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Table of Contents

1	EXECUTIVE SUMMARY AND REPORT SCOPE	6
2	INTRODUCTION.....	9
3	KIND OF USERS.....	10
4	PERFORMANCE OPTIMIZATION	10
5	CONTENT ACCESS	14
5.1	CONTENT KIND	14
5.2	CONTENT ACCESS FEATURES.....	15
5.3	CONTENT ACCESS ASSESSMENT	16
5.3.1	Access to DRUPAL pages and elements	16
5.3.2	Access to Objects.....	17
6	NETWORKING: GROUPS, FORUM, BLOG POST, MESSAGING, COMMENTS, VOTES, FOLKSONOMY.....	18
6.1	NETWORKING: FEATURES	18
6.1.1	Networking: Features Access	18
6.1.2	Networking: Features creation	19
6.2	NETWORKING: ASSESSMENT.....	21
7	PROFESSIONAL USAGE: WORKFLOW, IPR	22
7.1	PROFESSIONAL USAGE: FEATURES.....	22
7.2	PROFESSIONAL USAGE: ASSESSMENT	23
8	CONTENT ACCESS FROM MOBILE.....	24
8.1	CONTENT ACCESS FROM MOBILE: FEATURES	24
8.2	CONTENT ACCESS FROM MOBILE: ASSESSMENT.....	24
9	E-LEARNING	25
9.1	E-LEARNING: FEATURES	25
9.2	E-LEARNING: ASSESSMENT.....	25
10	QUERY	25
10.1	QUERY: FEATURES.....	25
10.2	QUERY: ASSESSMENT	26
11	SUGGESTIONS, RECOMMENDATIONS	27
11.1	SUGGESTIONS: FEATURES	27
11.2	SUGGESTIONS: ASSESSMENT.....	28
12	REGISTRATION	28
12.1	REGISTRATION: FEATURES.....	28
12.2	REGISTRATION: ASSESSMENT	28
13	SUMMARY ANALYSIS	28
14	USER BEHAVIOUR	30
14.1	BEHAVIOUR OF PUBLIC USERS IN THE FIRST CLICKS	30
14.1.1	State Transitions	31
14.1.1.1	Registration Paths	32
14.1.1.2	Start State occurrences.....	32
14.1.1.3	Total State occurrences.....	33
14.1.1.4	State Transition occurrences.....	33
14.1.1.5	End State occurrences.....	37
14.1.1.6	Top click generator states	37

14.1.1.7	Top Paths to Registration.....	38
14.1.1.8	Top 2-links Paths to Registration.....	39
14.1.1.9	Top 3-links Paths to Registration.....	40
14.1.1.10	Top 4-links Paths to Registration.....	40
14.1.1.11	Top 5-links Paths to Registration.....	41
14.1.1.12	Top 6-links Paths to Registration.....	42
14.1.2	Top Menus (first clicks)	43
14.1.3	Top Menus (second clicks).....	44
14.1.4	Top Menus (third clicks)	45
14.1.5	Top Menus (last clicks)	46
14.1.6	Top Objects (first clicks).....	48
14.1.7	Top Objects (second clicks)	48
14.1.8	Top Objects (third clicks).....	49
14.1.9	Top Objects (last clicks).....	50
14.1.10	Top Groups (first clicks)	51
14.1.11	Top Groups (second clicks).....	52
14.1.12	Top Groups (third clicks)	53
14.1.13	Top Groups (last clicks)	54
14.1.14	Top Pages (first clicks).....	55
14.1.15	Top Pages (second clicks)	56
14.1.16	Top Pages (third clicks).....	57
14.1.17	Top Pages (last clicks).....	57
14.2	BEHAVIOUR OF REGISTERED (NOT PARTNERS) USERS.....	58
14.2.1	State Transitions	59
14.2.1.1	Start State occurrences.....	60
14.2.1.2	Total State occurrences.....	61
14.2.1.3	State Transition occurrences.....	61
14.2.1.4	End State occurrences.....	63
14.2.1.5	Top click generator states	63
14.2.2	Top Menus (first clicks), registered non partners users.....	64
14.2.3	Top Menus (second clicks), registered non partners users	65
14.2.4	Top Menus (third clicks), registered non partners users.....	66
14.2.5	Top Menus (last clicks), registered non partners users.....	66
14.2.6	Top Objects (first clicks), registered non partners users.....	67
14.2.7	Top Objects (second clicks), registered non partners users.....	68
14.2.8	Top Objects (third clicks), registered non partners users	69
14.2.9	Top Objects (last clicks), registered non partners users	70
14.2.10	Top Groups (first clicks), registered non partners users.....	70
14.2.11	Top Groups (second clicks), registered non partners users	71
14.2.12	Top Groups (third clicks), registered non partners users.....	71
14.2.13	Top Groups (last clicks), registered non partners users.....	71
14.2.14	Top Pages (first clicks), registered non partners users	72
14.2.15	Top Pages (second clicks), registered non partners users.....	73
14.2.16	Top Pages (third clicks), registered non partners users	73
14.2.17	Top Pages (last clicks), registered non partners users	74
15	USER SATISFACTION AND UNDERSTANDING	76
15.1	USER SATISFACTION OF ECLAP SERVICES.....	77
15.2	USER UNDERSTANDING OF ECLAP SERVICES	78
15.3	CONCLUSIONS ON USER CLICK QUESTIONNAIRES	78
16	TREND OF REGISTERED USERS	79
17	CONCLUSIONS AND IMPROVEMENTS	80

1 Executive Summary and Report Scope

The purpose of this document is to describe the tasks performed for performances optimization of the ECLAP portal, and for the evaluation of user behaviour. Pages rendering metrics have been evaluated with respect to server scalability; a load balancing solution has been designed and implemented to cope with bottlenecks issues and workloads. User behaviour has been evaluated with a detailed log analysis, by describing each portal's functionality with respect to user clicks, preferences, and sessions.

The Introduction reports the main activities performed in the context of the portal evaluation and assessment tasks. In particular, the described activities have been carried out for the optimization and the validation of the results. Data collecting was set up by logging the portal activities and conducting a time series analysis of all the incoming requests, in a time frame of 90 days.

Section 3 reports the type of users constituting the ECLAP population, which were the target of the current analysis.

Section 4 starts with a detailed overview of the portal timings. Time and the memory used to serve requests is reported for each web functionality accessed by users (e.g., search, lists, content visualization). Another table reports the requests made by registered users (e.g., upload of content, login/logout, register). The data, acquired in 24 hours of requests from the internet shows that the average time to fulfill a request is quite good (less than 5 seconds) but in some cases the maximum time is quite high. Also the memory used is in line with the standard values of Drupal. Other figures report the frequency distribution of the time and of the memory used in all the requests, making clear that 93.21% of the requests were performed in less than 5 seconds, and that 99.03% of the request were performed with less than 11 MB. Concerning the frequency distribution of the time for the *view*, *view link* and *search* requests, most of the requests are performed within 5 seconds. The section introduces an overview of the main portal functionalities, analyzed in the considered period.

Section 5 reports the main figures about content exploitation of the portal. It starts by summarizing the content type featured on ECLAP, which is divided in Cross Media and Drupal contents, accessible through Searching or Menus of the portal. All these values presented were cleaned from the accesses of the partners and of the robots, crawlers, etc.

Sections 6-12 cover the main portal features concerning

- **Content access**, one of the most exploited functionalities on the ECLAP portal, mostly performed by anonymous users. Most exploited contents were **drupal pages**, and **crossmedia contents**. Despite the very limited number of Drupal items, compared to Cross Media resources, these contents were highly requested and accessed by users;
 - **Drupal access**, pages and groups were the top accessed contents among Drupal items. Web pages, despite the relatively limited number of page items on the portal, were fully accessed by users;
 - **Cross media access**, the majority of cross media content views were from public users. A relatively small fraction of content accesses was made by educational users (i.e., professors, students, researchers). Top accessed contents include images, pdfs, videos and videos. These kind of contents can be accessed through searching, popular content lists (e.g., featured, top rated, last posted etc.) or email notifications. A small fraction of the users accessing Cross Media content decided to download it. Most downloaded Cross Media contents were pdfs, images and documents. This means that Cross Media images and videos were played by users, but generally not downloaded. Downloaded Cross Media contents include resources that are not usually intended for leisure or entertainment, so that the typical downloader is a technical/professional user. Playlists and Collections were among the less exploited contents on the portal, with few creations and accesses from users. Since playlists and collections are

not automatically ingested contents, this kind of behaviour denotes a limited interest from users in creating such type of contents, but a potential interest in dealing with them.

- **Networking**, belong to this activity all the actions performed on groups, forum, blogs, messaging, comments, votes, etc. performed by the user with the aim of contributing and/or networking, that is also reading and acquiring information produced by other users, exchanging, etc. A huge part of networking was constituted by groups views, then forum views, and personal contents. The remaining activities didn't collect significant numbers. The majority of groups views was from anonymous users. Since users had a limited content creation activity, menu sections related to personal contents were accessed a few times. Users were not interested in creating new contents and deal with them. Personal pages, among the personal contents, **had** the biggest even if limited number of accesses; users that created a personal page were mainly not partners Forums did not collected a significant number of creations. The majority of forum views were performed by public users. Forum creations indicate a limited social activity of. Users had little interest in comments creation, Cross Media ranking and annotation. As for playlists or collections, users preferred to view these contents instead of creating new ones. Also, users had little interest in sharing ECLAP contents with other social networks. Use of social network icons, for exporting of cross media contents, collected few clicks. Blog creations were not significant, in the considered period. Users preferred to view blogs rather than creating new ones. Friendships and connections between users were established mostly by not partners. Messages were exchanged only by partners. These numbers suggest that the few social activities registered were about technical tasks between the project partners.
- **Professional usage**, this feature deals with the portal production phases: ingestion, IPR definition, publication, metadata enrichment. Content upload collected a huge number of events, due to the scheduled number of digital items to be provided by each single partner. Professional usage was performed only by partners. The other professional activities had limited access. Metadata editor was accessed few times, despite the huge number of items processed and uploaded to the system. Generally, contents with metadata translations need human metadata review and editing; the tool wasn't sufficiently exploited by users in order to make usability considerations. Playlist, collections and page creations didn't show a significant activity in the considered period; few playlists were created, and only by partners. Playlists are thought as shared and not personal contents, though users showed no interest for personal collections too. Page creations, although very limited in number, were preferred to social activities (personal page creations). Pages, collections, and playlist creations were made mainly by partners. The huge numbers collected by professional activities, compared to the rest of the activities, indicate that the portal was mainly used for tasks not related to leisure.
- **Mobile**, reports the features concerning accesses from mobile devices. The majority of mobile accesses was from anonymous users. Top exploited resource types were: Images, videos and documents. Downloads from mobile were not significant.
- **E-learning**, this feature concerns the WP6 trial of educational aspects. E-learning facilities did not exhibit any significant number in the considered period. This functionality was not exploited at all by users. No course creation was registered in the considered period.
- **Queries**, includes, the query from the frontal free text query, the exploitation of the advanced query service, the exploitation of faceted solution. Query services were one of the top exploited functionalities in the portal. Most of the queries were of simple type, frontal free text query, performed from the main page, and a limited fraction were advanced, faceted, query or keyword cloud queries queries. The majority of queries were performed by public users. As for advanced queries, faceted queries were not significant. Generally, after issuing a query, views were of type drupal and cross media. Users preferred more Drupal related contents to cross media, despite the limited amount of Drupal items, especially if related to Cross Media contents. Top search result clicks were on groups.
- **Suggestion and Recommendations**, the majority of similar contents views was from anonymous users. Featured contents was the most exploited content list, followed by Last Posted and Popular contents. In the considered period the list of featured content was exposed in the home page.
- **Portal Registrations**, almost all the users who registered in the considered period were not partners related, denoting a potential interest for the ECLAP portal.

Section 13 reports a summary analysis of the presented numbers. Generally, users preferred to interact with existing contents on the portal, especially with pages, discussion groups, pdfs, images and videos. Content were extremely limited for each available resource. Cross media contents received less attention than deserved to Drupal related contents. Users preferred to anonymously browse the portal, and were more interested in technical tasks, (e.g., related to the project commitment), rather than leisure activities. Thus the portal was mainly for internal purpose in that period even from anonymous users. Social interactions between users and e-learning activities were not significant at all, and demonstrated a limited interest in exploiting ECLAP social functionalities by users. Queries were almost always performed from the simple full text form on the top portal page; advanced or faceted queries received few attention. Almost the total of the activities was performed by desktop computers, with a negligible part from mobile devices.

Section 14 reports details about user behaviour, in terms of session analysis and click counts. It reports data about public users and registered users (not partners).

- **Public users**, to model user behavior while surfing the portal pages and interacting with resources, each user action was labelled with a letter, and each state transition with a couple of letters denoting each state (e.g., the user browses from page A to page B -> AB). Session timeout was set to 10 minutes. Top accessed states include page view, group view, Cross Media view, menu click, simple query. Users preferred to start their portal sessions with page view, groups view, Cross Media view. User preferred to end their portal sessions with page view, groups view, Cross Media view. Viewing PDA Cross Media, downloading PDA Cross Media, downloading Smartphone Cross Media, downloading MP21 Cross Media, were the less exploited actions in the first session clicks. Viewing wiki, downloading PDA Cross Media, viewing PDA Cross Media, download Medium Definition Cross Media were the less exploited actions in the last session. Users preferred to start and end their sessions by exploiting the portal contents, instead of downloading the resources or using the networking capabilities of the portal (messaging, commenting, voting etc.). In general, view page was the top click generators; each view of these contents was likely followed by another view of the same type. Another top click generator event was viewing a group. Users that decided to register to the ECLAP portal generally were viewing pages, events or groups.
- **Registered users (not partners)**, generally started their sessions with logging in the portal, then clicking on the ECLAP menu, viewing a page, and viewing an event object related page or an event generic page. Most popular second clicks include menu viewing, pages access, viewing event pages, menu click. Third clicks generally were menu access, viewing event pages, viewing groups, pages, objects. Top sessions last clicks events were on event pages, cross media content, access logout and menu clicks. Also in this case, to model user behavior while surfing the portal pages and interacting with resources, each user action was labelled with a letter, and each state transition with a couple of letters denoting each state (e.g., the user browses from page A to page B -> AB). Session timeout was set to 10 minutes. Top accessed states include login, page view, menu. Users preferred to start their portal sessions with login, view page, view Cross Media. User preferred to end their portal sessions with view page, view Cross Media, view event. Viewing groups, logging out, downloading Cross Media, were the less exploited actions in the first session clicks. Viewing forums, performing advanced queries, downloading Medium Definition Cross Media, were the less exploited actions in the last session clicks. Users preferred to start and end their sessions by exploiting contents such as cross media or pages, instead of downloading the resources or using the networking capabilities of the portal (messaging, commenting, voting etc.). After login, users' first session actions were likely related to page views, menu items and simple queries.

Section 15 reports data collected by presenting popups to users, during their navigational experience on the ECLAP portal. Users has to perform at least two clicks to reply to questions. One to open the pop up and the second to reply. The results were obtained by considering only those produced by non-registered users, so that public users that have not been logged into the ECLAP portal. The numbers of users involved in the analysis by replying to our questions is not high with respect to the number of users involved and accessed to the portal. On the other hand, these users decided to contribute to ECLAP thus they are typically very

interested and motivated. The general assessment of the user kind was performed by asking them to react at the question: “I am very interested in ECLAP's topics?”. At which the 100% of user strongly agreed and agreed. Thus the 57% of users agreed about the current aspect of the first page; that in the period was a page representing the current event: Dario Fo event, and the first ECLAP 2012 Conference Event. A second group of questions was provided to assess the user understanding of the ECLAP features. Users were quite satisfied of the ECLAP aspect and behaviour, though their perception about the ECLAP features was not complete. At this regard, a dissemination campaign on promoting the ECLAP features would be helpful.

Section 16 reports trends about registered users, with a graph describing the distribution of the new registrations per week. The data put in evidence some peak in the traffic, in correspondence with some main ECLAP events.

Section 17 reports conclusion about the assessment. Social networking potentialities of ECLAP were not sufficiently exploited by users, in the considered period; e-learning features were not tested at all. Many of the performed tasks were done for technical purposes, often related to the project commitment schedule. Most accessed contents include groups, pages, pdf documents, and videos. Creation and access of resources such as collections or playlists were practically ignored; in the main page, how to video tutorials could be provided, driving the new user in the portal. Considering the growing interest of people in Social Networking activities, messaging and friendship features must be improved to meet user needs, both from a design and performance point of view, with a new design of the user profile management interface, and a push notifying system. The search user service might include a detailed view, in order to find users with similar interests, contents, background etc. Integration with other Social Networks must be strengthened too, with the aim to direct the user toward the portal to register or access the contents, making Performing Arts students interested in the portal topics, for example with incentives from the content partners. Also, ECLAP community needs to be motivated to exploit the portal functionalities with a more effective dissemination campaign.

2 Introduction

The main activities performed for the assessment and evaluation of the ECLAP portal functionalities and performances were:

- Optimization
 - Performance evaluation of the ECLAP portal
 - Page rendering
 - Server scalability
 - Results achieved
- Validation
 - Main functionalities
 - Content Access
 - Networking: groups, forum, blog post, messaging, comments, votes, folksonomy
 - Professional usage: workflow, IPR
 - Content access Mobile
 - E-learning
 - Query
 - Suggestions, recommendations
 - Registrations

The exploitation of the current functionalities has been conducted by analysing the portal logs in a period of about 90 days. The usage of each ECLAP feature was evaluated, taking into account its target users, and presenting related data in terms of accesses to content and clicks. ECLAP portal activities can be divided in 8 categories. Contents Access refers to each activity where the user views or downloads some content (e.g. images, videos etc.); accesses from mobile devices are discussed separately. Networking deals with interactions between users, described as user activities on discussion groups and forums, blog posts,

messages sent or preferences expressed through voting and rating of contents. Professional tasks include all the back office activities related to content ingestion, workflow and IPR definition. E-learning activities refer to courses access and creation. Querying includes all the activities related to queries for information retrieval on the portal. Recommendations and suggestions include functionalities that provide the users content related suggestions and recommendations (e.g., similar contents to a list of contents). Registrations deal with logging of user subscriptions on the ECLAP portal.

3 Kind of Users

Users on the ECLAP portal are divided in three categories:

- Not Partners/Not Affiliated
- Partners/Affiliated
- Public (Anonymous)

Not Partners (or not Affiliated) users are registered to the portal and belonging to the ECLAP Community.

Partners/Affiliated users are registered to the portal and belonging to the ECLAP Community.

Public (or Anonymous) users are not registered to the portal, nor belonging to the ECLAP Community.

Registered users can access to the ECLAP portal services, and on the basis of their rights and subscriptions, view protected contents or participate in private discussions on forums or discussion groups.

4 Performance Optimization

The ECLAP Portal is based on Drupal. Drupal provides a caching system for pages that are accessed by not logged-in users, this strongly reduces the time to produce the page. However to be able to trace the access to content pages and to Drupal content (e.g. web pages) the access to the page need to be recorded regardless of the caching system. The server serving the calls is a virtual machine with 4 virtual cores at 6000 mhz and 3GB memory, it is running Apache 2.2 and MySQL.

In the following two tables the time and the memory used to serve requests (measured on the server when serving the request) is reported. The first table reports the requests for browsing the portal content (like search, lists, content visualization, etc.) while the second table reports requests made by registered users (upload of content, login/logout, register, etc.).

Request type	N. Req	Time (s)			Memory (MB)		
		Avg	Max	Std.Dev.	Avg	Max	Std.Dev.
VIEW LINK	40644	2,56	171,23	2,93	7	32	0,86
NODE VIEW	2618	2,39	116,34	4,12	7	24	3,38
TAXONOMY LIST	2006	3,64	63,63	3,10	10	25	1,38
DOWNLOAD	1945	4,94	220,50	13,16	4	20	0,70
GROUP OBJ LIST	1224	3,22	30,13	2,15	10	25	1,67
CALENDAR	910	2,46	21,66	2,18	10	27	1,34
SURVEY VIEW	575	1,07	36,94	2,05	3	18	0,87
FEATURED LIST	432	2,54	24,46	2,41	5	18	2,02
GROUP FORUM LIST	420	1,55	12,49	1,07	6	19	1,47
GROUP BLOG	418	2,03	26,82	2,18	8	14	3,66
SIMILAR LIST	414	1,79	12,16	1,55	4	5	0,85
SEARCH	301	4,09	31,07	3,28	5	13	0,84
AJAX VIEW	262	1,66	50,44	3,25	5	12	0,63
GROUP PAGE LIST	232	2,47	25,09	2,92	9	21	2,66
LASTPOSTED LIST	229	3,76	22,86	3,52	6	15	2,61

<i>EUROPEANA SEARCH</i>	177	3,12	18,20	2,34	3	11	0,58
<i>POPULAR LIST</i>	132	2,70	31,39	4,02	6	11	3,75
<i>GROUP FEED</i>	124	1,62	28,94	3,46	6	18	1,49
<i>TOP RATED LIST</i>	68	1,86	13,19	2,33	7	11	3,87
<i>LESS POPULAR LIST</i>	37	2,11	13,42	2,35	8	10	3,30
<i>LOCATION MAP</i>	30	1,72	4,89	1,09	8	10	3,50
<i>KEYWORD CLOUD</i>	30	1,44	6,82	1,41	7	11	4,23
<i>QUERY CLOUD</i>	19	2,18	8,48	1,60	9	10	0,17

Table. Browsing Requests

Request type	N. Req	Time (s)			Memory (MB)		
		Avg	Max	Std.Dev.	Avg	Max	Std.Dev.
<i>UGC PROGRESS</i>	1192	1,10	22,69	1,92	3	19	0,61
<i>UGC NOTIFY</i>	432	2,08	51,20	3,00	4	13	0,81
<i>UGC REGISTER</i>	237	1,98	19,27	2,15	3	17	1,12
<i>UGC PUBLISH</i>	214	4,65	99,99	7,50	4	15	1,18
<i>UGC POST</i>	204	2,71	15,53	2,72	4	12	0,65
<i>LOGIN</i>	96	2,05	64,34	6,63	5	23	4,16
<i>REGISTER</i>	58	4,07	17,33	3,87	10	28	4,16
<i>LOGOUT</i>	17	6,62	86,94	20,78	3	6	1,25
<i>UGC UPLOAD</i>	7	7,35	13,45	3,78	11	12	2,08

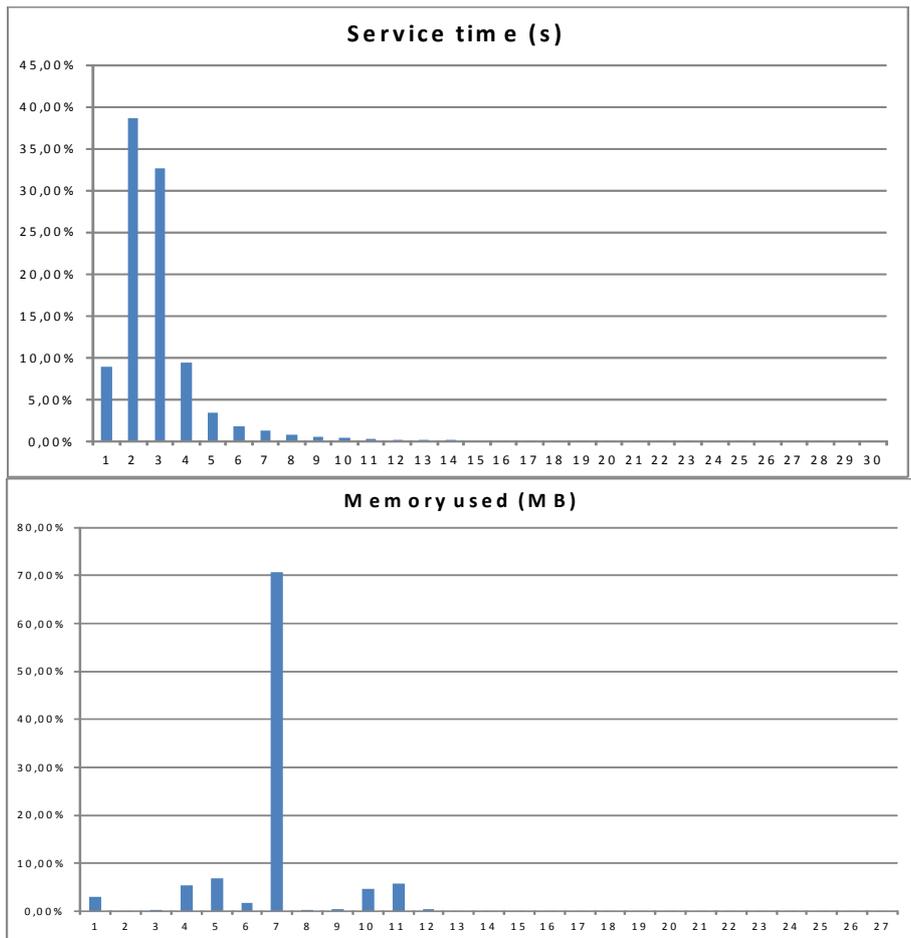
Table. Requests specific for registered users

The data has been acquired in 24h of requests from the internet (mainly from BOTs). It can be seen that the average time to fulfill a request is quite good (less than 5 seconds) but in some cases the maximum time is quite high. Also the memory used is in line with the standard values of Drupal.

Since the DOWNLOAD requests are managed by PHP the time elapsed to serve the download request depends on the file size for this reason the average time and its standard deviation for the request is quite high. For the rendering of the media the AJAX VIEW request is done via AJAX while the VIEW LINK is the rendering of a content from a link (mainly requested from BOTs).

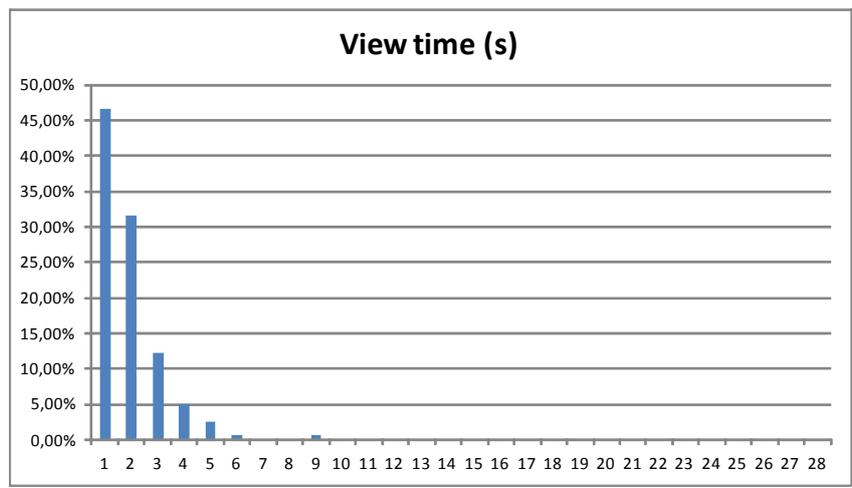
However a deeper investigation will be performed to analyze why the maximum time is so high for many requests.

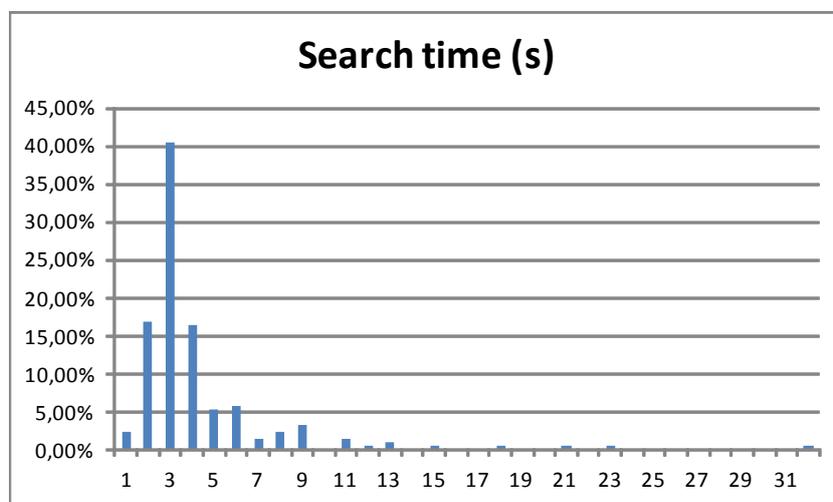
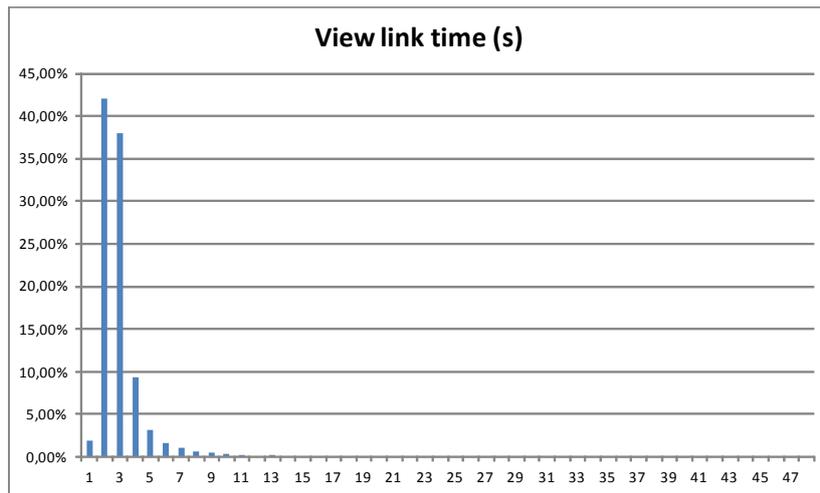
In the following two figures the frequency distribution of the time and of the memory used in all the requests is reported:



It can be seen that 93.21% of the requests were performed in less than 5 seconds and that 99.03% of the request were performed with less than 11MB.

In the following figures are reported the frequency distribution of the time for the **view**, **view link** and **search** requests:





It can be seen that most of the requests are performed within 5 seconds.

On the client, at these times have the times to get all the other files (images, js, css) to be added and thus the time experimented by users is higher.

To increase the scalability we are testing a solution with a front-end machine running apache with the *mod_proxy* module configured to be a reverse proxy for two (or more) machines running apache+PHP connected to one DB machine. The front-end machine will cache (in memory) also static files as css, js and images. This configuration will decrease the time to serve the requests as on some cases the CPU is at 100%. In case the access to db will become too high we will consider to create a database cluster.

Analysis of Main Features

The following analysis was conducted by taking into account ECLAP portal activities in the period **February 1st – May 31th 2012**. The same analysis is going to be replicated in the next period to make comparison.

The following Tables illustrate the content related features of the ECLAP portal.

Legend:

- *Feature*, the functionality exposed in the ECLAP portal;
- *Target*, the set of users that can use the functionality :

- A= All,
- Pa= Partner,
- D = DSI, Coordinator
- *Source Path*, paths from where the functionality can be accessed:
 - For example:
 - Featured (1) means clicked from the list of featured content as a first click
 - Events → main Blog (1) means that the access has been on the event main menu to the main blog item in that menu with one click.
 - numbers between parentheses are the number of clicks necessary to use the functionality, coming from a Source Path;
- *Min # of clicks*, minimum number of clicks necessary to use the functionality;
 - If a feature has a minimum number equal to 2 means that the feature is not directly accessible at the first click.
- *Total Accesses*, total number of accesses registered for the functionality. The number reported refer to the number of accesses, click, etc. of features that may be decomposed into click/accesses for
 - *p* = partners users,
 - *np* = not partners,
 - *pub* = anonymous users;
- *Normalization*, the normalization factor used for the assessment of the functionality
 - The number refer to the counting with respect to normalize the proposed features/measure;
- *Note*, a comment regarding the functionality;
- *Assessment*,
 - list of most accessed contents by using the functionality, the numbers corresponds to the NID, node id of the system

5 Content Access

Playback of multimedia contents requires:

- videos or audios, a Flash Player plug-in installed on the browser. Videos are available in standard or high resolution, and can be viewed full size.
- Cross Media Contents are accessible through the ECLAP player (e.g., image, pdf) or from download (e.g., doc, slide, xls).

For every Content, a right panel shows: content related metadata (relevant and technical) in various languages, content taxonomical classification, IPR information, geolocation data; each content can be downloaded from desktop or mobile devices. Relevant metadata include: content title, subject, description. Technical metadata include: number of content accesses, format, type, duration and video quality (for video or audio), available platforms, upload date, group, content publisher, content uploader, filename, workflow type, content url, QR code, object id (axoid). IPR information consists in a matrix of rights that reports desktop and mobile permissions about content access (e.g, download and playback for trusted and anonymous users).

Each content can be downloaded in their source format, or in MPEG-21 format (for Desktop or Mobile).

5.1 Content kind

ECLAP BPN resources are divided in Cross Media and Drupal contents, and they are accessible through Searching or Menus of the portal.

- Cross Media types include: archive, audio, braille music, collection, crossmedia, document, event, epub, excel, flash, html, image, pdf, playlist, slide, smil, tool and video. Cross Media contents may be annotated, recommended to other users, added to a playlist or to a personal collection, edited, downloaded, marked as favorite or featured, commented, tagged and voted.
- Drupal Content types include: blog, forum, groups, page. Drupal contents may be commented and voted. Also,

Both Cross Media or Drupal content may be linked and suggested to users in other Social Networks, with 1-click icons (i.e., del.icio.us, digg.com, Facebook, Twitter, MySpace, Messenger, Orkut, Plaxo, LinkedIn, Google).

5.2 Content Access Features

The following table reports the features concerning content access. In the considered period there were 55287 content accesses (download/play), mostly performed by anonymous users (47165).

Feature	Target	Source Path	Min # of clicks	Total Accesses	Normalization	Note	Assessment
Page View	A	Menu -> XXX (1) Groups (2) Search (2) Newsletter (1)	2	20955 (np=576, p=1749, pub=18630)	# of Page View (20955)	Distribution of Page View per nid	Page Views per nid: 68524 (6362) 65281 (4329) 3727 (1143)
Crossmedia View/Play	A	Featured (1) Popular, etc..... Newsletter/email Search Filter (2) Content (2) Keyword Cloud (2) Query Cloud (2) Groups (2)	1, 2	13970 (np=389, p=2331, pub=11250)	# of View/Play (55287, np=1508, p=6614, pub=47165)	Distribution of crossmedia view/play by content type	Most accessed Crossmedia: image (7964) pdf (2923) video (2348)
Crossmedia Download	A	Crossmedia View/Play Featured (2) Search Filter (3) Content (3) Keyword Cloud (3) Query Cloud (3) Groups (3)	2, 3	1203 (np=2, p=19, pub=1177)	# of Crossmedia Download (1203) # of View/Play (55287)	Distribution of crossmedia download by content type	Most downloaded contents: pdf (724) image (375) document (46)
Blog General View	A	About->Eclap News Blog (1) Events -> Main Blog (1) Newsletter (1)	1	358 (np=5, p=12, pub=341)	# of Blog General Access (535) # of Menu Clicks (10307)	Distribution of Blog General Access per Menu (About, Events)	Blog General Views per Menu: About (358) Events (177)
Collections View/Play	A	Featured (1) Search Filter (2) Content (2) Keyword Cloud (2)	1, 2	55 (np=3, p=19, pu=23)	# of Collections View/Play (55)	Distribution of collections View/Play per axoid	Most accessed collections per nid: 61641 (16)

		Query Cloud (2) Groups (2)			# of Crossmedia View/Play (55287)		40875 (13) 70775 (10)
Playlists View/Play	A	Featured (1) My Playlists (2) Search Filter (2) Content (2) Keyword Cloud (2) Query Cloud (2) Groups (2)	1, 2	33 (np=1, p=14, pub=18)	# of Playlist creations (p=3) # of View/Play (55287)	Playlists content access not significant e	View/Play of My Playlists (12)
Blog Group View	A	Groups (2) Search (2)	2	431	# of Blog Group View (431)	Distributio n of BlogViews per nid	Blog Views by nid: 82156 (51) 93301 (50) 94338 (47)
QR Access	A	Featured (1) Search Filter (2) Content (2) Keyword Cloud (2) Query Cloud (2) Groups (2)	1, 2	16 (pub=16)	# of QR Access (16) # of Content View/Play from Mobile (1642) # of View/Play (55287)	Distributio n of QR access per nid	

5.3 Content Access Assessment

Content access is one of the most exploited functionalities on the ECLAP portal.

Most exploited contents were:

- **drupal pages:** 20955 views
- **crossmedia content:** 13970 views plus 1203 downloads.

the majority of accesses was from anonymous users (85.3093856%). All these values have been cleaned from the accesses of the partners and of the robots, crawlers, etc.

Drupal resource had 74.7318538% of total views performed on the portal. Despite the very limited number of Drupal items, compared to Cross Media resources (about 0.514874142% of total), these contents were highly requested and accessed by users;

5.3.1 Access to DRUPAL pages and elements

During the period, the 33 groups created since the start of the project collected 17343 views (> 143 per day);

Groups are a source path for locating contents and interacting with other people on the portal; pages and groups were the top accessed contents among Drupal items. Pages collected about 52.120383% of all Drupal views, groups collected about 43.1364258%;

Top accessed pages include the “ECLAP Network of Performing Arts” (6362), ECLAP 2012 Conference: General Programme (4329), European Collected Library of Artistic Performance (1143);

Web Pages are accessible through searching, groups, newsletters, or content lists (e.g., last posted, top rated etc.); despite the relatively limited number of page items on the portal, this kind of content was fully exploited by users, with more than 173 accesses per day in the considered period;

The most 3 accessed pages, collected about 56.35506453% of total page accesses (respectively 30.29668079%, 20.61526739% and 5.443116339%);

The general ECLAP page collected 1143 accesses (9.44628099 per day, about 1 access each 13.1924759 visits to the portal). (There were 15079 visits in the considered period February 1st 2012 – May 31st 2012).

Blogs are a sort of personal journal pages, in the style of traditional web logs, accessed through searching or by browsing groups' contents. The ECLAP portal features two types of blogs: general and groups related. The general blog is the main project repository page, containing updated news about the project related tasks and activities. This single page collected nearly 2.95867769 clicks per day from the ECLAP menu. Groups related blog accesses are about 75.4816112% of all blog accesses.

Events are a special kind of page contents, with 2.24350205% of Drupal accesses; events accesses have peaks in correspondence to interesting events for users, and they don't follow the average behaviour of other Drupal contents.

5.3.2 Access to Objects

The majority of cross media content views were from public users. A relatively small fraction of content accesses was made by educational users, 12.1045097% (i.e., professors, students, researchers, 62.3233909% of registered users declared a specialization in their profile).

Top accessed contents include images, pdfs, videos and videos. These kind of contents can be accessed through searching, popular content lists (e.g., featured, top rated, last posted etc.) or email notifications. A small fraction of the users accessing Cross Media content decided to download it;

Most downloaded Cross Media contents are pdfs (60.43%), images (31.30%) and documents (46%); this means that Cross Media images and videos are played by users, but generally not downloaded; Downloaded Cross Media contents include resources that are not usually intended for leisure or entertainment, so that the typical downloader is a technical/professional user;

Playlists and Collections were among the less exploited contents on the portal, with few creations and accesses from users. They can be accessed through searching, groups' contents, or contents lists (e.g., featured, last posted, popular). Since playlists and collections are not automatically ingested contents, this kind of behaviour denotes a limited interest from users in creating such type of contents, but a potential interest in dealing with them, because playlists and collections consist of Cross Media contents that are popular among users (e.g., videos, pdfs).

The following table lists view and downloads for each type of cross media resource.

Type	Views	Download
image	7964 (57.01%)	375 (31.30%)
pdf	2923 (20.92%)	724 (60.43%)
video	2348 (16.81%)	8 (0.67%)
audio	317 (2.27%)	-
html	122 (0.87%)	-
epub	76 (0.54%)	17 (1.42%)
collection	55 (0.39%)	-
document	38 (0.27%)	46 (3.84%)
playlist	33 (0.24%)	-

wrl	27 (0.19%)	-
archive	25 (0.18%)	21 (1.75%)
slide	15 (0.11%)	2 (0.17%)
excel	9 (0.06%)	3 (0.25%)
tool	8 (0.06%)	-
flash	7 (0.05%)	2 (0.17%)
other	3 (0.02%)	-

6 Networking: groups, forum, blog post, messaging, comments, votes, folksonomy

Belong to this activity all the actions performed on groups, forum, blogs, messaging, comments, votes, etc. performed by the user with the aim of contributing and/or networking, that is also reading and acquiring information produced by other users, exchanging, etc.

6.1 Networking: Features

The following table reports the features concerning networking activities.

6.1.1 Networking: Features Access

Feature	Target	Source Path	Min # of clicks	Total Accesses	Normalization	Note	Assessment
Group Views	D, N, Pa	Groups(2) Search (2)	2	17343 (np=206, p=1919, pub=15218)	# of Drupal content View		
Forum View	A	Groups (2) Search (2)	2	424 (np=13, p=14, pub=397)	# of Drupal content View	Distribution of Forum Views per nid	Forum Views per nid: 3430 (42) 3276 (31) 3541 (26)
My Content	A	Content (1)	1	548 (np=17, p=531)	Total number of menu clicks		
Personal Page access	D, N, Pa	My Colleagues (2)	2	29 (np=7, p=17, pub=5)	# of Personal page creation (15) # of Personal page access (10)	Distribution of Personal page access per uid	Personal Page accesses per affiliation: Not partners/affiliated (11) Partners/affiliated (2) Public (6)
My Playlists List (clicks)	A	Content (1)	1	30 (np=3, p=27)	Total number of menu clicks		
Crossmedia Media Annotation	D, N, Pa	Featured (3) Search Filter (4) Content (4)	3, 4	2	# of Crossmedia Media	Distribution of Crossme	Crossmedia Video Annotation

		Keyword Cloud (4) Query Cloud (4) Groups (4)			Annotation (2) # of Crossmedia Annotation (p=7)	dia Media Annotation per nid	per nid: 3623 (2) 70804 (1) 50393 (1) 41413 (1)
Workshop section content access	A	Menu-> Page “past and future” Menu->Calendar -> date Newsletter/email Featured (1) Search Filter (2) Content (2) Keyword Cloud (2) Query Cloud (2) Groups (2)	1, 2	28 (p=1, pub=27)	# of Workshop section content access (28) # of Page View (20955)	Distribution of Workshop section content access per nid	Workshop section content access per nid: 65310 (46) 65307 (45) 81211 (38) 65290 (36) 65308 (13)
My Annotations List (clicks)	A	Content (1)	1	4 (np=2, p=1, pub=1)	Total number of menu clicks	-	-
My Collections List (clicks)	A	Content (1)	1	9 (np=5, p=4)	Total number of menu clicks	-	-
My Favorites List (clicks)	A	Content (1)	1	3 (np=2, p=1)	Total number of menu clicks	-	-
My Featured List (clicks)	A	Content (1)	1	10 (np=1, p=9)	Total number of menu clicks	-	-
Content of colleagues	A	Content (1)	1	1 (p=1)	Total number of menu clicks	-	-

6.1.2 Networking: Features creation

Feature	Target	Source Path	Min # of clicks	Total Accesses	Normalization	Note	Assessment
Import/Export from other SN	A	Featured (2) Search Filter (3) Content (3) Keyword Cloud (3) Query Cloud (3) Groups (3)	2, 3	120 (np=2, pub=118)	# of SN section clicks (120)	Distribution of clicks per nid	
Crossmedia Media Annotation	D, N, Pa	Featured (3) Search Filter (4) Content (4) Keyword Cloud	3, 4	2	# of Crossmedia Media Annotation	Distribution of Crossmedia	Crossmedia Video Annotation per nid:

		(4) Query Cloud (4) Groups (4)			(2) # of Crossmedia Annotation (p=7)	Media Annotati on per nid	3623 (2) 70804 (1) 50393 (1) 41413 (1)
Comment Creations	A	Featured (1) Search (2)	1, 2	5 (np=5)	# of Comment Creations (5)	Distribut ion of commen ts per nid	Comments per nid: 65221 (1) 3541 (1) 3650 (1) 92787 (1) 94290 (1) 65220 (1)
Personal Page creation	D, N, Pa	Profile (1)	1	16 (np=13, p=3)	# of Personal page creation (16)	Distribut ion of Personal page creation per affiliatio n	Personal Page creation per affiliation: Not partners/affili ated (13) Partners/affil iated (3)
Direct Messages usage	D, N, Pa	My Colleagues (3)	3	55 (p=55)	# of Direct Messages usage (55)	Distribut ion of Direct Message s usage per uid	Direct Messages usage per uid: 271 (53) 1002 (1) 1088 (1)
Crossmedia Ranking/Voti ng	D, N, Pa	Featured (2) Search Filter (3) Content (3) Keyword Cloud (3) Query Cloud (3) Groups (3)	2, 3	7	# of Crossmedia Ranking/Vo ting (7)	Distribut ion of Crossme dia Ranking /Voting per nid	Crossmedia Ranking/Voti ng per uid not significant
Crossmedia Text Annotation	D, N, Pa	Featured (2) Search Filter (3) Content (3) Keyword Cloud (3) Query Cloud (3) Groups (3)	2, 3	6	# of Crossmedia Text Annotation (6) # of Crossmedia Media Annotation (2)	Distribut ion of Crossme dia Text Annotati on per nid	Crossmedia Text Annotation per nid: 3570 (1) 4131 (1)
Blog Group Creations	D, N, Pa	Groups (3)	3	31	# of Blog Group View (431) # of Blog	Distribut ion of Blog Creation s per nid	Blog Creations not significant

					Group Creations (31)		
Forum Creations	D, N, Pa	Groups (3)	3	3 (np=1, p=2)			
Invitations sent	D, N, Pa	My Colleagues (2)	2	62 (np=30, p=16, pub=16)	# of Invitations sent	Distribution of Invitations sent per uid	Invitations sent per partner: Not partners/affiliated (30), Partners/affiliated (16), public (16)

6.2 Networking: Assessment

A huge part of networking (17343 total events) was constituted by groups views, then forum views (424), and My Content (548); the remaining activities didn't collect significant numbers.

The majority of groups views was from anonymous users (87.7472179%). Group and page views were respectively 43.1364258% and 52.120383% of total Drupal views. Most accessed groups include:

- **History of Art at University of Glasgow (UG), UK (2317 views),**
- **Muzeum, Institute of Art Production, Mediation and Publishing, Ljubljana, Slovenia (1524 views)**
- **Thematic Working Groups & Workshops (1302 views).**

Services access:

- **Groups views (92.5552354% of total networking activities)**
- **My Content (2.92453837% of total networking activities)**
- **Forum views (2.26278151% of total networking activities)**
- Social icons (0.640409862% of total networking activities)
- Workshop pages (0.149428968% of total networking activities)
- Content of colleagues (0% of total networking activities)
- Forums creation (0.0160102466% of total networking activities)
- Direct Messages (0.0160102466% of total networking activities)
- Invitations (0.0106734977% of total networking activities)
- Personal Pages creations (0.0853879816% of total networking activities)
- My Annotations List (0.0213469954% of total networking activities)
- My Published Collections List (0.0480307397% of total networking activities)
- My Favorites List (0.0160102466% of total networking activities)
- My Featured List (0.0533674885% of total networking activities)
- My Playlists List (0.160102466% of total networking activities)

Since users had a limited **content creation activity**, menu sections related to personal contents were accessed a few times. Users were not interested in creating new contents and deal with them.

- **Personal pages, among the personal contents, had the biggest** even if limited number of accesses; users that created a personal page were mainly not partners (81.25% of total users creating a personal page). 58.6206897% of the users accessing a personal page were partners. Creation/View ratio for personal pages was about 0.551724138, thus indicating a potential interest in dealing with such content from users;
 - Personal contents were accessed 548 times through the menu ("My Contents"), and this was the most accessed functionality among personal menu items;

- Forums are threads attached to discussion groups. They collected a total number of 424 views (1.0545952% of total Drupal contents views), with a not significant number of creations. 93.6320755% of forum views were performed by public users, 3.30188679% by partners, and 3.06603774% by not partners.
 - Forum creations were about 4.47761194% of total Drupal resource creations. Forums are a main element of networking, and these numbers indicate a limited social activity of users (0.76690723% of total resource views on the portal). Top 3 forums collected about 23.3490566% of views (respectively 9.905660377%, 7.311320755%, 6.132075472%);
- Users had little interest in comments creation, Cross Media ranking and annotation.
 - As for playlists or collections, users preferred to view these contents instead of creating new ones;
- Users had little interest in sharing ECLAP contents with other social networks; about 0.858983536% of cross media content accesses produced a social icon click. Use of social network icons, for exporting of cross media contents, collected 120 clicks (0.00795808741 clicks per visit on average); typically this is a second or third click, since the user can share the content after accessing to it;
- Blog creations were not significant, in the considered period. Users preferred to view blogs rather than creating new ones;
- Friendships and connections between users were established mostly by not partners (48.3870968%);
- Messages were exchanged only by partners. These numbers suggest that the few social activities registered were about technical tasks between the project partners;

7 Professional usage: workflow, IPR

This feature has to cope with the production phases: ingestion, IPR definition, publication, metadata enrichment, etc. Please note that in the period under consideration this activity was not activated yet.

7.1 Professional Usage: Features

The following table reports the features concerning professional usage on the portal.

Feature	Target	Source Path	Min # of clicks	Total Accesses	Normalization	Note	Assessment
Workflow Usage	D	Back Office	-	p=81999	# of Workflow Usage (81999)	Distribution of Workflow Usage per type	Distribution of Workflow Usage per type: Internal (7) Test (10) ECLAP (154) Europeana (23241)
Professional Content Upload	D	Back Office	-	p=23480	# of Professional Content Upload (23480)		
Metadata Editor	D, Pa	Featured (3) Search Filter (4) Content (4) Keyword Cloud (4) Query Cloud (4)	3, 4	427 (p=427)	# of Metadata Editor usage (427)	Distribution of Metadata Editor usages per Group	Metadata Editor INSERT per uid: 226 (12), 45 (9), 264 (8) Metadata Editor UPDATE per uid: 220 (237), 226 (54)

		Groups (4)					45 (13) Metadata Editor INSERT per affiliation: partners (49) Metadata Editor UPDATE per partner: partners (319)
Page Creations	D, N, Pa	Groups (3)	3	29 (np=1 5, p=14)	# of Page Creations (29)	Distribut ion of Page Creation s per user	Page Creations per user: 271 (9) 1 (7)
Collections Creation	D, N, Pa	Action List - > Add to personal collection	1, 2	p=9	# of Collections creations (9)	Collecti ons creation not significa tive	
Playlists Creation	D, N, Pa	Action List - > Add to playlist	1, 2	p=5	# of Playlist creations (5)	Playlists creation not significa tive	
IPR Wizard	D, Pa	Featured (3) Search Filter (4) Content (4) Keyword Cloud (4) Query Cloud (4) Groups (4)	3, 4				

7.2 Professional Usage: Assessment

Professional content upload collected 23480 events, due to the scheduled number of digital items to be provided by each single partner. Workflow usage (almost all of Europeana type), that accounted for 81999 events. Professional usage was performed only by partners. The other professional activities had limited access;

- Metadata editor was accessed 427 times (about 3.52892562 per day), despite the huge number of items processed and uploaded to the system; generally, contents with metadata translations need human metadata review and editing; the tool wasn't sufficiently exploited by users in order to make usability considerations;
- Playlist, collections and page creations didn't show a significant activity in the considered period; few playlists were created, and only by partners. Playlists are thought as shared and not personal contents, though users showed no interest for personal collections too;

- Page creations, although very limited in number, were about 1.8125 the number of personal page creations, so that professional activities (page creations) were preferred to social activities (personal page creations);
- Pages, collections, and playlist creations were made mainly by partners (65.1162791%).
- The huge numbers collected by professional activities, compared to the rest of the activities, indicate that the portal was mainly used for tasks not related to leisure;

8 Content access from Mobile

8.1 Content Access from Mobile: Features

The following table reports the features concerning accesses from mobile devices. Please note that the content upload from mobile is not available as a feature in that period.

Feature	Target	Source Path	Min # of clicks	Total Accesses	Normalization	Note	Assessment
Content View/Play from Mobile	A	Featured (1) Search Filter (2) Content (2) Keyword Cloud (2) Query Cloud (2) Groups (2)	1, 2	1642 (np=14, p=101, pub=1527)	# of Content View/Play from Mobile (1642) # of Crossmedia View/Play (55287)	Distribution of Content View/Play from Mobile per nid	Most accessed per type: image (227) video (206) document (198) Most accessed sections: search_base_result (173) similarByText (163) mostDownloaded_resultbase (153)
Content Download from Mobile	A	Featured (1) Search Filter (2) Content (2) Keyword Cloud (2) Query Cloud (2) Groups (2)	1, 2	p=34	# of Content Download from Mobile (34) # of Crossmedia View/Play (55287)	Distribution of Content Download from Mobile per nid	Most accessed per type: document (3) archive (1) Most accessed sections: similar_by_text (5)

8.2 Content Access from Mobile: Assessment

Mobile accesses were about 2.96995677% of total content accesses; the majority of mobile accesses was from anonymous users (92.9963459%). Content were accessed from mobile devices 1642 times, with an average of 13.5702479 views per day.

Top exploited resource types were:

- Images, videos and documents, were the most accessed content types from mobile, respectively with 13.8246041%, 12.545676% and 12.0584653% of all mobile accesses;

- related to query results (10.5359318%), similar objects (9.92691839%), and promoted contents (9.31790499%);

Downloads from mobile were not significant;

9 E-learning

This feature has to cope with the WP6 trial of educational aspects. Please note that in the period under consideration this activity was not activated yet.

9.1 E-learning: Features

The following table reports the features concerning e-learning activities.

Feature	Target	Source Path	Min # of clicks	Total Accesses	Normalization	Note	Assessment
e-learning Courses Access	D, N, Pa	Manu -> e-learning (2) Courses (2)	2	0	# of e-learning Courses Access		Course->Object
e-learning Courses Creations	D, N, Pa	Courses (2)	2	0	# of e-learning Courses Creations		

9.2 E-learning: Assessment

E-learning facilities did not exhibit any significant number in the considered period. This functionality was not exploited at all by users. No course creation was registered in the considered period.

10 Query

Query services includes, the query from the frontal free text query, the exploitation of the advanced query service, the exploitation of faceted solution,

10.1 Query: Features

The following table reports the features concerning querying.

Feature	Target	Source Path	Min # of clicks	Total Accesses	Normalization	Note	Assessment
Simple Query	A	Search (1)	1	6260 (np=426, p=1277, pu=4557)	# of Simple Query (6260)	Distribution of Simple Query per uid	Simple Query per partner: Not partners/affiliated (426) Partners/affiliated (1277) Public users (4557)
Faceted Query	A	Search Filter (2)	2	168, (np=45, p=15,			

				pub=108)			
Keyword Cloud (clicks on its menu)	A	Keyword Cloud (1)	1	95 (p=1, pub=94)	# of Keyword Cloud (clicks) (95)	Distribution of clicks per uid	Keyword Cloud (clicks) per uid: 0 (94) 1090 (1) 232 (1) 879 (1)
Query Cloud (clicks on its menu)	A	Query Cloud (1)	1	77 (np=1, p=1, pub=75)	# of Query Cloud (clicks) (77)	Distribution of clicks per uid	Query Cloud (clicks) per uid: 0 (75) 1090 (1) 232 (1)
Advanced Query	A	Search (2)	2	71 (np=4, p=17, pub=50)	# of Simple Query (6260)	Distribution of Advanced Query per uid	Advanced Query per partner: Not partners/affiliated (4) Partners/affiliated (17) Public users (50)

10.2 Query: Assessment

Query services were one of the top exploited functionalities in the portal.

- Most of the queries were of simple type, frontal free text query with about 93.8%, performed from the main page, and a limited fraction were advanced, faceted, query or keyword cloud queries.
- 73.21% of queries were performed by public users.
 - Users performed about 0.415 simple queries per visit on the portal;
- As for advanced queries, faceted queries were not significant:
 - 64.28% of faceted search were performed by public users.
 - 70.42% of advanced queries were performed by public users;
- Access to pages related to keyword or query clouds were respectively 95 and 77 (about 2.67412935% of total simple queries);

In the considered period:

- 3098 items was viewed after performing a query, thus 46.4398141% of all queries performed resulted in a click by the user on some result. Viewed contents after performing a query were of type:
 - Drupal 563 (18.1730148%) and
 - cross media 2535 (81.8269852%).

This is in line with the data accounting for 74.7318538% of Drupal content views and 25.2681462% cross media views, so that users preferred more Drupal related contents to cross media, despite the limited amount of Drupal items, especially if related to Cross Media contents.

Top simple queries performed include:

- *Empty query* (706, 11.2779553% of all simple queries); That has been removed in the present version of the portal to avoid unuseful workload.
- *koreográfus* (226, 3.61022364% of all simple queries);
- *dario fo* (198, 3.1629393% of all simple queries), due to internal control as anonymous user;
- *Harangozó* (155, 2.47603834% of all simple queries);
- *carmelo bene* (145, 2.31629393% of all simple queries), due to internal control as anonymous user;
- *operaház* (121, 1.93290735% of all simple queries), due to internal control as anonymous user;

- *jelmezterv* (53, 1.66134185% of all simple queries);
- *dario* (71, 1.1341853% of all simple queries);
- *Grotowski* (69, 1.10223642% of all simple queries);
- *díszletterv* (58, 0.926517572% of all simple queries);

11 Suggestions, recommendations

The activities in the area of suggestions are referring to features in which the users are stimulated to access and click to made content and usage of the premade query provided to the users such as the: promoted, the last posted, the most viewed, etc. etc.

11.1 Suggestions: Features

The following table reports the features concerning suggestions and recommendations.

Feature	Target	Source Path	Min # of clicks	Total Accesses	Normalization	Note	Assessment
Similar Contents View/Play	A	Featured (2) Search Filter (3) Content (3) Keyword Cloud (3) Query Cloud (3) Groups (3) Play..	2, 3	8501 (np=163, p=571, pub=7767)	# of Similar Contents View/Play (8501)	Distribution of Similar Contents View/Play per type	
Featured List (clicks)	A	Content (1)	1	358 (np=5, p=12, pub=341)	Content Lists Accesses (10297)		Distribution of clicks per day or list
Last Posted List (clicks)	A	Content (1)	1	345 (np=5, p=55, pub=285)	Content Lists Accesses (10297)		Distribution of clicks per day or list
Popular List (clicks)	A	Content (1)	1	232 (np=11, p=7, pub=214)	Content Lists Accesses (10297)		Distribution of clicks per day or list
Less Popular List (clicks)	A	Content (1)	1	pub=145	Content Lists Accesses (10297)		Distribution of clicks per day or list
Top Rated List (clicks)	A	Content (1)	1	194 (np=5, p=6, pub=183)	Content Lists Accesses (10297)		Distribution of clicks per day or list
Suggested Content List	A	Content (1)	1	4 (np=3, p=1)	Content Lists Accesses (10297)		Distribution of clicks per day or list

(clicks)							
Featured Content (promoted)	D, N, Pa	Featured (2) Search Filter (3) Content (3) Keyword Cloud (3) Query Cloud (3) Groups (3)	2, 3	3			

11.2 Suggestions: Assessment

Similar contents were accessed 8501 times (15.3761282%). Similar is always a second click; Similar content views per visit ratio was 0.563764175. The majority of similar contents views was from anonymous users (91.3657217%);

Featured content was the most exploited content list, with 358 clicks (about 28.0125196% of total content list accesses), followed by Last Posted (26.9953052%) and Popular contents (18.1533646%);

Content lists collected 1278 clicks from users, about 0.0847536309 clicks per visit and 10.5619835 clicks per day;

These numbers regard menu actions. In the considered period the list of featured content was exposed in the home page.

12 Registration

12.1 Registration: Features

The following table reports the features concerning portal registrations.

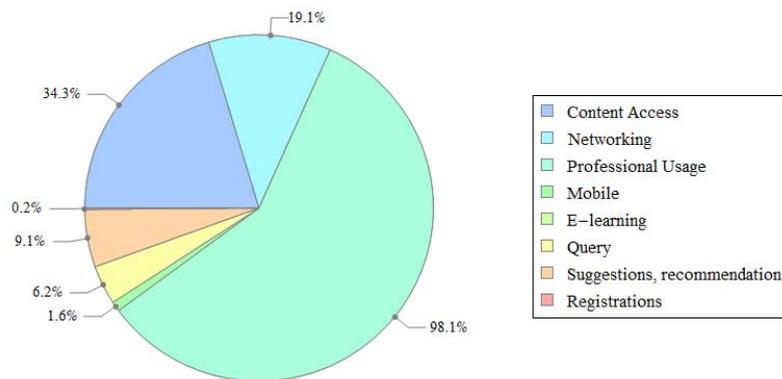
Feature	Target	Source Path	Min # of clicks	Total Accesses	Normalization	Note	Assessment
Portal Registration	Pu	Create account (1)	1	239 (np=229, p=10)	# of Portal Registration (239)	Distribution of Portal Registration per partner	Portal Registration per partner: other (229) partner (10)

12.2 Registration: Assessment

Portal registrations were 239, with an average of one registration each 63.0920502 visits on the portal. Almost all the users who registered in this period were not partners of the project (95.8158996%).

13 Summary Analysis

In the considered period the main portal functionalities collected 107967 actions (clicks) on the portal



Distributed as follows:

- **Professional usage: workflow, IPR, 105949, 58.2153356%**
- **Content Access: 37021, 20.3417676%**
- **Networking: groups, forum, blog post, messaging, comments votes folksonomy 20657, 11.3503118%**
- Query 6671, 3.66548532%
- Suggestions, recommendations 9782, 5.37487294%
- Registrations 239, 0.131322289%
- Content access Mobile 1676, 0.92090442%
- E-learning 0 0%

Generally, users preferred to interact with existing contents on the portal, especially with pages, discussion groups, pdfs, images and videos; content creations (including management of personal content) were extremely limited for each available resource. Cross media contents received less attention than deserved to Drupal related contents (e.g., discussion groups or pages), considering the huge amount of cross media contents with respect to Drupal contents.

Users preferred to anonymously browse the portal, and were more interested in technical tasks, (e.g., related to the project commitment), rather than leisure activities. Thus the portal was mainly for internal purpose in that period even from anonymous users.

Social interactions between users (e.g., messaging, friendships, comments on forums etc.) and e-learning activities were not significant at all, and demonstrated a limited interest in exploiting ECLAP social functionalities by users.

Queries were almost always performed from the simple full text form on the top portal page; advanced or faceted queries received few attention. Almost the total of the activities was performed by desktop computers, with a negligible part from mobile devices.

User session clicks

14 User Behaviour

14.1 Behaviour of public users in the first clicks

Public users typically started their sessions by viewing a page (41.89%), viewing a group (26.68%), and viewing a cross media content (22.62%). Most popular second and third clicks nearly exhibited the same behaviour. The users finished their sessions by viewing a page (40.16%), a group (26.53%), or a cross media content (19.29%).

First Click	Second Click	Third Click	Last Click
A 41.89% (7847)	A 38.38% (2978)	A 28.92% (1147)	A 40.16% (7726)
D 26.68% (4998)	D 23.70% (1839)	C 22.06% (875)	D 26.53% (5104)
C 22.62% (4237)	C 15.38% (1193)	D 18.91% (750)	C 19.29% (3712)
E 3.27% (612)	E 9.69% (752)	E 14.70% (583)	E 4.34% (835)
G 1.60% (299)	K 6.26% (486)	K 8.09% (321)	B 3.31% (636)
K 1.35% (252)	F 1.42% (110)	F 1.64% (65)	K 2.24% (431)
H 0.65% (121)	B 1.38% (107)	M 1.41% (56)	F 1.57% (303)
J 0.61% (115)	H 1.34% (104)	B 1.08% (43)	J 0.99% (190)
B 0.52% (98)	J 0.97% (75)	H 0.96% (38)	M 0.57% (109)
F 0.39% (73)	L 0.71% (55)	L 0.91% (36)	H 0.55% (106)
L 0.37% (69)	G 0.49% (38)	J 0.71% (28)	G 0.22% (42)
N 0.02% (4)	M 0.15% (12)	G 0.33% (13)	L 0.09% (18)
O 0.02% (3)	N 0.09% (7)	N 0.10% (4)	I 0.05% (10)
M 0.01% (1)	I 0.03% (2)	I 0.10% (4)	N 0.04% (8)
I 0.01% (1)	P 0.01% (1)	P 0.05% (2)	R 0.02% (3)
Q 0.01% (1)	-	R 0.03% (1)	O 0.01% (2)
P 0.01% (1)	-	-	P 0.01% (2)
-	-	-	Q 0.01% (1)
-	-	-	S 0.01% (1)

Legend:

- A: VIEW page
- B: Download Cross Media
- C: VIEW Cross Media
- D: VIEW groups
- E: MENU
- F: VIEW event
- G: VIEW blog
- H: VIEW
- I: Download MP21 Cross Media
- J: VIEW forum
- K: Simple Query
- L: Register
- M: Download Smartphone Cross Media
- N: Advanced Query
- O: VIEW wiki
- P: Download PDA Cross Media
- Q: VIEW PDA Cross Media

- R: VIEW MP21 Cross Media
- S: Download Medium Definition Cross Media
- T: Download High Definition Cross Media

14.1.1 State Transitions

To model user behavior while surfing the portal pages and interacting with resources, each user action was labelled with a letter, and each state transition with a couple of letters denoting each state (e.g., the user browses from page A to page B -> AB). Session timeout was set to 10 minutes.

Top accessed states include page view 30.28% (18467), group view 24.54% (14968), Cross Media view 18.33% (11178), menu click 13.45% (8202), simple query 7.40% (4513).

Users preferred to

- start their portal sessions with page view 41.895 (7847), groups view 26.68% (4998), Cross Media view 22.625 (4237);
- end their portal sessions with page view 40.15801% (7726), groups view 26.52945% (5104), Cross Media view 19.29414% (3712).

Viewing PDA Cross Media 0.01%, downloading PDA Cross Media 0.01%, downloading Smartphone Cross Media 0.01%, downloading MP21 Cross Media 0.01%, were the less exploited actions in the first session clicks (values expressed in percentage of total number of actions in the first session click).

Viewing wiki 0.010396%, downloading PDA Cross Media 0.010396%, viewing PDA Cross Media 0.005198%, download Medium Definition Cross Media 0.005198% were the less exploited actions in the last session clicks (values expressed in percentage of total number of actions in the last session click).

Users preferred to start and end their sessions by exploiting the portal contents, instead of downloading the resources or using the networking capabilities of the portal (messaging, commenting, voting etc.).

Top 2-links transitions (with percentage of total 2-links transitions and total number of occurrences)

- view groups -> view groups 20.96012 (8693)
- view page -> view page 11.94483% (4954)
- view Cross Media -> view Cross Media 8.967064% (3719)
- view page -> view page 7.19728% (2985)
- menu click -> menu click 6.42089% (2663)

In general, view page was the top click generators; each view of these contents was likely followed by another view of the same type 25.90% (10741). Another top click generator event was viewing a group 23.785 (9862).

Top event click generators

- page view 25.90% (10741)
- groups view 23.78% (9862)
- Cross Media view 18.00% (7464)

Top starting sessions (not counting recursive states and end links) transition probabilities

- 1 click, page view 41.89%
- 2 clicks
 - page view -> menu click 6.769424%
- 3 clicks
 - page view -> menu click -> page view 2.04707382%

- 4 clicks
 - page view -> menu click -> page view -> menu click 0.330807129%

Most likely users' first session actions were page views and menu clicks.

14.1.1.1 Registration Paths

Users that decided to register to the ECLAP portal generally were viewing pages (45.92593%), Events (21.48148%), or groups (11.85185%).

Top paths exploited before registering (2 clicks):

- page view -> registration 45.92593% (62)
- event -> registration 21.48148% (29)
- group view -> registration 11.85185% (16)

Top paths exploited before registering (3 clicks):

- page view -> page view -> registration 20.98765% (17)
- page view -> event view -> registration 17.28395% (14)
- page view -> menu click -> registration 8.641975% (7)

Top paths exploited before registering (4 clicks):

- page view -> page view -> event view -> registration 11.11111% (5)
- page view -> page view -> page view -> registration 8.88889% (4)
- cross media view -> cross media view -> cross media view -> registration 8.88889% (4)
- group view -> group view -> group view -> registration 8.88889% (4)

Top paths exploited before registering (5 clicks):

- page view -> page view -> event view -> event view -> registration 6.060606% (2)
- cross media view -> cross media view -> cross media view -> cross media view -> registration 6.060606% (2)
- group view -> group view -> group view -> group view -> registration 6.060606% (2)

Top paths exploited before registering (6 clicks):

- Page view -> page view -> page view -> event view -> event view -> registration 7.692308% (2)

14.1.1.2 Start State occurrences

Start State	# occurrences	%
A	7847	41.89
D	4998	26.68
C	4237	22.62
E	612	3.27
G	299	1.60
K	252	1.35
H	121	0.65
J	115	0.61

B	98	0.52
F	73	0.39
L	69	0.37
N	4	0.02
O	3	0.02
Q	1	0.01
P	1	0.01
M	1	0.01
I	1	0.01

14.1.1.3 Total State occurrences

State	# occurrences	%
A	18467	30,29
D	14968	24,55
C	11178	18,33
E	8202	13,45
K	4513	7,40
B	1162	1,91
M	535	0,88
F	520	0,85
G	406	0,67
J	394	0,65
H	312	0,51
L	211	0,35
N	47	0,08
I	26	0,04
P	12	0,02
R	6	0,01
T	5	0,01
O	4	0,01
S	4	0,01
Q	2	0,00

14.1.1.4 State Transition occurrences

Transition	# occurrences	%
DD	8693	20,96
AA	4955	11,95
CC	3719	8,97
AE	2985	7,20
EE	2663	6,42
EA	2480	5,98

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CA	2136	5,15
KK	1629	3,93
EK	1483	3,58
AC	1311	3,16
KE	1264	3,05
KC	928	2,24
AK	635	1,53
AD	568	1,37
DA	489	1,18
ED	406	0,98
CK	381	0,92
CB	366	0,88
BC	337	0,81
CM	329	0,79
CE	304	0,73
DE	301	0,73
EC	272	0,66
DC	245	0,59
MM	198	0,48
KA	185	0,45
CD	179	0,43
BB	156	0,38
HH	130	0,31
JJ	117	0,28
LA	113	0,27
AF	112	0,27
MA	102	0,25
MC	79	0,19
FF	79	0,19
FA	69	0,17
LF	64	0,15
AL	62	0,15
DK	60	0,14
GG	60	0,14
KD	47	0,11
JE	42	0,10
MK	41	0,10
HA	41	0,10
AB	35	0,08
AH	34	0,08
FL	33	0,08
JD	23	0,06
DJ	21	0,05
NN	20	0,05

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EF	19	0,05
HD	19	0,05
DL	16	0,04
BA	16	0,04
DF	15	0,04
GC	15	0,04
AJ	14	0,03
KH	13	0,03
FD	12	0,03
EJ	12	0,03
AG	12	0,03
JA	12	0,03
CG	12	0,03
GD	11	0,03
DG	9	0,02
EN	9	0,02
EL	9	0,02
GE	9	0,02
GA	9	0,02
DH	8	0,02
EG	8	0,02
CL	8	0,02
FE	7	0,02
FC	7	0,02
NK	7	0,02
HK	7	0,02
NC	6	0,01
FK	6	0,01
AP	6	0,01
JL	6	0,01
BK	6	0,01
CI	6	0,01
IC	5	0,01
KL	5	0,01
CF	5	0,01
CR	5	0,01
PA	4	0,01
JC	4	0,01
AN	4	0,01
BI	4	0,01
KN	4	0,01
LE	4	0,01
CN	4	0,01
LD	4	0,01

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ND	3	0,01
HF	3	0,01
HE	3	0,01
IA	3	0,01
PP	3	0,01
AI	3	0,01
KG	3	0,01
KM	3	0,01
CS	3	0,01
LC	3	0,01
EB	2	0,00
LL	2	0,00
ME	2	0,00
DN	2	0,00
EH	2	0,00
NA	2	0,00
TT	2	0,00
EI	2	0,00
OE	2	0,00
FH	2	0,00
PI	2	0,00
GK	2	0,00
IB	2	0,00
II	2	0,00
AM	2	0,00
BE	2	0,00
BP	2	0,00
TC	2	0,00
CT	2	0,00
DB	2	0,00
CH	2	0,00
LK	2	0,00
DT	1	0,00
MD	1	0,00
NE	1	0,00
GF	1	0,00
FJ	1	0,00
HG	1	0,00
HC	1	0,00
PE	1	0,00
RI	1	0,00
HL	1	0,00
RC	1	0,00
RB	1	0,00

ID	1	0,00
IF	1	0,00
IK	1	0,00
QC	1	0,00
IR	1	0,00
AO	1	0,00
KB	1	0,00
BF	1	0,00
SS	1	0,00
BD	1	0,00
TA	1	0,00
SD	1	0,00
SC	1	0,00
CQ	1	0,00
LJ	1	0,00

14.1.1.5 End State occurrences

End State	# occurrences	%
A	7726	40.16
D	5104	26.53
C	3712	19.29
E	835	4.34
B	636	3.31
K	431	2.24
F	303	1.57
J	190	0.99
M	109	0.57
H	106	0.55
G	42	0.22
L	18	0.09
I	10	0.05
N	8	0.04
R	3	0.02
O	2	0.01
P	2	0.01
Q	1	0.01
S	1	0.01

14.1.1.6 Top click generator states

State	# generated clicks	%
A	10739	25,90
D	9862	23,78

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C	7462	18,00
E	7367	17,77
K	4082	9,84
B	525	1,27
M	423	1,02
F	216	0,52
H	206	0,50
J	204	0,49
L	193	0,47
G	107	0,26
N	39	0,09
I	16	0,04
P	10	0,02
T	5	0,01
R	3	0,01
S	3	0,01
O	2	0,00
Q	1	0,00

14.1.1.7 Top Paths to Registration

Path	# occurrences	%
AL	36	26,66667
AAL	12	8,888889
AFL	8	5,925926
FL	6	4,444444
DL	5	3,703704
AEL	4	2,962963
JL	4	2,962963
AAAL	3	2,222222
CL	3	2,222222
AAFL	2	1,481481
ADL	2	1,481481
FFL	2	1,481481
AAAFFL	1	0,740741
AAFFL	1	0,740741
AAAF	1	0,740741
AAAKCKKACCAACCCL	1	0,740741
AADL	1	0,740741
AAEAKKEAEEAAEL	1	0,740741
AAECEL	1	0,740741
AAEDDL	1	0,740741
AAEL	1	0,740741

AAFFAAFL	1	0,740741
AAKACCCCKAKKKL	1	0,740741
AAKCKKCKKKL	1	0,740741
ABFFL	1	0,740741
ACAL	1	0,740741
ACCBKKKDL	1	0,740741
ACCCDDDL	1	0,740741
ACEAEAEAEAEAEAEACCCAL	1	0,740741
AEEAAKAL	1	0,740741
AECBAEEAAL	1	0,740741
AECBCSCCCKCCCL	1	0,740741
AECSCCCKBKKKEKKEAEL	1	0,740741
AEKEAEKL	1	0,740741
AKAAKKKKAKKKKKKEEKKENNAKDAL	1	0,740741
AKCCCKKEKECKECCCEKEKL	1	0,740741
AKCKKKCKKKKKL	1	0,740741
AKDL	1	0,740741
AKEKEKAKAL	1	0,740741
CAAFL	1	0,740741
CCCCL	1	0,740741
CCCDL	1	0,740741
CCDDDDL	1	0,740741
CCL	1	0,740741
CKCDDDDDL	1	0,740741
DAL	1	0,740741
DDAAEDDDADCDJL	1	0,740741
DDDAL	1	0,740741
DDDL	1	0,740741
DFL	1	0,740741
EAEAFFAL	1	0,740741
EEFL	1	0,740741
EEL	1	0,740741
FAAAL	1	0,740741
FAL	1	0,740741
FCCCCCL	1	0,740741
FFL	1	0,740741
HFL	1	0,740741
HL	1	0,740741
KAFL	1	0,740741

14.1.1.8 Top 2-links Paths to Registration

Path	# occurrences	%
AL	62	45,92593

FL	29	21,48148
DL	16	11,85185
EL	9	6,666667
CL	8	5,925926
JL	5	3,703704
KL	5	3,703704
HL	1	0,740741

14.1.1.9 Top 3-links Paths to Registration

Path	# occurrences	%
AAL	17	20,98765
AFL	14	17,28395
AEL	7	8,641975
FFL	6	7,407407
CCL	5	6,17284
DDL	5	6,17284
ADL	3	3,703704
DAL	3	3,703704
KKL	3	3,703704
CAL	2	2,469136
EKL	2	2,469136
FAL	2	2,469136
KAL	2	2,469136
KDL	2	2,469136
CDL	1	1,234568
CEL	1	1,234568
DFL	1	1,234568
DJL	1	1,234568
EEL	1	1,234568
EFL	1	1,234568
HFL	1	1,234568
HL	1	1,234568

14.1.1.10 Top 4-links Paths to Registration

Path	# occurrences	%
AAFL	5	11,11111
AAAL	4	8,888889
CCCL	4	8,888889
DDDL	4	8,888889
KKKL	3	6,666667

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AAEL	2	4,444444
AFFL	2	4,444444
AKAL	2	4,444444
AADL	1	2,222222
ACAL	1	2,222222
AEKL	1	2,222222
AKDL	1	2,222222
BFFL	1	2,222222
CCAL	1	2,222222
CCDL	1	2,222222
CDJL	1	2,222222
DDAL	1	2,222222
EAAL	1	2,222222
EAEL	1	2,222222
ECEL	1	2,222222
EDDL	1	2,222222
EEFL	1	2,222222
FFAL	1	2,222222
KAFL	1	2,222222
KDAL	1	2,222222
KEKL	1	2,222222
KKDL	1	2,222222

14.1.1.11 Top 5-links Paths to Registration

Path	# occurrences	%
AAFFL	2	6,060606
CCCCL	2	6,060606
DDDDL	2	6,060606
AAAF	1	3,030303
AAKAL	1	3,030303
ABFFL	1	3,030303
ACCAL	1	3,030303
ACCCL	1	3,030303
AECCL	1	3,030303
AEDDL	1	3,030303
AFFAL	1	3,030303
AKDAL	1	3,030303
AKKKL	1	3,030303
CAAF	1	3,030303
CCCDL	1	3,030303
CDDDL	1	3,030303
CKKKL	1	3,030303

DCDJL	1	3,030303
DDDAL	1	3,030303
EAAEL	1	3,030303
EAEKL	1	3,030303
EEAAL	1	3,030303
EKEKL	1	3,030303
FAAAL	1	3,030303
FAAFL	1	3,030303
KAKAL	1	3,030303
KCCCL	1	3,030303
KEAEL	1	3,030303
KKKDL	1	3,030303
KKKKL	1	3,030303

14.1.1.12 Top 6-links Paths to Registration

Path	# occurrences	%
AAAFFL	2	7,692308
AACCCL	1	3,846154
AAECEL	1	3,846154
AAEDDL	1	3,846154
ADCDJL	1	3,846154
AEEAAL	1	3,846154
BKKKDL	1	3,846154
CACCAL	1	3,846154
CCCCCL	1	3,846154
CCDDDL	1	3,846154
CDDDDL	1	3,846154
CEKEKL	1	3,846154
CKCCCL	1	3,846154
DDDDDL	1	3,846154
EAAKAL	1	3,846154
EAFFAL	1	3,846154
EEAAEL	1	3,846154
EKAKAL	1	3,846154
FFAAFL	1	3,846154
KAKKKL	1	3,846154
KCKKKL	1	3,846154
KEAEKL	1	3,846154
KKEAEL	1	3,846154
KKKKKL	1	3,846154
NAKDAL	1	3,846154

Legend:

- A: VIEW page
- B: Download Cross Media
- C: VIEW Cross Media
- D: VIEW groups
- E: MENU
- F: VIEW event
- G: VIEW blog
- H: VIEW
- I: Download MP21 Cross Media
- J: VIEW forum
- K: Simple Query
- L: Register
- M: Download Smartphone Cross Media
- N: Advanced Query
- O: VIEW wiki
- P: Download PDA Cross Media
- Q: VIEW PDA Cross Media

14.1.2 Top Menus (first clicks)

Top accessed menu in the first click was the ECLAP Description page (65 clicks).

Menu	# clicks	
content/3727	65	
blog	53	
home/lastPosted	52	
og	33	
axmedis/search	28	
content/3757	25	
home/mostDownloaded	25	
content/3739	23	
calendar	20	
advancedsearch	18	
content/3750	17	
og/all/feed	16	
home/promoted	15	
content/3729	15	
kwcloud	14	
content/3578	13	
home/lessDownloaded	12	
content/3733	12	
translatednode/3730	11	
home/mostRanked	10	
elearning	10	
content/3732	10	
content/3734	10	

content/3735	10	
content/3738	9	
content/3748	9	
ugc/upload	8	
content/3758	7	
content/3759	7	
querycloud	7	
translatednode/3731	7	
content/3736	6	
content/3737	6	
user/271/friends	4	
home/search	3	
user/241/objects	3	
content/3730	3	
user/261/objects	3	
content/3731	2	
messages	2	
calendar/2012-05	2	
user/271/objects	1	
calendar/2012-01-28	1	
en-us/content/3729	1	
home/myAnnotations	1	
views/ajax	1	
user/220/objects	1	
proc/self/environ	1	
calendar/2012-04	1	

14.1.3 Top Menus (second clicks)

Top accessed menu in the second click was the ECLAP Description page (195 clicks).

Menu	# clicks	
content/3727	195	
home/lastPosted	105	
blog	40	
content/3757	37	
content/3578	37	
content/3739	28	
home/mostDownloaded	24	
content/3729	24	
advancedsearch	23	
axmedis/search	22	
og	20	
home/mostRanked	16	

content/3758	15	
home/promoted	14	
calendar	13	
content/3750	12	
content/3733	12	
content/3737	10	
content/3748	10	
content/3732	9	
content/3759	9	
content/3736	8	
content/3734	7	
content/3738	7	
content/3735	6	
elearning	5	
calendar/2012-05	5	
kwcloud	5	
content/3730	4	
content/3731	4	
translatednode/3730	3	
home/search	2	
og/all/feed	2	
calendar/2012-03	2	
translatednode/3731	2	
user/261/objects	2	
messages	1	
user/220/objects	1	
user/241/objects	1	
user/271/messages/subscriptions	1	
calendar/2012-04	1	
proc/self/enviro	1	
user/271/friends	1	
calendar/2012-06	1	
querycloud	1	
home/lessDownloaded	1	
ugc/upload	1	
en-us/content/3727	1	

14.1.4 Top Menus (third clicks)

Top accessed menu in the third click was the ECLAP description page (204 clicks).

Menu	# clicks	
content/3727	204	
blog	64	

DE6.1.2 – Early validation and service optimisation, 2012 update
Best Practice Network

axmedis/search	58
content/3578	38
content/3739	22
og	20
content/3757	18
home/mostDownloaded	15
content/3729	15
content/3750	13
advancedsearch	12
home/lastPosted	10
home/promoted	10
content/3733	9
content/3759	9
content/3748	9
content/3732	8
calendar	6
content/3737	5
home/search	4
kwcloud	4
translatednode/3730	4
content/3758	3
content/3735	3
home/mostRanked	3
content/3736	3
querycloud	3
content/3738	2
elearning	2
content/3730	1
content/3731	1
content/3734	1
calendar/2012-07	1
en-us/blog	1
calendar/2012-03	1
home/lessDownloaded	1
calendar/2012-02-19	1
translatednode/3731	1
user/261/objects	1

14.1.5 Top Menus (last clicks)

Top accessed menu in the last click was the ECLAP description page (144 clicks).

Menu	# clicks
content/3727	144

DE6.1.2 – Early validation and service optimisation, 2012 update
 Best Practice Network

blog	80
content/3578	47
og	44
content/3757	41
home/mostDownloaded	35
content/3739	34
home/lastPosted	33
content/3729	32
axmedis/search	27
home/promoted	21
og/all/feed	19
home/mostRanked	15
calendar	15
home/lessDownloaded	14
content/3732	14
content/3733	14
content/3734	14
elearning	13
kwcloud	13
content/3748	13
content/3750	12
content/3758	12
content/3735	12
advancedsearch	11
content/3759	10
content/3737	10
content/3738	10
querycloud	10
translatednode/3730	10
translatednode/3731	8
content/3731	6
content/3736	6
ugc/upload	5
content/3730	5
user/271/friends	4
calendar/2012-05	4
user/261/objects	4
user/241/objects	3
user/271/objects	1
home/search	1
calendar/2012-01-28	1
en-us/advancedsearch	1
calendar/2012-12	1
views/ajax	1

messages	1	
user/220/objects	1	
calendar/2012-04	1	
calendar/2012-03	1	
calendar/2012-03-10	1	

14.1.6 Top Objects (first clicks)

Top accessed objects in the first click were:

- “La Bibbia dei villani - 1996, Giullarata popolare con Dario Fo e Franca Rame“ (68 clicks),
- “mask” (52 clicks),
- “C. Bene, E. De Filippo: Incontro con gli studenti/1” (50 clicks).

Object Id	# clicks
urn:axmedis:00000:obj:b2d27ec9-e918-49cd-8cb0-67ba23c597df	68
urn:axmedis:00000:obj:87f7f04e-2e67-4656-8bd5-ab6ac7fb6ce0	52
urn:axmedis:00000:obj:e45b5021-fe6f-4114-9c1d-216ce8900df0	50
urn:axmedis:00000:obj:bdeccacf-bb61-486b-861c-2b3ce63e514d	45
urn:axmedis:00000:obj:26a832bb-8011-4782-bc27-9aac34d8c04	44
urn:axmedis:00000:obj:14aa7c2a-1a5b-46a1-9972-295b5db1d601	38
urn:axmedis:00000:obj:f9382af2-d4f0-48fa-acd2-08403a8050b2	27
urn:axmedis:00000:obj:23150222-56b8-4381-ba11-2156ecd5dfd3	25
urn:axmedis:00000:obj:41f981d1-e9d5-4d7a-9b1c-fa6d817d6456	24
urn:axmedis:00000:obj:386af15a-7485-4df1-a3a5-215e0c165872	24
urn:axmedis:00000:obj:04e0caef-b33b-4f4a-ba50-a80d96766192	22
urn:axmedis:00000:obj:99284f29-a89e-4801-9c2e-dc4fd0334318	21
urn:axmedis:00000:obj:15d586f7-e132-4fcb-98f6-6bc086574fac	19
urn:axmedis:00000:obj:e2e24d4b-22ab-48ec-a461-98250f283b55	19
urn:axmedis:00000:obj:b828710e-b77c-4074-993c-3efddfbfaad7	19
urn:axmedis:00000:obj:a345a84f-6fdf-4f84-a412-88094ce363e2	17
urn:axmedis:00000:obj:11e30760-8631-46e7-8e5d-d765a4450403	16
urn:axmedis:00000:obj:649aaaf0-bf10-47db-8f3d-66b38f527f18	16
urn:axmedis:00000:obj:78fc2419-3233-4d86-88ed-6a0b78e489cb	15
urn:axmedis:00000:obj:a4277a9a-f314-4226-b0d4-d0435daedd24	14
urn:axmedis:00000:obj:cc369c87-ab62-4e53-9e4d-46ff7e5b73d1	13
urn:axmedis:00000:obj:026add0f-a4c1-4a1a-a86d-c29152dfd261	13
urn:axmedis:00000:obj:3871f787-bef6-43b6-9daa-cbce2cb651b7	12
urn:axmedis:00000:obj:f78ffb66-3f9d-4815-8e48-020313d36cd0	12
urn:axmedis:00000:obj:5724e598-f2cb-49c8-a000-86768296770c	12
urn:axmedis:00000:obj:9b8f9ad8-9a34-43b6-bc2a-e486f2672bd1	11
urn:axmedis:00000:obj:bc5b4bf7-e91c-4fe5-a635-6339e2d2b74c	11
urn:axmedis:00000:obj:257328d8-ad3a-4e8d-8fd1-bb76f3a57024	11
urn:axmedis:00000:obj:8f35050d-eb4a-4c73-8063-a04051e330d0	10
urn:axmedis:00000:obj:689a5543-ee69-439b-8f6b-15d38bf1ba1e	10

14.1.7 Top Objects (second clicks)

Top accessed objects in the second click were:

- “Diótőro, Magyar Állami Operaház, (Budapest)” (62 clicks),
- “you PARA | DISO” (38 clicks), and

- “C. Bene, E. De Filippo: Incontro con gli studenti/1” (28 clicks).

Object Id	# clicks
urn:axmedis:00000:obj:f6135f69-3c9d-4fd8-8736-67512345be91	62
urn:axmedis:00000:obj:04e0caef-b33b-4f4a-ba50-a80d96766192	38
urn:axmedis:00000:obj:e45b5021-fe6f-4114-9c1d-216ce8900df0	28
urn:axmedis:00000:obj:14aa7c2a-1a5b-46a1-9972-295b5db1d601	18
urn:axmedis:00000:obj:41f981d1-e9d5-4d7a-9b1c-fa6d817d6456	13
urn:axmedis:00000:obj:23150222-56b8-4381-ba11-2156ecd5dfd3	11
urn:axmedis:00000:obj:f9382af2-d4f0-48fa-acd2-08403a8050b2	11
urn:axmedis:00000:obj:bdeccacf-bb61-486b-861c-2b3ce63e514d	9
urn:axmedis:00000:obj:8c5f8909-e05d-43e1-a18e-1a359f9df3fc	8
urn:axmedis:00000:obj:ffaa3a96-823d-4aef-bdeb-28e38bad49fd	8
urn:axmedis:00000:obj:41f3b8ac-a942-4d9f-8e39-9b3f6391390f	7
urn:axmedis:00000:obj:6b9127a9-b01e-4896-8ede-148ad11d0f70	7
urn:axmedis:00000:obj:b828710e-b77c-4074-993c-3efddfbfaad7	7
urn:axmedis:00000:obj:698705f4-2780-401f-a5eb-73e785d1a3c6	6
urn:axmedis:00000:obj:1ee73508-5549-4144-a160-3080298ceb93	6
urn:axmedis:00000:obj:b2d27ec9-e918-49cd-8cb0-67ba23c597df	6
urn:axmedis:00000:obj:d2be6d93-1b0a-4795-b120-1c45e70187e7	5
urn:axmedis:00000:obj:91f0f144-2531-4391-90b6-c3de969aa88a	5
urn:axmedis:00000:obj:bebd64f4-164d-4e7a-b5c6-e6fd410775ed	5
urn:axmedis:00000:obj:a0907682-7e93-420d-97d9-44fada4e4af8	5
urn:axmedis:00000:obj:99284f29-a89e-4801-9c2e-dc4fd0334318	5
urn:axmedis:00000:obj:0fe003be-9e5a-4620-be16-1a2df972270b	5
urn:axmedis:00000:obj:43493252-d22c-47c8-96d7-ddfb55486903	5
urn:axmedis:00000:obj:412cd13d-3f8a-4d55-99f3-d0d474911fab	4
urn:axmedis:00000:obj:b384cd5e-faf8-48df-a3ee-d4c274c8611e	4
urn:axmedis:00000:obj:368e3618-eff5-4361-96e2-c0b88f8f9be2	4
urn:axmedis:00000:obj:f1fcb0bb-743e-4389-a0b7-b7b931b8b4b4	4
urn:axmedis:00000:obj:f0611bb4-59d6-4913-95f5-0a778e74312d	4
urn:axmedis:00000:obj:c237f5a4-36d1-43c5-979c-7da828d071a0	4
urn:axmedis:00000:obj:31c5152a-a085-4f42-afc7-ef050d707481	4

14.1.8 Top Objects (third clicks)

Top accessed object in the third click was “you PARA | DISO” (24 clicks).

Object Id	# clicks
urn:axmedis:00000:obj:04e0caef-b33b-4f4a-ba50-a80d96766192	24
urn:axmedis:00000:obj:41f981d1-e9d5-4d7a-9b1c-fa6d817d6456	14
urn:axmedis:00000:obj:23150222-56b8-4381-ba11-2156ecd5dfd3	10
urn:axmedis:00000:obj:bdeccacf-bb61-486b-861c-2b3ce63e514d	9
urn:axmedis:00000:obj:b828710e-b77c-4074-993c-3efddfbfaad7	7

urn:axmedis:00000:obj:e45b5021-fe6f-4114-9c1d-216ce8900df0	6
urn:axmedis:00000:obj:698705f4-2780-401f-a5eb-73e785d1a3c6	6
urn:axmedis:00000:obj:8c5f8909-e05d-43e1-a18e-1a359f9df3fc	6
urn:axmedis:00000:obj:67134534-ab99-42c2-9c28-d3ad266beed2	6
urn:axmedis:00000:obj:d1910096-ed41-44b4-af8a-f57545526702	5
urn:axmedis:00000:obj:9fd14797-f64c-400e-b600-e12a1ec02afb	5
urn:axmedis:00000:obj:398805e6-0a49-4569-9466-13e6944ed367	5
urn:axmedis:00000:obj:decd8432-3b8a-40ca-85f2-091b086ea2ee	5
urn:axmedis:00000:obj:f9382af2-d4f0-48fa-acd2-08403a8050b2	5
urn:axmedis:00000:obj:2e1e6633-4966-472e-9a3b-d68000f35487	5
urn:axmedis:00000:obj:d2be6d93-1b0a-4795-b120-1c45e70187e7	4
urn:axmedis:00000:obj:6ae14df2-b19b-465a-99f3-81835a954439	4
urn:axmedis:00000:obj:86831d56-8ccf-4ee5-9e39-a3f454ae52f0	4
urn:axmedis:00000:obj:44890b98-3fb3-4e03-abd0-39a21526a3e5	4
urn:axmedis:00000:obj:ee66d4fb-e9a8-4a81-9479-1fcca40590b3	4
urn:axmedis:00000:obj:08e9ccc8-70b5-43b5-86ca-93336d9e6671	4
urn:axmedis:00000:obj:0bd9aeb3-c74d-49b6-97ed-b1d85f4bb40d	3
urn:axmedis:00000:obj:6b9127a9-b01e-4896-8ede-148ad11d0f70	3
urn:axmedis:00000:obj:8f4127a2-9c15-40ca-a1f3-a73ff6baa3ef	3
urn:axmedis:00000:obj:981bddd8-9386-453f-abde-664182b47873	3
urn:axmedis:00000:obj:1e7c0686-f15a-499c-99ad-080554d984fd	3
urn:axmedis:00000:obj:efaf2122-970d-4d69-bb59-2ca775793544	3
urn:axmedis:00000:obj:bbfdbde4-568b-4d00-96a5-26d729990c86	3
urn:axmedis:00000:obj:88c352e7-31bd-4b73-bb09-066b894c4239	3
urn:axmedis:00000:obj:ac4e932c-123f-47eb-a230-dcfdbeca096f	3

14.1.9 Top Objects (last clicks)

Top accessed object in the last click was
“C. Bene, E. De Filippo: Incontro con gli studenti/1” (76 clicks).

Object Id	# clicks
urn:axmedis:00000:obj:e45b5021-fe6f-4114-9c1d-216ce8900df0	76
urn:axmedis:00000:obj:b2d27ec9-e918-49cd-8cb0-67ba23c597df	68
urn:axmedis:00000:obj:f6135f69-3c9d-4fd8-8736-67512345be91	67
urn:axmedis:00000:obj:14aa7c2a-1a5b-46a1-9972-295b5db1d601	47
urn:axmedis:00000:obj:bdeccacf-bb61-486b-861c-2b3ce63e514d	36
urn:axmedis:00000:obj:04e0caef-b33b-4f4a-ba50-a80d96766192	33
urn:axmedis:00000:obj:f9382af2-d4f0-48fa-acd2-08403a8050b2	32
urn:axmedis:00000:obj:b828710e-b77c-4074-993c-3efddfbfaad7	30
urn:axmedis:00000:obj:87f7f04e-2e67-4656-8bd5-ab6ac7fb6ce0	29
urn:axmedis:00000:obj:26a832bb-8011-4782-bc27-9aac34d8c04	26
urn:axmedis:00000:obj:41f981d1-e9d5-4d7a-9b1c-fa6d817d6456	25
urn:axmedis:00000:obj:15d586f7-e132-4fcb-98f6-6bc086574fac	17

urn:axmedis:00000:obj:a345a84f-6fdf-4f84-a412-88094ce363e2	16
urn:axmedis:00000:obj:99284f29-a89e-4801-9c2e-dc4fd0334318	15
urn:axmedis:00000:obj:cc369c87-ab62-4e53-9e4d-46ff7e5b73d1	13
urn:axmedis:00000:obj:5724e598-f2cb-49c8-a000-86768296770c	13
urn:axmedis:00000:obj:026add0f-a4c1-4a1a-a86d-c29152dfd261	13
urn:axmedis:00000:obj:78fc2419-3233-4d86-88ed-6a0b78e489cb	12
urn:axmedis:00000:obj:386af15a-7485-4df1-a3a5-215e0c165872	12
urn:axmedis:00000:obj:91f0f144-2531-4391-90b6-c3de969aa88a	12
urn:axmedis:00000:obj:23150222-56b8-4381-ba11-2156ecd5dfd3	12
urn:axmedis:00000:obj:ffaa3a96-823d-4aef-bdeb-28e38bad49fd	11
urn:axmedis:00000:obj:689a5543-ee69-439b-8f6b-15d38bf1ba1e	10
urn:axmedis:00000:obj:257328d8-ad3a-4e8d-8fd1-bb76f3a57024	10
urn:axmedis:00000:obj:3871f787-bef6-43b6-9daa-cbce2cb651b7	9
urn:axmedis:00000:obj:b384cd5e-faf8-48df-a3ee-d4c274c8611e	9
urn:axmedis:00000:obj:6f371ec5-b5d5-46e5-bd5e-a10a3e4228b4	9
urn:axmedis:00000:obj:d1910096-ed41-44b4-af8a-f57545526702	9
urn:axmedis:00000:obj:e2e24d4b-22ab-48ec-a461-98250f283b55	9
urn:axmedis:00000:obj:368e3618-eff5-4361-96e2-c0b88f8f9be2	9

14.1.10 Top Groups (first clicks)

Top accessed groups in the first click were:

- **“History of Art at University of Glasgow (UG), UK” (1315 clicks),**
- **“Thematic Working Groups & Workshops” (509 clicks),**
- **“Universidad de Castilla La Mancha, UCLM, Spain” (316 clicks),**
- **“Országos Színháztörténeti Múzeum és Intézet (Hungarian Theatre Museum and Institute), OSZMI” (302 clicks).**

Group Id	# clicks
3481	1315
3502	509
3491	316
3478	302
3344	231
3480	225
3161	188
2862	163
3476	148
2859	134
2864	129
3232	114
3489	110
3474	106
3261	99
3275	95

71323	84
3160	79
2867	77
65229	70
3364	69
4354	65
3362	56
64651	53
4353	52
64695	52
69399	41
3479	37
3477	32
72766	30
91417	18
91420	7
3427	4

14.1.11 Top Groups (second clicks)

Top accessed groups in the second click were:

- “History of Art at University of Glasgow (UG), UK” (575 clicks),
- “Országos Színháztörténeti Múzeum és Intézet (Hungarian Theatre Museum and Institute), OSZMI” (180 clicks),
- “General Management” (92 clicks).

Group Id	# clicks
3481	575
3478	180
3161	92
3502	85
3232	85
3480	82
3476	74
2862	73
2859	52
3474	52
3344	51
3261	49
2864	46
71323	43
2867	40
3489	32
3275	22
4353	20

3364	18
72766	18
64695	18
3160	17
3491	17
65229	17
4354	15
64651	14
3362	13
69399	10
91417	7
3477	5
3479	5
91420	4
3427	1

14.1.12 Top Groups (third clicks)

Top accessed groups in the third click were:

- “History of Art at University of Glasgow (UG), UK” (127 clicks),
- “Országos Színháztörténeti Múzeum és Intézet (Hungarian Theatre Museum and Institute), OSZMI” (63 clicks), and
- “Muzeum, Institute of Art Production, Mediation and Publishing, Ljubljana, Slovenia” (42 clicks).

Group Id	# clicks
3481	127
3478	63
3476	42
2864	41
3232	39
3502	38
2859	31
2862	31
3161	30
3261	28
3474	28
3480	25
3344	23
71323	22
2867	21
3489	20
64695	17
4353	15
3160	13

72766	11
4354	10
64651	10
3477	9
65229	9
3362	8
3275	8
3479	6
3364	6
69399	6
91420	4
3491	4
91417	2
3427	1

14.1.13 Top Groups (last clicks)

Top accessed groups in the last click were:

- **“History of Art at University of Glasgow (UG), UK” (1308 clicks),**
- **“Thematic Working Groups & Workshops“ (482 clicks),**
- **“Universidad de Castilla La Mancha, UCLM, Spain” (314 clicks).**

Group Id	# clicks
3481	1308
3502	482
3491	314
3478	295
3480	218
3344	212
3232	193
2862	171
3161	160
3476	152
2859	135
2864	115
3489	110
3474	109
3261	99
3160	93
3275	90
2867	88
71323	86
4354	81
65229	75

64651	73
3364	73
3479	66
64695	54
4353	52
3362	52
69399	41
72766	39
3477	29
91417	25
91420	11
3427	4

14.1.14 Top Pages (first clicks)

Top accessed pages in the first click were:

- **“ECLAP Network of Performing Arts”** (3015 clicks), the
- **“ECLAP 2012 Conference: General Programme”** (2032 clicks),
- **“ECLAP Conference”** (354 clicks).

Page Id	# clicks
68524	3015
65281	2032
65235	354
3727	239
3778	150
94220	130
3757	109
94224	98
41614	93
3735	91
3578	88
3758	82
82654	81
3730	72
3739	72
94155	66
3731	64
3729	62
3733	62
3748	54
65282	53
65284	47
3736	37

66235	34
40876	34
3738	31
65310	30
3737	30
71625	29
3732	29

14.1.15 Top Pages (second clicks)

Top accessed pages in the second click were the:

- **“ECLAP Network of Performing Arts” (1099 clicks),**
- **“ECLAP 2012 Conference: General Programme” (807 clicks),**
- **“European Collected Library of Artistic Performance” (199 clicks).**

Page Id	# clicks
68524	1099
65281	807
3727	199
65235	63
3578	52
3757	51
3739	49
3735	48
94224	44
94220	39
94155	38
3733	34
3778	30
65282	28
3729	27
65284	24
3758	23
3731	22
41614	22
3750	20
3732	20
3748	18
3730	18
3734	14
3738	14
82654	13
4014	13
3736	12

3759	11
3737	11

14.1.16 Top Pages (third clicks)

Top accessed page in the third click was the:

- “ECLAP Network of Performing Arts” (338 clicks)
- “ECLAP 2012 Conference: General Programme” (252 clicks)

Page Id	# clicks
68524	338
65281	252
3727	182
3578	45
3735	28
3729	27
65235	24
3757	23
3739	21
94155	16
65282	15
3733	11
94220	11
65284	10
94224	10
3730	9
3778	8
82654	8
3748	7
3750	7
4014	7
3734	7
41614	7
3758	6
3759	5
3732	5
65307	4
4311	4
82631	4
3736	4

14.1.17 Top Pages (last clicks)

Top accessed pages in the last click were:

- “ECLAP Network of Performing Arts” (2962 clicks),

- “ECLAP 2012 Conference: General Programme” (2051 clicks), and
- “ECLAP Conference” (313 clicks).
- “European Collected Library of Artistic Performance” (180 clicks)
- “Your ECLAP Content on Mobiles” (137 clicks)

Page Id	# clicks
68524	2962
65281	2051
65235	313
3727	180
94220	137
3778	136
3735	105
3757	98
94224	96
3578	90
3758	80
3729	78
82654	77
3739	77
94155	76
3731	68
3733	62
65282	60
4014	59
41614	53
65284	51
3748	45
3730	42
3734	40
3738	37
3736	35
66235	33
3732	33
65310	31
3750	31

14.2 Behaviour of registered (not partners) users

Registered users (not partners, partners are not included) obviously started their sessions by:

- logging in the portal (75.11%), then
- viewing a page (13.44%), and viewing an object(4.33%) or an event page (2.43%).

Most popular second clicks include:

- viewing pages (38.63%);

DE6.1.2 – Early validation and service optimisation, 2012 update
Best Practice Network

- menu click (13.42%);
- login (10.41%).

Third clicks generally were:

- menu access (29.86%);
- viewing event pages (23.26%);
- viewing objects (10.42%).

Top session last events were on event pages (22.45%), logout (18.50%) and menu clicks (17.26%).

First Click	Second Click	Third Click	Last Click
A 75.11% (833)	D 38.63% (141)	B 24.43% (64)	D 36.09% (179)
D 13.44% (149)	B 13.42% (49)	D 21.37% (56)	F 14.92% (74)
F 4.33% (48)	A 10.41% (38)	G 16.03% (42)	G 12.30% (61)
G 2.43% (27)	G 9.04% (33)	F 12.98% (34)	K 10.89% (54)
B 2.25% (25)	F 8.49% (31)	E 11.07% (29)	B 9.27% (46)
E 1.08% (12)	E 8.22% (30)	C 6.11% (16)	E 4.44% (22)
I 0.54% (6)	K 6.03% (22)	K 3.82% (10)	C 3.83% (19)
C 0.45% (5)	C 3.29% (12)	A 3.05% (8)	A 3.02% (15)
K 0.27% (3)	J 1.37% (5)	H 0.38% (1)	H 2.22% (11)
M 0.09% (1)	I 0.82% (3)	I 0.38% (1)	I 1.21% (6)
-	H 0.27% (1)	J 0.38% (1)	J 1.21% (6)
-	-	-	N 0.40% (2)
-	-	-	L 0.20% (1)

Legend:

- A: login
- B: MENU
- C: VIEW groups
- D: VIEW page
- E: Simple Query
- F: VIEW Cross Media
- G: VIEW event
- H: VIEW blog
- I: VIEW
- J: VIEW forum
- K: logout
- L: Download Medium Definition Cross Media
- M: Download Cross Media
- N: Advanced Query

14.2.1 State Transitions

To model user behavior while surfing the portal pages and interacting with resources, each user action was labelled with a letter, and each state transition with a couple of letters denoting each state (e.g., the user browses from page A to page B -> AB). Session timeout was set to 10 minutes.

Top accessed states include login 25.950855 (887), page view 16.73493% (572), menu 15.623175 (534).

Users preferred to

DE6.1.2 – Early validation and service optimisation, 2012 update
Best Practice Network

- start their portal sessions with login 75.11271% (833), view page 13.43553% (149), view Cross Media 4.328224% (48);
- end their portal sessions with view page 36.08871% (179), view Cross Media 14.91935% (74), view event 12.29839% (61).

Viewing groups 0.450857% (5), logout 0.270514% (3), downloading Cross Media 0.090171% (1), were the less exploited actions in the first session clicks (values expressed in percentage of total number of actions in the first session click).

Viewing forum 1.209677% (6), performing advanced queries 0.403226% (2), downloading Medium Definition Cross Media 0.201613% (1), were the less exploited actions in the last session clicks (values expressed in percentage of total number of actions in the last session click).

Users preferred to start and end their sessions by exploiting contents such as cross media or pages, instead of downloading the resources or using the networking capabilities of the portal (messaging, commenting, voting etc.).

Top 2-links transitions (with percentage of total 2-links transitions and total number of occurrences)

- menu click -> menu click 8.220376% (188)
- view event -> view event 7.477044% (171)
- simple query -> simple query 7.389593% (169)
- view Cross Media -> view Cross Media 6.864889% (157)
- menu -> simple query 5.946655% (136)

In general, menu click was the top click generator; each view of these contents was likely followed by another view of the same type 21.34733% (488). Another top click generator event was performing a simple query 17.36658% (397).

Top starting sessions (not counting recursive states and end links) transition probabilities

- 1 click, login 75.11271%
- 2 clicks, login -> page view 9.79257892%
- 3 clicks, login -> page view -> menu click 1.83219151%
- 4 clicks, login -> page view -> menu click -> simple query 0.466659179%

After login, users' first session actions were likely related to page view, menu items and simple queries.

14.2.1.1 Start State occurrences

Start State	# occurrences	%
A	833	75,11271
D	149	13,43553
F	48	4,328224
G	27	2,434626
B	25	2,254283
E	12	1,082056
I	6	0,541028
C	5	0,450857
K	3	0,270514
M	1	0,090171

14.2.1.2 Total State occurrences

State	# occurrences	%
A	887	25,95085
D	572	16,73493
B	534	15,62317
E	419	12,25863
F	389	11,38092
G	279	8,162668
C	203	5,939146
K	77	2,252779
H	20	0,585138
I	18	0,526624
J	13	0,380339
N	4	0,117028
M	2	0,058514
L	1	0,029257

14.2.1.3 State Transition occurrences

Transition	# occurrences	%
BB	188	8,223972
GG	171	7,480315
EE	169	7,392826
FF	157	6,867892
BE	136	5,949256
CC	136	5,949256
DD	125	5,468066
AD	118	5,161855
DB	107	4,680665
EB	102	4,461942
EF	94	4,111986
BD	77	3,368329
FB	54	2,362205
FE	46	2,012248
FD	43	1,881015
DG	42	1,83727
DF	39	1,706037
DE	31	1,35608
BF	29	1,268591
AB	28	1,224847
GD	27	1,181102
BC	27	1,181102
AG	25	1,093613

DE6.1.2 – Early validation and service optimisation, 2012 update
Best Practice Network

DA	20	0,874891
AK	19	0,831146
CB	18	0,787402
AE	17	0,743657
DK	16	0,699913
ED	15	0,656168
KA	15	0,656168
BG	13	0,568679
AF	11	0,48119
BK	10	0,437445
CD	9	0,393701
AC	8	0,349956
AA	8	0,349956
DC	8	0,349956
EC	7	0,306212
FC	7	0,306212
GA	7	0,306212
EH	6	0,262467
CF	6	0,262467
AJ	5	0,218723
GB	5	0,218723
BH	5	0,218723
FK	5	0,218723
KK	5	0,218723
CK	5	0,218723
ID	4	0,174978
II	4	0,174978
CJ	4	0,174978
CE	4	0,174978
DI	3	0,131234
EK	3	0,131234
GC	3	0,131234
BN	3	0,131234
HB	3	0,131234
GE	2	0,087489
HD	2	0,087489
GK	2	0,087489
HH	1	0,043745
DM	1	0,043745
ME	1	0,043745
IB	1	0,043745
IA	1	0,043745
IG	1	0,043745
IF	1	0,043745

MB	1	0,043745
FA	1	0,043745
AH	1	0,043745
JC	1	0,043745
JB	1	0,043745
AI	1	0,043745
ND	1	0,043745
EI	1	0,043745
JJ	1	0,043745
JK	1	0,043745
CA	1	0,043745
NN	1	0,043745
KB	1	0,043745
FL	1	0,043745
KF	1	0,043745
FI	1	0,043745
KD	1	0,043745
HF	1	0,043745
HE	1	0,043745
HC	1	0,043745
CI	1	0,043745

14.2.1.4 End State occurrences

End State	# occurrences	%
D	179	36,08871
F	74	14,91935
G	61	12,29839
K	54	10,8871
B	46	9,274194
E	22	4,435484
C	19	3,830645
A	15	3,024194
H	11	2,217742
I	6	1,209677
J	6	1,209677
N	2	0,403226
L	1	0,201613

14.2.1.5 Top click generator states

State	# generated clicks	%
B	488	21,34733
E	397	17,36658

D	392	17,14786
F	315	13,77953
A	241	10,54243
G	217	9,492563
C	184	8,048994
K	23	1,006124
I	12	0,524934
H	9	0,393701
J	4	0,174978
M	2	0,087489
N	2	0,087489

Legend:

- A: login
- B: MENU
- C: VIEW groups
- D: VIEW page
- E: Simple Query
- F: VIEW Cross Media
- G: VIEW event
- H: VIEW blog
- I: VIEW
- J: VIEW forum
- K: logout
- L: Download Medium Definition Cross Media
- M: Download Cross Media
- N: Advanced Query

14.2.2 Top Menus (first clicks), registered non partners users

Top accessed menus in the first click were the calendar (3 clicks), and “Events Past and Future” (2 clicks).

Menu	# clicks	
calendar	3	
content/3757	2	
advancedsearch	2	
blog	2	
user/1032/objects	2	
og	2	
content/3727	1	
axmedis/search	1	
user/1184/edit	1	
user/1121/edit	1	
content/3734	1	
home/activities	1	

messages	1	
content/3737	1	
content/3729	1	
user/1139/edit	1	
user/1052/edit	1	
home/myFavorites	1	
home/lastPosted	1	

14.2.3 Top Menus (second clicks), registered non partners users

Top accessed menus in the second click were “Advanced Search” (4 clicks), “Groups and channels” (4 clicks), and home/activities (4 clicks).

Menu	# clicks	
advancedsearch	4	
og	4	
home/activities	4	
messages	3	
content/3757	2	
content/3733	2	
content/3759	2	
home/mostDownloaded	2	
blog	2	
home/my	2	
content/3727	2	
axmedis/search	1	
home/myAnnotations	1	
user/1121/edit	1	
user/1000/edit	1	
user/970/objects	1	
elearning	1	
user/1058/edit	1	
user/1078/messages/subscriptions	1	
user/1157/edit	1	
home/lastPosted	1	
user/1046/objects/promoted	1	
user/1172/edit	1	
ugc/upload	1	
home/promoted	1	
user/1032/objects	1	
user/1065/messages/subscriptions	1	
home/mycollections	1	
content/3578	1	
user/980/edit	1	

user/1135/edit	1
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14.2.4 Top Menus (third clicks), registered non partners users

Top accessed menus in the third clicks were the ECLAP Description page (7 clicks), and Messages (6 clicks).

Menu	# clicks
content/3727	7
messages	6
og	5
axmedis/search	4
content/3757	2
home/my	2
home/myPlaylists	2
calendar	2
home/activities	2
content/3739	2
content/3578	2
user/901/edit	1
user/1101/edit	1
user/1184/friends/list	1
user/879/friends/list	1
advancedsearch	1
home/myAnnotations	1
content/3733	1
user/756/edit	1
content/3759	1
home/mostDownloaded	1
blog	1
user/1032/messages/subscriptions	1
user/979/edit	1
elearning	1
user/1058/edit	1
user/1157/edit	1
user/1046/edit	1
user/977/messages/subscriptions	1
ugc/upload	1

14.2.5 Top Menus (last clicks), registered non partners users

Top accessed menus for last clicks were ugc/upload (4 clicks), and advancedsearch (3 clicks).

Menu	# clicks
ugc/upload	4

advancedsearch	3	
searchUsers	3	
content/3578	3	
content/3733	2	
content/3734	2	
blog	2	
calendar	2	
content/3727	2	
content/3739	2	
user/879/friends/neighbours	1	
content/3757	1	
user/1121/edit	1	
user/756/edit	1	
content/3759	1	
home/mostRanked	1	
messages	1	
user/979/edit	1	
user/988/objects	1	
elearning	1	
home/my	1	
user/1005/objects	1	
user/1046/edit	1	
og	1	
home/lastPosted	1	
user/1190/edit	1	
user/1043/edit	1	
user/1172/edit	1	
home/promoted	1	
home/activities	1	

14.2.6 Top Objects (first clicks), registered non partners users

Top accessed object in the first click was urn:axmedis:00000:obj:e45b5021-fe6f-4114-9c1d-216ce8900df0 (30 clicks).

Object Id	# clicks
urn:axmedis:00000:obj:e45b5021-fe6f-4114-9c1d-216ce8900df0	30
urn:axmedis:00000:obj:23150222-56b8-4381-ba11-2156ecd5dfd3	3
urn:axmedis:00000:obj:9938b804-0aec-4716-b4b8-49f5057a8460	2
urn:axmedis:00000:obj:ee66d4fb-e9a8-4a81-9479-1fcca40590b3	1
urn:axmedis:00000:obj:0f123b99-0789-434c-b2ff-8ef56ade58e6	1
urn:axmedis:00000:obj:08e9ccc8-70b5-43b5-86ca-93336d9e6671	1

urn:axmedis:00000:obj:251943d7-97e8-4220-95f0-1c4ab789db8e	1
urn:axmedis:00000:obj:8f3fc734-e52c-4915-889d-d709b999481e	1
urn:axmedis:00000:obj:659517de-2576-4298-93ba-94b0a26dcfb2	1
urn:axmedis:00000:obj:8c5f8909-e05d-43e1-a18e-1a359f9df3fc	1
urn:axmedis:00000:obj:5724e598-f2cb-49c8-a000-86768296770c	1
urn:axmedis:00000:obj:14aa7c2a-1a5b-46a1-9972-295b5db1d601	1
urn:axmedis:00000:obj:b828710e-b77c-4074-993c-3efddfbfaad7	1
urn:axmedis:00000:obj:15419c78-b1f3-4160-819a-abd1bbc0b393	1
urn:axmedis:00000:obj:94a12b50-f507-4d6b-92e0-79be3039800d	1
urn:axmedis:00000:obj:a99558c2-d629-4013-9b3d-7b7333a7afd7	1
urn:axmedis:00000:obj:d7232b3c-b107-487d-952d-f95296cdbc24	1
urn:axmedis:00000:obj:c5373fc0-de4c-4b31-a832-587a93602912	1

14.2.7 Top Objects (second clicks), registered non partners users

Top accessed object in the second click was urn:axmedis:00000:obj:23150222-56b8-4381-ba11-2156ecd5dfd3 (7 clicks).

Object Id	# clicks
urn:axmedis:00000:obj:23150222-56b8-4381-ba11-2156ecd5dfd3	7
urn:axmedis:00000:obj:e45b5021-fe6f-4114-9c1d-216ce8900df0	6
urn:axmedis:00000:obj:ca8d5498-9c0a-4d70-b85e-eb570a35333f	1
urn:axmedis:00000:obj:9b861bfe-7ce2-43aa-9dec-37d0db4ce424	1
urn:axmedis:00000:obj:ec2c74fd-fa3f-44fb-98d5-0db40b604cc8	1
urn:axmedis:00000:obj:f9b3d079-f8b9-48cf-850f-a172df7c9f41	1
urn:axmedis:00000:obj:31c5152a-a085-4f42-afc7-ef050d707481	1
urn:axmedis:00000:obj:8c5f8909-e05d-43e1-a18e-1a359f9df3fc	1
urn:axmedis:00000:obj:5724e598-f2cb-49c8-a000-86768296770c	1
urn:axmedis:00000:obj:14aa7c2a-1a5b-46a1-9972-295b5db1d601	1
urn:axmedis:00000:obj:9693592c-a07a-49f6-90b1-5cf46e3883ff	1
urn:axmedis:00000:obj:415eeba1-f1c2-418d-b9bb-8fc2f3f1c79e	1
urn:axmedis:00000:obj:c1964840-d83f-47fa-b406-c452243e2153	1
urn:axmedis:00000:obj:0d492438-2432-4a2d-952c-8aceb335c6da	1
urn:axmedis:00000:obj:1e7c0686-f15a-499c-99ad-080554d984fd	1
urn:axmedis:00000:obj:3d084d19-6bdf-456f-9acf-400157de4c4c	1
urn:axmedis:00000:obj:9938b804-0aec-4716-b4b8-49f5057a8460	1

urn:axmedis:00000:obj:6d56fb86-611d-436a-8b42-c66b0c79818a	1
urn:axmedis:00000:obj:b5e89bec-2c82-457a-8c48-4a1f510ec9ee	1
urn:axmedis:00000:obj:9ff6cc86-35eb-4a59-bfd3-e925534f2993	1

14.2.8 Top Objects (third clicks), registered non partners users

Top accessed object in the third click was urn:axmedis:00000:obj:04e0caef-b33b-4f4a-ba50-a80d96766192 (4 clicks).

Object Id	# clicks
urn:axmedis:00000:obj:04e0caef-b33b-4f4a-ba50-a80d96766192	4
urn:axmedis:00000:obj:23150222-56b8-4381-ba11-2156ecd5dfd3	3
urn:axmedis:00000:obj:c09c3a70-3b5e-47d5-83d3-7ff0e31867d7	1
urn:axmedis:00000:obj:9fd14797-f64c-400e-b600-e12a1ec02afb	1
urn:axmedis:00000:obj:23f0f811-d60d-4f97-a0ff-4b991270ff80	1
urn:axmedis:00000:obj:1fd0220e-36c6-4df6-8b04-e38903d0759f	1
urn:axmedis:00000:obj:eba09dde-3446-4cad-848d-387cda78ba17	1
urn:axmedis:00000:obj:a3cf62d2-577b-456f-9351-2e215787b091	1
urn:axmedis:00000:obj:bba334a9-46ec-4f25-b86c-984434c6cd48	1
urn:axmedis:00000:obj:5724e598-f2cb-49c8-a000-86768296770c	1
urn:axmedis:00000:obj:034f7c37-a3e4-4540-9ed6-2af609578717	1
urn:axmedis:00000:obj:ff2b1c9c-402d-49a4-915f-54ed8998570b	1
urn:axmedis:00000:obj:38df56da-7a2b-4ed3-be70-6f6c07c2f40c	1
urn:axmedis:00000:obj:6981a22f-a8dc-49d6-b55f-46c1e5d31338	1
urn:axmedis:00000:obj:64c091a4-2a61-4212-a0a3-58592f98bbbc	1
urn:axmedis:00000:obj:d7232b3c-b107-487d-952d-f95296cdbd24	1
urn:axmedis:00000:obj:e45b5021-fe6f-4114-9c1d-216ce8900df0	1
urn:axmedis:00000:obj:551e7817-a88f-4db2-b9f6-16bc85457010	1
urn:axmedis:00000:obj:36721245-3158-49c1-8664-03f3633d6267	1
urn:axmedis:00000:obj:e061901d-637e-4636-93a7-1e449d03eaf9	1
urn:axmedis:00000:obj:d3324d8c-f340-42ed-b9d6-9fa885ec32b0	1
urn:axmedis:00000:obj:839ba65d-ebc3-49c1-aca6-2bca396a3109	1
urn:axmedis:00000:obj:cdbf8985-9ffd-4a2d-9db1-c3dcd36db709	1
urn:axmedis:00000:obj:b43fd8a4-3ec1-4a0a-985e-8a5d1ffb5965	1
urn:axmedis:00000:obj:097b7600-60ba-4990-80d3-0a38ff9d0d43	1
urn:axmedis:00000:obj:61b92869-28ea-481e-83ad-73699bee5797	1
urn:axmedis:00000:obj:eb937ebb-5204-4428-adc2-1fc2770065d2	1
urn:axmedis:00000:obj:989f71e4-d7d6-4415-8d27-ea81900b96b2	1
urn:axmedis:00000:obj:bb87f360-2655-4390-81e9-80e3fd33fd23	1

14.2.9 Top Objects (last clicks), registered non partners users

Top accessed object in the last click was urn:axmedis:00000:obj:e45b5021-fe6f-4114-9c1d-216ce8900df0 (36 clicks).

Object Id	# clicks
urn:axmedis:00000:obj:e45b5021-fe6f-4114-9c1d-216ce8900df0	36
urn:axmedis:00000:obj:1fd0220e-36c6-4df6-8b04-e38903d0759f	2
urn:axmedis:00000:obj:08e9ccc8-70b5-43b5-86ca-93336d9e6671	2
urn:axmedis:00000:obj:251943d7-97e8-4220-95f0-1c4ab789db8e	1
urn:axmedis:00000:obj:e8898a3a-a4f2-47f5-9068-1666a14ecafc	1
urn:axmedis:00000:obj:453ed034-a031-4e14-afe3-a02c934e764b	1
urn:axmedis:00000:obj:e0573899-3890-462f-91ff-487b1cd1e462	1
urn:axmedis:00000:obj:8c5f8909-e05d-43e1-a18e-1a359f9df3fc	1
urn:axmedis:00000:obj:99205893-3f44-4be7-a9bf-48d4464eb2e2	1
urn:axmedis:00000:obj:37952e38-89b4-46aa-b260-cecc8d1b7233	1
urn:axmedis:00000:obj:5724e598-f2cb-49c8-a000-86768296770c	1
urn:axmedis:00000:obj:7651d6c0-317c-44b9-961a-5e2e56a91eb5	1
urn:axmedis:00000:obj:b828710e-b77c-4074-993c-3efddfbfaad7	1
urn:axmedis:00000:obj:bc591ba1-1e4a-4338-be69-25344ff3da0f	1
urn:axmedis:00000:obj:6981a22f-a8dc-49d6-b55f-46c1e5d31338	1
urn:axmedis:00000:obj:9938b804-0aec-4716-b4b8-49f5057a8460	1
urn:axmedis:00000:obj:d7232b3c-b107-487d-952d-f95296cdbd24	1
urn:axmedis:00000:obj:7fa02aa7-3978-4470-99fe-3bc50c49f1a7	1
urn:axmedis:00000:obj:0f123b99-0789-434c-b2ff-8ef56ade58e6	1
urn:axmedis:00000:obj:36721245-3158-49c1-8664-03f3633d6267	1
urn:axmedis:00000:obj:24225da5-1ad0-4b5f-bb79-5bf018b65956	1
urn:axmedis:00000:obj:839ba65d-ebc3-49c1-aca6-2bca396a3109	1
urn:axmedis:00000:obj:0beed117-a049-401b-9351-1e4b262020b2	1
urn:axmedis:00000:obj:39b79854-16a7-4dae-9ecb-b1e624d5b10b	1
urn:axmedis:00000:obj:3b0bf389-f617-436f-a7cc-ff41cbd0d609	1
urn:axmedis:00000:obj:cdbf8985-9ffd-4a2d-9db1-c3dcd36db709	1
urn:axmedis:00000:obj:23150222-56b8-4381-ba11-2156ecd5dfd3	1
urn:axmedis:00000:obj:14aa7c2a-1a5b-46a1-9972-295b5db1d601	1
urn:axmedis:00000:obj:04e0caef-b33b-4f4a-ba50-a80d96766192	1
urn:axmedis:00000:obj:99a4f093-7e51-4cc8-915e-848a720e2a1a	1

14.2.10 Top Groups (first clicks), registered non partners users

Top accessed group in the first click was 3161 (1 clicks).

Group Id	# clicks
3161	1
2864	1
3502	1
3261	1
3362	1

14.2.11 Top Groups (second clicks), registered non partners users

Top accessed group in the second click was 3502 (2 clicks).

Group Id	# clicks
3502	2
3261	2
2859	2
2862	1
3491	1
2864	1
3232	1
3344	1
71323	1

14.2.12 Top Groups (third clicks), registered non partners users

Top accessed groups in the third click was 3261 (3 clicks).

Group Id	# clicks
3261	3
2864	3
2862	2
72766	1
3502	1
65229	1
2859	1
3232	1
3344	1
3362	1
71323	1

14.2.13 Top Groups (last clicks), registered non partners users

Top accessed groups in the last click were:

- 3261 (8 clicks),
- 2864 (2 clicks), and
- 3160 (1 click).

Group Id	# clicks
3261	8
2864	2
3160	1
2862	1
3161	1
3491	1
72766	1
3502	1
3474	1
3232	1
71323	1
64651	1

14.2.14 Top Pages (first clicks), registered non partners users

Top accessed pages in the first click were:

- 65281 (73 clicks),
- 68524 (42 clicks),
- 65235 (5 clicks).

Page Id	# clicks
65281	73
68524	42
65235	5
65282	4
65284	3
65309	2
65307	2
71625	2
3759	2
3727	1
69398	1
65642	1
3757	1
3578	1
89484	1
70610	1
94155	1
3733	1
65263	1
65288	1
65286	1
3739	1

65310	1
94220	1
81128	1

14.2.15 Top Pages (second clicks), registered non partners users

Top accessed page in the second click was 65281 (59 clicks).

Page Id	# clicks
65281	59
68524	42
65235	10
3727	5
3757	4
3578	3
3739	2
94220	2
94155	1
3734	1
95230	1
65307	1
3650	1
41614	1
71625	1
3737	1
82640	1
3729	1
3889	1
69398	1
65290	1
3778	1
65284	1

14.2.16 Top Pages (third clicks), registered non partners users

Top accessed page in the third click was 65281 (22 clicks).

Page Id	# clicks
65281	22
68524	11
65235	4
65307	2
3727	2
3757	2
65282	2

66235	1
3734	1
3733	1
3738	1
3739	1
65310	1
94220	1
3778	1
65284	1
3759	1
3578	1

14.2.17 Top Pages (last clicks), registered non partners users

Top accessed pages in the last clicks were

- **65281 (78 clicks),**
- **68524 (45 clicks),**
- **65235 (8 clicks),**
- **65284 (8 clicks),**
- **3727 (7 clicks),**
- **65307 (5 clicks).**

Page Id	# clicks
65281	78
68524	45
65235	8
65284	8
3727	7
65307	5
65282	5
3578	3
65290	2
94220	2
65309	1
66235	1
71625	1
69398	1
3778	1
65642	1
3759	1
89484	1
3730	1
94155	1
95230	1
3733	1

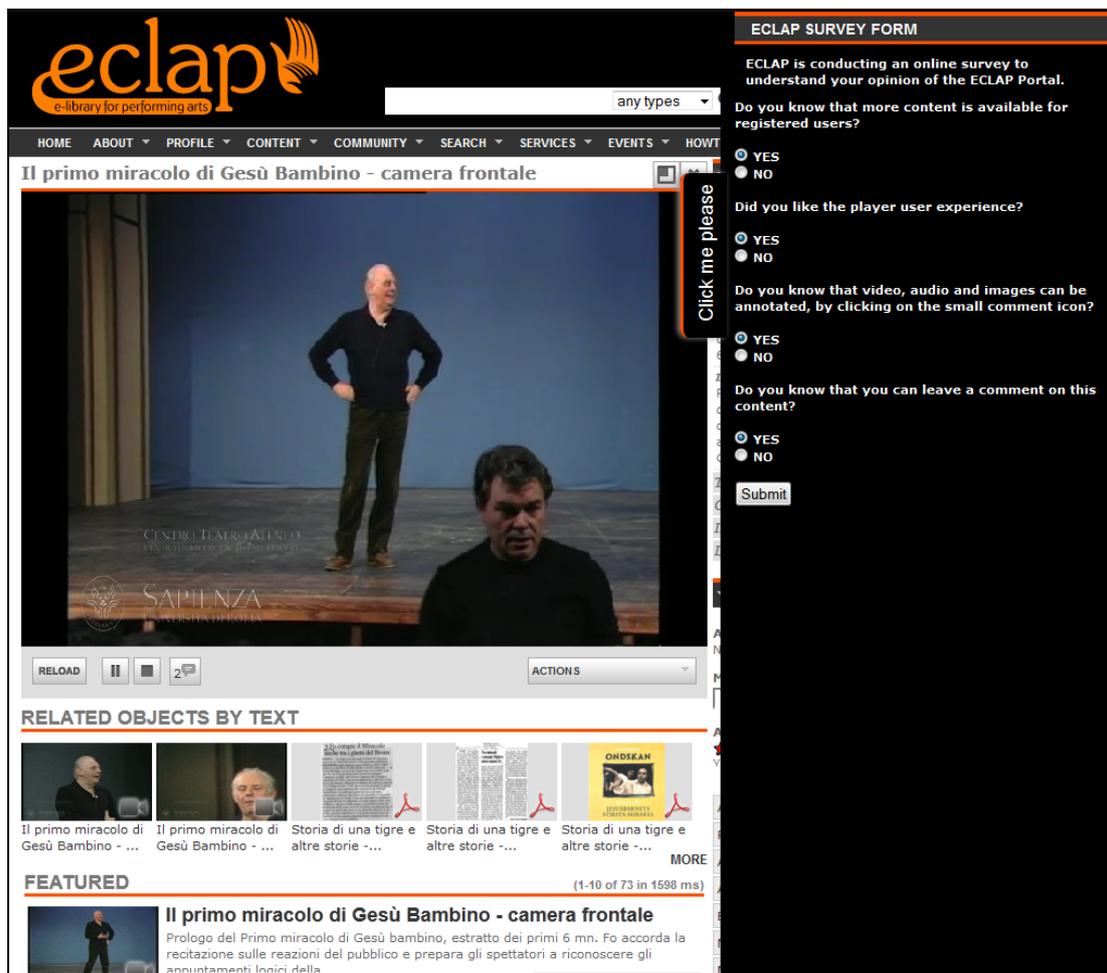
DE6.1.2 – Early validation and service optimisation, 2012 update
Best Practice Network

3650	1
65288	1
3737	1
76449	1
3739	1
3889	1

Users' reactions to pop up questions

15 User Satisfaction and Understanding

The users have been simulated with contextual queries. They have to perform at least two clicks to respond to those questions. One to open the pop up and the second to respond. An example is reported in the following images.



The questions have been contextualized in different situations::

- First page, Web page
- During the Play
- After the production of results of query
- During workflow
- Etc.

The significant results obtained are reported in the following, by considering ONLY those produced by non-registered users, so that public users that have not been logged into the ECLAP portal. The period taken into consideration of the reported analysis is mainly from November 2011 to May 2012.

The numbers of users involved in this analysis by responding to our questions is not high with respect to the number of users involved and accessed to the portal. On the other hand, these users decided to contribute to ECLAP thus they are typically very interested and motivated as highlighted by the following question.

The general assessment of the user kind was performed by asking them to react at the question: “I am very interested in ECLAP's topics?”. At which the 100% of user strongly agreed and agreed.

Strongly disagree	0
Disagree	0
Neither agree nor disagree	0
Agree	29%
Strongly agree	71%
	100%

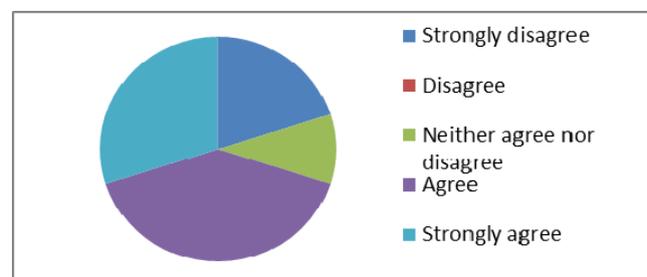
15.1 User Satisfaction of ECLAP Services

This first group of questions were mainly focussed on assessing the **user satisfactory** about the ECLAP services with 34 users.

	number	yes	no	%yes	%no
Are you satisfied with the information contained in this group?	3	3	0	100,0%	0,0%
Are you satisfied with the information contained in this page?	8	5	3	62,5%	37,5%
Are you satisfied with the present image?	3	2	0	66,7%	33,3%
Are you satisfied with the search results?	10	6	4	60,0%	40,0%
Did you find what you were looking for?	10	5	5	50,0%	50,0%
	34			67,8%	32,2%

Specific assessment has been performed about the search capability:
“The search speed is satisfying?”

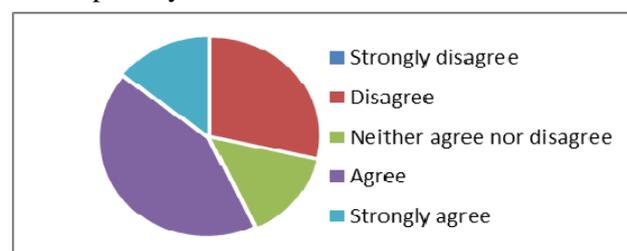
Strongly disagree	0,2
Disagree	0
Neither agree nor disagree	0,1
Agree	0,4
Strongly agree	0,3
	100%



Thus the 70% of users agreed on the search speed.

Specific assessment has been performed about the search capability:
“The homepage is very effective?”

Strongly disagree	0,00
Disagree	0,29
Neither agree nor disagree	0,14
Agree	0,43
Strongly agree	0,14
	100%



Thus the 57% of users agreed about the current aspect of the first page; that in the period was a page representing the current event: Dario Fo event, and the first ECLAP 2012 Conference Event.

15.2 User Understanding of ECLAP services

This second group of questions has been provided to assess the **user understanding** of the ECLAP features with 37 users.

	number	yes	no	%yes	%no
<i>Do you know that more content is available for registered users?</i>	6	3	3	50,0%	50,0%
<i>Do you know that video, audio and images can be annotated, by clicking on the small comment icon?</i>	6	2	4	33,3%	66,7%
<i>Do you know that you can leave a comment on this content?</i>	14	9	5	64,3%	35,7%
<i>Do you know that you may access at the PDF in full page?</i>	5	2	3	40,0%	60,0%
<i>Do you prefer to have featured contents in the homepage?</i>	6	6	0	100,0%	0,0%
	37			57,5%	42,5%

15.3 Conclusions on User click questionnaires

The first analysis of the above table means that the users are quite satisfied of the ECLAP aspect and behaviour while their perception about the ECLAP features is not complete. Thus a campaign on promoting the ECLAP features is needed.

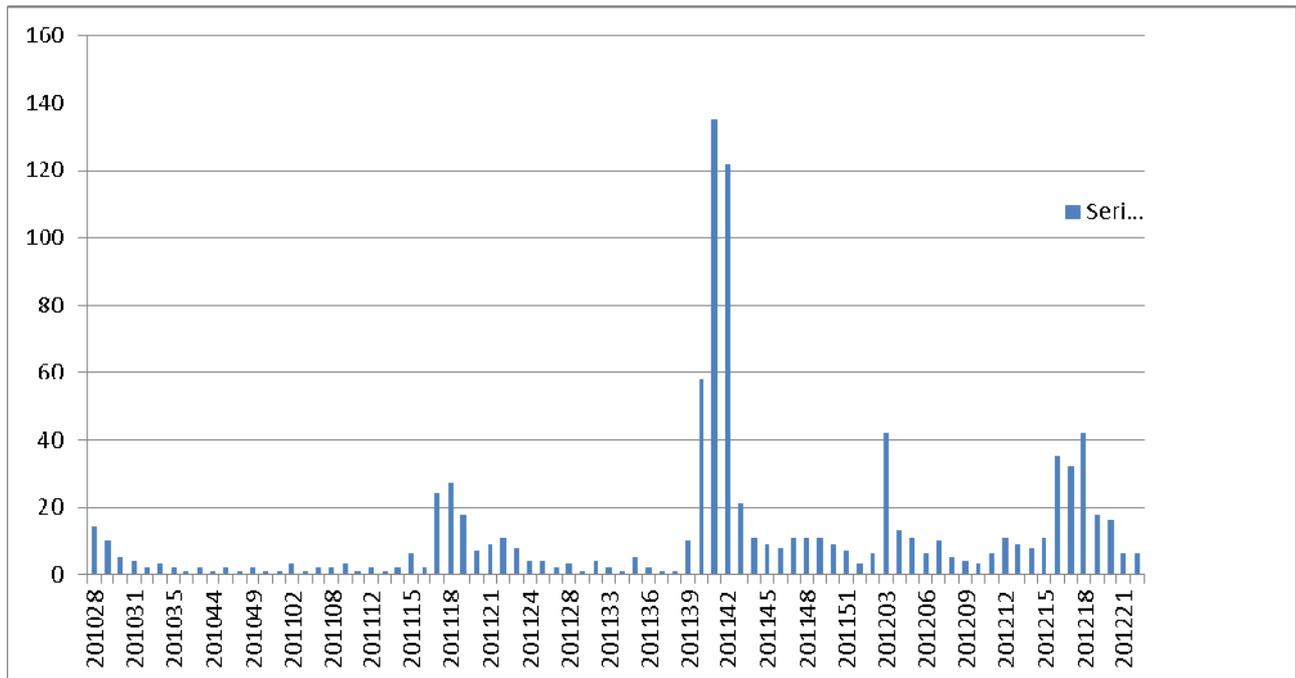
Thus the first page has been changed into pages for promoting features and for presenting featured content.

Trend of Registered Users

16 Trend of Registered Users

In the following, the graph describing the distribution of the new registrations per week from the 28th week of the 2010 to the 21st week of the 2012 is reported. It is evident that the peaks correspond to the events:

- June 2011, ECLAP workshop in Brussels
- October 2011, Events about ECLAP and CTFR archive with Dario Fo in Rome, Italy
- May 2012, ECLAP conference in Florence.



Now in May 2012 we have about 1000 registered users.

Conclusions

17 Conclusions and improvements

Social networking potentialities of ECLAP were not sufficiently exploited by users, in the considered period; e-learning features were not tested at all. Many of the performed tasks were done for technical purposes (e.g., content ingestion), often related to the project commitment schedule. Most accessed contents include groups, pages, pdf documents, and videos. Creation and access of resources such as collections or playlists were practically ignored; in the main page, how to video tutorials could be provided, driving the new user in the portal (e.g., how to manage your contents, how to access e-learning etc.); this could be very effective, for example to reduce the bounce rate, by explaining the hidden or most technical features and potentialities of the portal.

The possibility of putting in the front page an object per day could be a way to make it more visible and promoted. For example the hint of the day, and below the list of featured or related contents.

Considering the growing interest of people in Social Networking activities, messaging and friendship features must be improved to meet user needs, both from a design and performance point of view, with a new design of the user profile management interface (e.g., friends list with thumbnails, buttons for quick reply or popup messages etc.), and a push notifying system (e.g., real time messaging and alerting etc.) to improve the use of messaging and interaction between users.

The search user service might include a detailed view, in order to find users with similar interests, contents, background etc. Integration with other Social Networks must be strengthened too, with the aim to direct the user toward the portal to register or access the contents, making Performing Arts students interested in the portal topics, for example with incentives from the content partners (e.g., free tickets for theatre performances or Performing Arts events organized by the content providers etc.).

Also, ECLAP community needs to be motivated to exploit the portal functionalities with a more effective dissemination campaign, putting in evidence the quality of digital contents provided, and the potential use of the portal for entertainment and edutainment.

As regarding public users they prefer to access via Menu looking for specific information as reported in the following table.

Menu choice	click	description	Service/content
content/3727	512	ECLAP general description	
content/3757	254	ECLAP Events page	service
og	244	Groups	service
blog	215	Blog	service
home/lastPosted	181	Last Posted	content
home/promoted	157	Promoted / Featured	content
advancedsearch	131	Advanced search	
home/mostDownloaded	122	Most Downloaded	content
content/3578	117	Partners	
content/3739	96	Content and Metadata Ingestion model	Content
content/3729	85	Main Contact Point	
elearning	84	elearning	service
calendar	81	calendar	service

home/mostRanked	79	Most Ranked	content
content/3733	69	How to get affiliated	
axmedis/search	68	Search	
kwcloud	58	Keyword Cloud	content
content/3758	57	e-learning facilities	service
home/lessDownloaded	52	Less Downloaded	content
content/3734	35	FAQ	
querycloud	35	Query cloud	content
content/3759	33	Promotional material to be used	service
content/3732	31	Networking and Group Creation	service
user/271/friends	30	Friends	service
content/3730	25	Terms of Use	
content/3750	11	Statistics about accesses	
content/3736	10	Related links	service

This means that the above web pages and services have to be more carefully revised in order to provide higher quality of content in those pages and related services.

As regarding registered users (excluding the partners) they prefer to access via Menu looking for specific information as reported in the following table.

Menu choice	click	description	Service/content
calendar	37	calendar	Service
content/3757	22	ECLAP Events page	Service
blog	17	blog	Service
ugc/upload	17	upload	
home/promoted	16	Promoted / Featured	
home/activities	15	activities	
advancedsearch	12	Advanced search	
content/3727	10	ECLAP general description	
home/mostDownloaded	9	Most Downloaded	
og	8	Group	
content/3739	5	Content and Metadata Ingestion model	
elearning	5	elearning	
searchUsers	5	Search Users	
content/3738	4	Content Enrichment and Aggregation	
home/my	4	My	
messages	4	Messages	
content/3758	2	e-learning facilities	
content/3759	2	Promotional material to be used	
home/mostRanked	2	Most ranked	
project/issues	2	Issues	