the website metrics to take account of users finding PDFs and images directly via Google. This has resulted in a dramatic difference between the average monthly users (14,000) in the first eight months of the 23 month period (1<sup>st</sup> February –14<sup>th</sup> September 2013) and the average monthly users (39,000) for later months of the 23 month period as can be seen in the **figure 1** below.



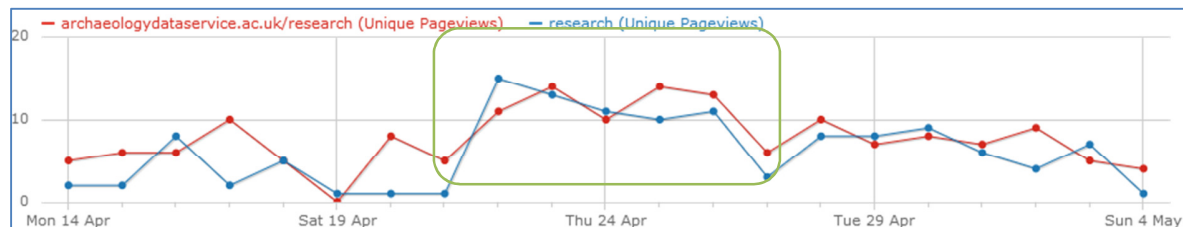
*Figure 1: Unique visitors to the ADS website (1st February 2013 – 31st December 2014). Annotations mark server disruption, popular data releases and changes to the direct access filter.*

Close analysis of the ADS website metrics on and around the specific ARIADNE events show a notable impact on the use of the ADS website. For example, the impact of the workshop presented at the start of the CAA2014 held in Paris (22<sup>nd</sup> – 25<sup>th</sup> April 2014) can be seen in the increased traffic to the ADS website during the week of the conference. The average number of visits to the ADS website calculated across the three weeks in April prior to the conference is **2125**, and the week following the conference the number of visits to the ADS website increased by over **25%** to **2755**. ADS are not aware of any other event at that time that may have influenced this unusual increase. The impact of CAA2014 is also seen clearly in the increase of visits to the ADS website from Paris during the week of the conference as shown in **Figure 2**.



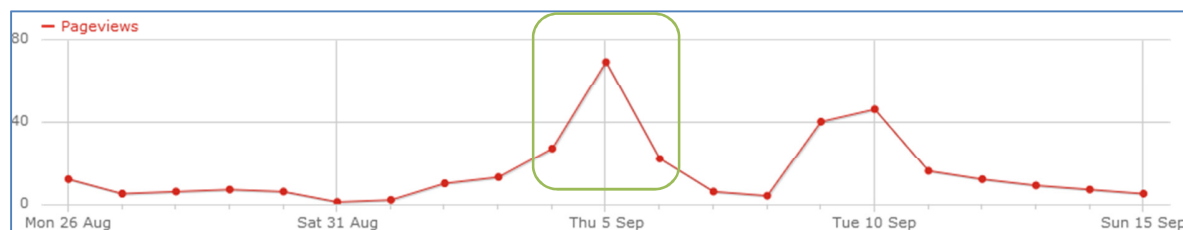
*Figure 2: Visits to the ADS website by users located in Paris. The green box highlights the week of the CAA conference and the increase in page views, starting the day of the workshop on the 22nd.*

An increase in page views of the two main research pages of the ADS website during this event (see **figure 3**) further suggests that an increased number of visitors were trying to access details about ADS's involvement with the ARIADNE project.



*Figure 3: Page views of the ADS research pages. The green box highlights the week of the CAA conference and the increase in page views.*

Similar increases can also be seen in relation to CHNT2013 and the ARIADNE workshops held during EAA2013 and to a slight degree in 2014. In particular there was a very significant spike in page views of the ADS research pages following the ARIADNE workshop before EAA2013 (see **figure 4**).



*Figure 4: Page views of ADS's main research page. The green box highlights the peak of page views following the ARIADNE workshop.*

The ARIADNE case study for the Guides to Good Practice; 'Selection and Retention of Files in Big Data Collections: The Example of the Pergamon Excavation of the DAI Istanbul' has had 240 unique page views, with an average time spent per visit on the page of 1.29 seconds which compares very favourably to other Guides to Good practice case studies. Whilst a further spike can be seen around November, the release of the very popular EH Monographs by the ADS at the same time means that it can't be asserted that the increase in visitor numbers was solely due to ARIADNE, if at all.

### 3.2.2 Social Media

The ADS routinely advertises ARIADNE events and activities on through their social media accounts. ARIADNE related posts on ADS's Facebook page (1244 fans), have an average of 170 views and 2/3 likes per post. The first announcement of the project was the most popular post with 378 views and 8 likes.

### 3.2.3 Referrals

During the 23 month period the top referring websites were Wikipedia (8%), Facebook (6%), Twitter (5%), Heritage Gateway (3%), and Europeana (2%). This reflects the number of key archaeological sites with Wikipedia entries for which the ADS holds data. It also reflects the active use of both Twitter and Facebook by ADS. The ARIADNE infrastructure website referred 254 unique visitors (0.2%) to ADS during the period of review. As can be seen in the figure below (Fig 5) referrals from the Ariadne network relate to external activities publicising ARIADNE. The Green box highlights the period during which CAA2014 Paris. ADS staff were also present at SAA2014 in Austin, Texas, during this time, promoting their resources and the ARIADNE project.

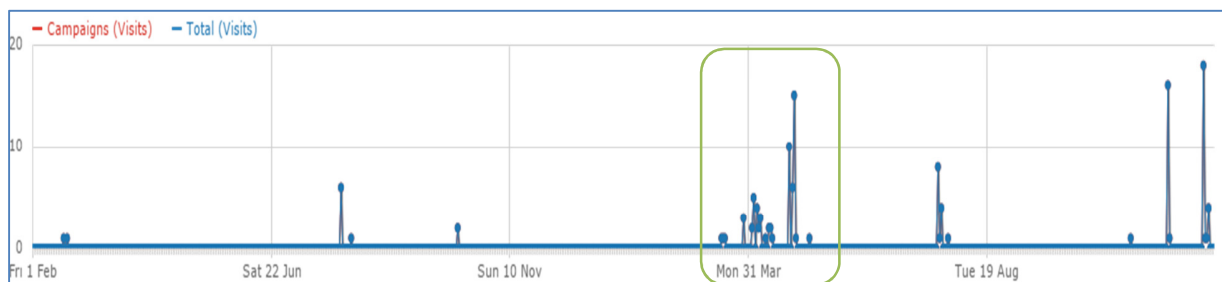


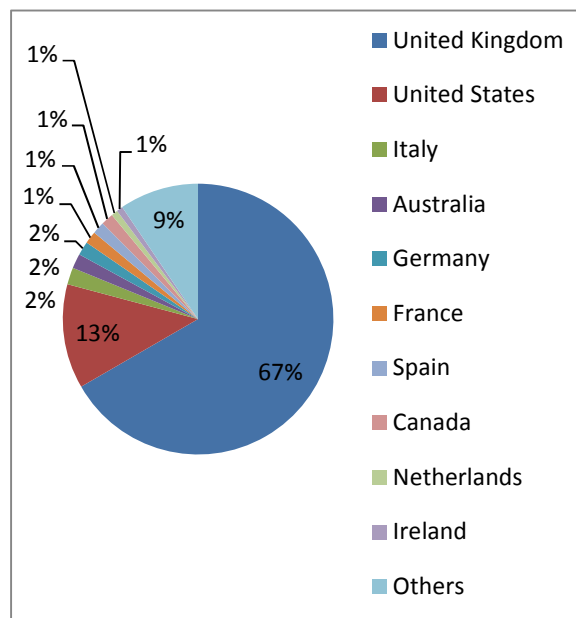
Figure 5: Referrals from the ARIADNE network to the ADS website. The Green box highlights the period during which CAA and SAA took place.

### 3.2.4 Browser Language of Users and their Location

80.3% of all ADS visitors during this time period were located in Europe, with 63% of all visitors being located in the UK. Italy is the third highest location of ADS visitors. The high percentage of visitors located in Italy is probably a reflection of the four Italian partners in the ARIADNE project. Germany, Spain, France, Ireland and Netherlands all feature in the list of the top ten locations for ADS visitors. All other ARIADNE partner countries make the list of top 20 locations for visitors; therefore it is likely that publicity by partner institutions is playing a part in the percentage of ADS services used by European located visitors.

**Location of unique visitors by country, 1<sup>st</sup> February 2013 to 31<sup>st</sup> December 2014:**

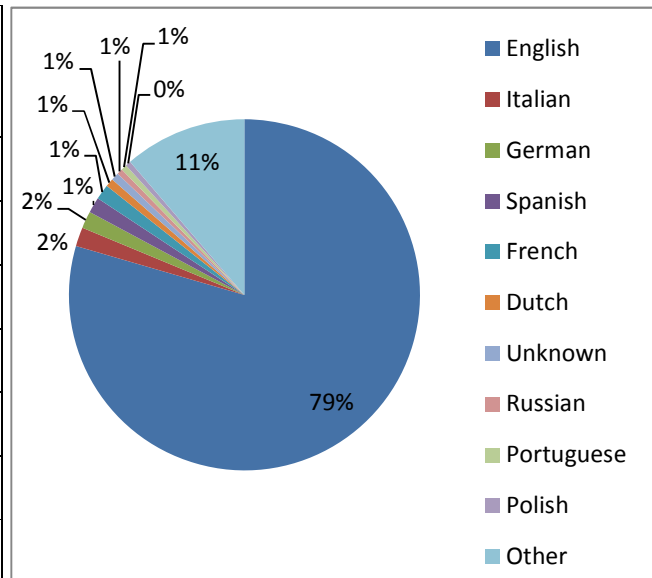
Country	Unique Visitors	% of Unique Visitors
 United Kingdom	46,0063	66%
 United States	86,222	12%
 Italy	14,027	2%
 Australia	12,121	2%
 Germany	11,196	2%
 France	10,261	2%
 Spain	10,219	2%
 Canada	9,974	1%
 Netherlands	5,377	1%
 Ireland	5,291	1%
Others	65,412	9%



English is the browser language used by 79% of unique visitors to the ADS website this is reflected by English speaking countries being high in the top ten of unique visitor locations. The prominence of Italian as the browser language for ADS visitors further confirms the influence of Italian partners in ARIADNE on ADS usage. Prior to the ARIADNE project, Italy only made up 1% of the location of visitors to the ADS site in 2012 and 0.1% of the visitors in 2011.

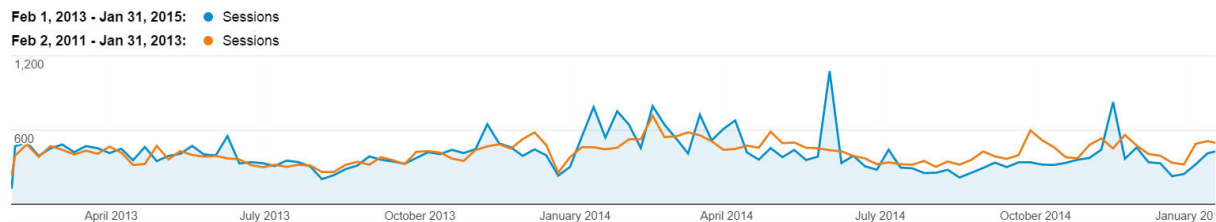
**Browser languages used by unique visitors, 1<sup>st</sup> February 2013 to 31<sup>st</sup> December 2014:**

Browser Language	Unique Visitors	% of Unique Visitors
English	551,366	79%
Italian	12,186	2%
German	10,795	2%
Spanish	10,069	1%
French	9,727	1%
Dutch	5,269	1%
Russian	3,811	1%
Portuguese	3,765	1%
Polish	3,409	1%
Unknown	4,933	1%
Other	78,292	11%



### 3.3 Fasti Online

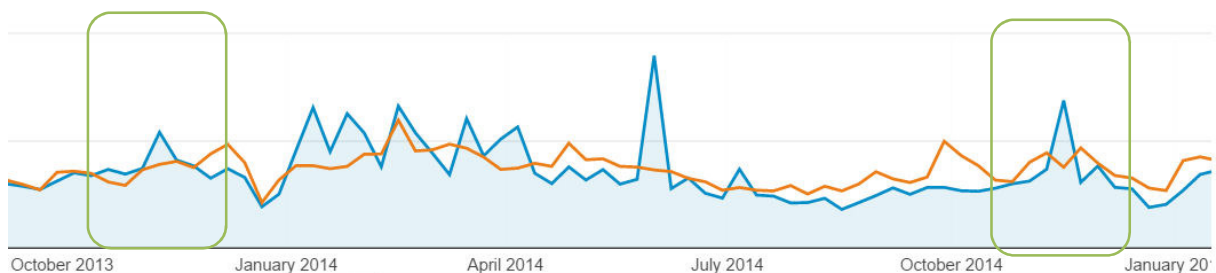
Fasti Online was launched in early 2009. During the last two years, there have been 43,157 sessions by 28,709 unique visitors who generated 97,072 page views. The average number of pages per session was 2.25 and the average session duration was 2 minutes and 21 seconds. More than 35% of end users have used the service more than once, with around 10% returning more than 15 times.



Fasti Online visitor sessions over the last two years. The yellow line is the previous two-year period which illustrates how the visitor rates have “spiked” more frequently and dramatically over the last two years.

#### 3.3.1 Visitor rates to the Fasti website

The user rates have been fairly static up to January 2014. The average number of users in 2013 was 1,115 per month. However, it is evident that there has been an increase in activity since the start of 2014 when the rate rose to over 1,332 users per month and the visitor rates became far more variable on a week by week basis. This can be seen by comparing the last two years with the previous two years, where some fluctuations can be observed (e.g. a spike in October 2012) but not as large as those seen for 2014.



Fasti Online Visitor rates (yellow line 2011-13 over same period) in more detail.

Although there were slight peaks corresponding to EAA during September in both 2013 and 2014, there have also been some significant usage peaks, the first being during the week 10<sup>th</sup> – 16<sup>th</sup> November 2013, the same week as the CHNT Conference in Vienna. There is another large peak from 16<sup>th</sup>-22<sup>nd</sup> November 2014 which follows the ARIADNE Infrastructure event held in Rome (on the 13-14<sup>th</sup>) which received a lot of media coverage (traditional and online) and attracted a lot of new visitors to the website. Since the



number of registrations also increased during the same period, and was predominantly Italian archaeologists, this confirms the impact of the Rome conference. The peaks between January and April could be partly due to the survey, which was active at this time, but the peak for the first week in June is not explained by an ARIADNE activity, especially as the number of users from Italy dropped by 10% during this period.

### 3.3.2 Visitor sources

Visitors come to Fasti Online directly (27%), through search engines (23%) and a further 27% via referrals and social media.

Source	Sessions	New sessions	New users
Organic Search	12,149 (28.15%)	54.21%	6,586 (23.43%)
Direct	11,468 (26.57%)	67.27%	7,714 (27.44%)
(not set)	10,274 (23.81%)	60.62%	6,228 (22.16%)
Referral	5,647 (13.08%)	81.65%	4,611 (16.40%)
Social	3,619 (8.39%)	82.07%	2,970 (10.57%)
Email	198 (0.88%)	7.58%	15 (0.10%)

### 3.3.3 Referrals

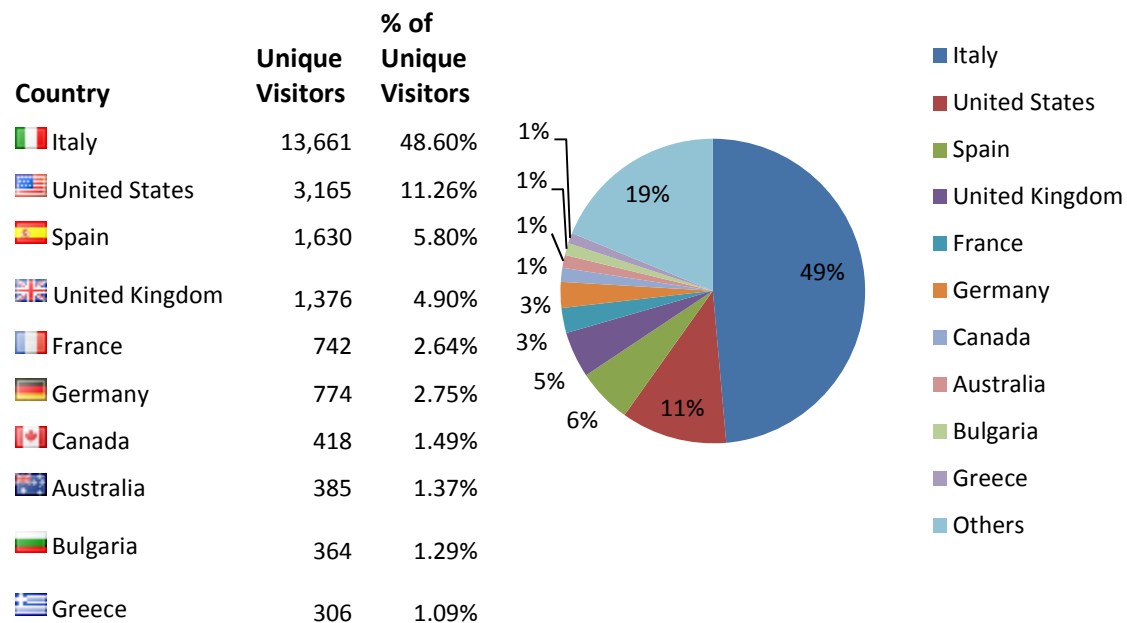
The main referrals for Fasti Online (out of 710 in total) are Facebook (a massive 30%), Wikipedia (Pompeii, GIS in Archaeology, Fasti...) 19%, AIAC (the hosting organisation) 6%, and the ARIADNE Infrastructure website provided 1.55% of referrals, of which is 145 are new users. The Facebook referrals correlate strongly to the spikes in visitor rates, which suggest the increasingly important role of social media as a dissemination tool for academic information sources.

	Visits	% referrers
<b>Facebook</b>	2807	29.93%
<b>Twitter</b>	92	0.98%
<i>(Social media)</i>		<b>30.91%</b>
<b>Wikipedia</b>	1825	19.46%
<b>Archaeology sites (Top 30 referrals only)</b>	735	7.84%
<b>ARIADNE</b>	145	1.55%
<b>AIAC</b>	552	5.88%
<b>Total</b>		<b>65.64%</b>

The remaining 35.36% of referrals come from a variety of archaeology related websites, academic institutions and other sources such as blogs.

### 3.3.4 Browser Language of Users and their Location

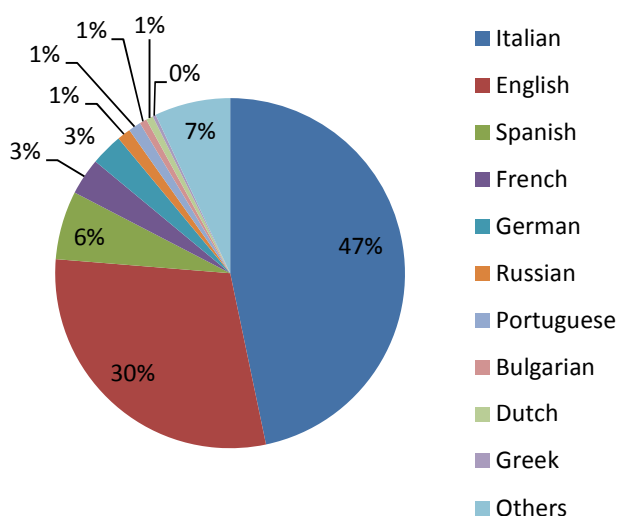
Europe is the source of 79% of unique users with a further 15% coming from North America. Asia accounts for 3% and 1.5% from Australia/New Zealand (Oceania).



Users located in Italy dominate (49%) with just 5% from the UK and 3% from Germany.

As might be expected, the leading browser language is Italian followed by English and then Spanish (possibly because of the similarities between the Spanish and Italian languages). Russian features quite highly – one of the major Facebook referrals is a Russian Archaeology Group with over 1,600 members.

Browser Language	Unique Visitors	Percentage of Unique Visitors
Italian	13,119	47%
English	8,311	30%
Spanish	1,783	6%
French	961	3%
German	828	3%
Russian	357	1%
Portuguese	320	1%
Bulgarian	185	1%
Dutch	182	1%
Greek	85	0%
Other		7%



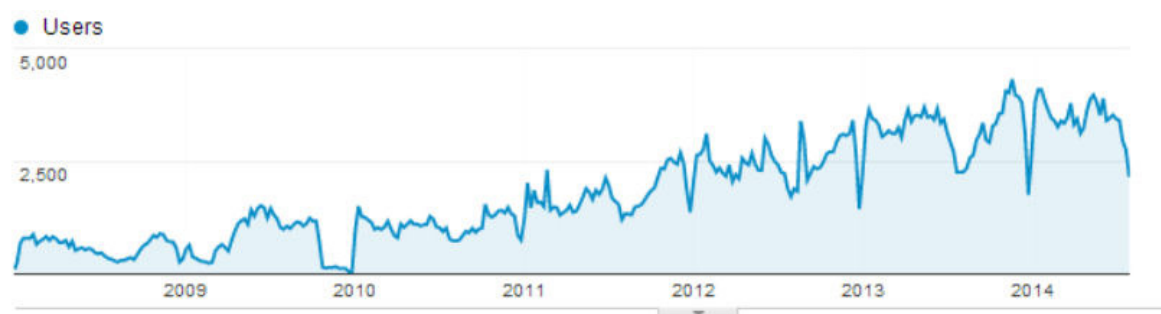
In order to assess whether there has been any change in the audience for Fasti Online, the two previous years have been compared with the last two years, when ARIADNE has been in operation to see if there are any significant trends.

Language	01/02/2011 – 31/01/2012	01/02/2012 – 31/01/2013	M1-M24
Italian	58%	59%	47%
English	28%	25%	30%
Spanish	3%	3%	6%
German	3%	3%	3%
French	3%	3%	3%
Other	5%	7%	11%

The proportion of Italian-based users has decreased in favour of a 3% increase in Spanish language users, as well as a smaller increase in English users. The proportion of French and German language-based users remains constant at 3% whilst other languages have increased. Closer inspection of the web statistics indicate that some of this increase is due to a growth of users from Eastern Europe.

### 3.4 The ARACHNE Online Service

The ARACHNE Online service was first available from late December 2007. The following graphic of users shows the steady increase in the numbers of users. By 2014, the average number of users per month is just under 12,000.



#### 3.4.1 Visitor rates to the ARACHNE website



For the 24 month period 1 February 2013 – 31 January 2015, the visitor rate to the ARACHNE website has been fairly stable with an increased visitor rate compared to the previous two year period. Repeat visitors and new visitors are more or less even at 49% and 51% each. During this period, there were 521,564 sessions by 270,263 users who generated 3,980,704 page views. The average number of pages per session was 7.63 and the average session duration was 6 minutes and 7 seconds. Around 3% of the site users (76,423) have visited the ARACHNE website more than 15 times.



The peak in late 2013 that can be seen in the Users profile was around the 18<sup>th</sup>-20<sup>th</sup> November, shortly after the CHNT Conference in Vienna. Prior to this, EAA in September was followed by a small peak. Both

CAA (22<sup>nd</sup>-25<sup>th</sup> April) and EAA (13<sup>th</sup>-14<sup>th</sup> September 2014) coincide with rising user numbers, but without any discernable short term increases. However, the Rome event in November 2014 does correspond to a peak which is similar in behavior to the user patterns for the other two services. Since the overall user numbers are much higher, a similar number of new users for the other two services resulted in a more pronounced peak than for ARACHNE. Inspection of the daily visitor rate for November 2014 reveals an increase of around 10 visitors daily during the week of the 15<sup>th</sup>-22<sup>nd</sup> (i.e. up by 10%) but overall, this is not a significantly large increase in overall end user numbers for ARACHNE.

### 3.4.2 Visitor sources

Source	Sessions	New sessions	New users
Source	Sessions	New sessions	New users
Organic Search	98,810 (18.94%)	46.33%	45,774 (16.82%)
Search engines	126,809 (24.32%)	47.83%	60,672 (22.29%)
Direct	94,905 (18.20%)	66.16%	62,790 (23.07%)
(not set)	122,996 (23.58%)	49.40%	60,765 (22.33%)
Referral	46,406 (8.90%)	55.72%	25,859 (9.50%)
Social Media	6,885 (1.32%)	49.59%	3,414 (1.25%)
Wikipedia Links	8,823 (1.69%)	0.6816	6,014 (2.21%)
Edu/partners Links	15,930 (3.06%)	43.20%	6,880 (9.51%)

Visitors come to ARACHNE directly (23%), through search engines (39%) and a further 11% via referrals and social media. Nearly 10% of the referrals are identified as academic or partner links.











### 3.4.3 Referrals

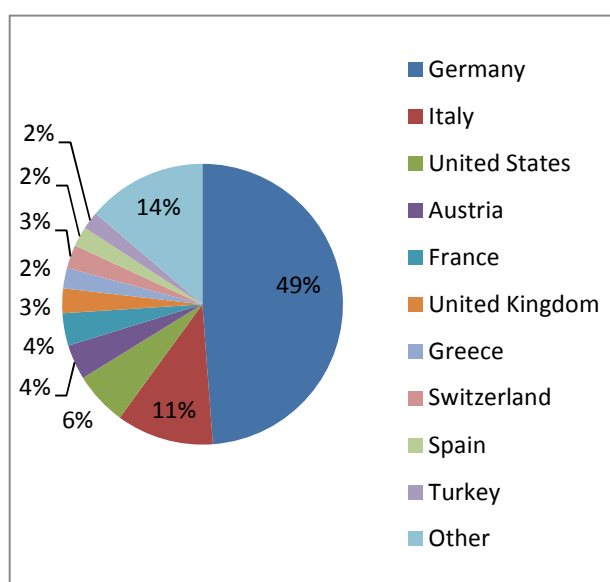
	Users	% referrers
<b>Facebook</b>	11,132	18.45%
<b>Wikipedia</b>	14,077	23.33%
<b>Corpus Inscriptionum Latinarum</b>	8582	14.23%
<b>ARIADNE</b>	143	0.24%
<b>DAI</b>	1664	2.76%
<b>Total</b>		<b>59.01%</b>

Wikipedia is the number one source of referrals (ARACHNE\_Bilddatenbank is the top page) of 1,557 different sources at over 23%. Facebook (18%) is the 2<sup>nd</sup> most popular source with one archaeology portal, the Corpus Inscriptionum Latinarum hosted by the Berlin-Brandenburg Academy of Sciences and Humanities accounting for over 14% of all referrals. Google.de accounts for 15% and the remaining top 30 referrals consist of German academic institutions and archaeology related websites. The ARIADNE website was responsible for referring 143 new users to ARACHNE (0.24%).

### 3.4.4 Browser Language of Users and their Location

Europe accounts for around 86% of users with a further 8% from North America. Nearly half of all ARACHNE users are based in Germany – this is to be expected with the high numbers of referrals coming from archaeology-related and academic websites. The next highest users are Italy (11%), whilst the UK only accounts for around 3%, a similar proportion to Switzerland, Greece and Spain.

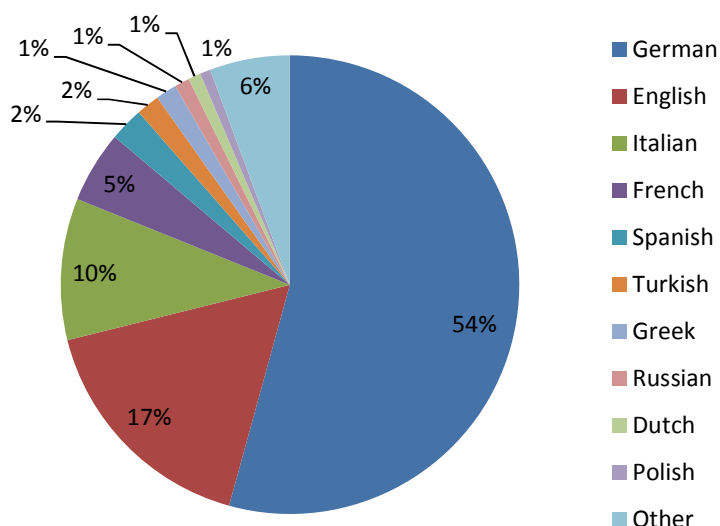
Country	Unique Visitors	% of Unique Visitors
 Germany	129,736	48.81%
 Italy	29,831	11.22%
 United States	16,463	6.19%
 Austria	10,717	4.03%
 France	9,896	3.72%
 United Kingdom	7,613	2.86%
 Switzerland	7,170	2.70%
 Greece	6,237	2.35%
 Spain	6,149	2.31%
 Turkey	5,392	2.03%



ARACHNE has a large audience based in Germany, Austria and Switzerland, which accounts for German being the dominant language (54%). Nearly 17% of end users use English, followed by Italian at 10%. The proportion of English language is much lower than for Fasti Online, suggesting that ARACHNE has a potentially larger audience across Europe.

**Browser Languages of ARACHNE end-users**

Browser Language	Unique Visitors	Percentage of Unique Visitors
German	144,296	54.28%
English	44,732	16.83%
Italian	26,500	9.97%
French	13,489	5.07%
Spanish	6,298	2.37%
Turkish	4,380	1.65%
Greek	3,979	1.50%
Russian	2,756	1.04%
Dutch	2,388	0.90%
Polish	1,949	0.73%
Other	15,051	5.66%



Looking at previous years, the proportion of German speakers has dropped as an increasing number of other users across Europe have started to use the service. One notable increase is the proportion of Italian speakers which grew by 2% - ARIADNE has four partners from Italy which include PIN (the project coordinator), who have been very active in promoting the project. French, Greek and Spanish have also increased, albeit by small amounts. Overall, the proportion of German language browsers has decreased by 6% since the start of ARIADNE whilst the other main language shares have grown.

Language	01/02/2011 – 31/01/2012	01/02/2012 – 31/01/2013	M1-M24
German	70%	60%	54%
English	11%	15%	17%
French	3%	3%	5%
Italian	8%	8%	10%
Turkish	1%	1%	2%
Greek	1%	1%	2%
Spanish	<1%	<1%	2%
Other	0%	11%	8%

## 4 Conclusion

The ARIADNE project events such as the workshops at CHNT2013, EAA2013, CAA2014, EAA2014, SAA2014 and particularly the Research Infrastructure Conference in Rome have had a noticeable impact on the ARIADNE website visitor rates. Archaeologists and researchers visit the website and then some clearly move onto the online services. Social media is playing an increasingly influential role in disseminating information, especially Facebook, which is the favoured channel for bringing visitors to both ARIADNE and the online data services. Twitter is also effective for ARIADNE and ADS employ several social media channels which have a large following. Wikipedia is also an important source of referrals for Fasti Online, less so for ARACHNE. However, what is noticeable is the number of academic institutions and archaeology-related websites that provide referrals to ARACHNE.

The online ARIADNE stakeholder survey was widely promoted on Twitter and other social media channels and this also had a very positive effect for the project website. Likewise, traffic from the online services can be traced back to ARIADNE. The increased involvement of Italian and other European users is particularly noticeable for the German-hosted ARACHNE service. Likewise, Fasti Online has seen a decrease in Italian users whilst English, Spanish and other European users have grown their share.

Finally, the power of “traditional” media should not be underestimated, albeit online. The national coverage for the Research Infrastructures Conference held in Rome in November 2014 (and which also appeared in the Austrian and Greek press) provided a significant boost to new visitors to the ARIADNE website.

As the ARIADNE infrastructure continues to be developed and becomes available to end users, the numbers of archaeology-related users from across Europe should increase, and these will continue to be reflected in the increasing numbers of service end-users who are from outside the national boundaries of the service providers, implementing one of the main goals of the ARIADNE project.