



SecCord

SECurity and trust COoRDination and enhanced collaboration

Project N° 316622

Deliverable 4.1 T&S research web repository web specifications

D4.1

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Acronym

GUI Graphical User Interface

UX –User Experience

W3C The World Wide Web Consortium (W3C) is the main international standards organization for the World Wide Web (abbreviated WWW or W3).

T&Cs Terms and Conditions

CMS – Content Management System

T&S trust and security

RSS Really Simple Syndication

SEO Search Engine Optimization

FIA The European Future Internet Assembly

1 Executive Summary

This deliverable is the initial identification of the specifications and requirements for the provision of the Web Portal that the SecCord project will implement, operate and provide support to the CSP FORUM, the project consortium, the Trust and security clustering groups and the wider trust and security community, working to highlight

- information about the project itself , its planned clustering and conference events and its outputs and results , acting as a valuable dissemination outreach channel;
- a facility for the use of the clustering and coordination clients of the project;
- a channel – *portal* – to related or relevant Trust and Security news and information.

This document provides an overview of the projects web portal set up, planning, design and development, initialisation and content management to date.

It will also detail some search engine optimization options, to be looked into in more detail in the near future in order to increase the usefulness and usability of the website, which in turn will actively contribute towards the statistics results coming from analytics setup. The project website will continue to evolve and mature as the project continues, in a phased development approach. This is an important aspect of work that is currently in the planning and early design/development stages and will be completed in the coming weeks. The web portal upkeep is an ongoing activity throughout the lifespan of the SecCord project.

2 Introduction

2.1 Purpose

The purpose of this document is to provide initial details on the setup and maintenance of a dedicated web portal for the funded SECCORD CSA project. It will convey the initialisation work completed to date on the website, the branding of the website and the future work planned to be completed.

2.2 Scope and Goals

As the Seccord project is in its infancy at the time of writing this deliverable, the web portal, its requirements and functionality will continue to evolve and mature over time in a phased development approach, to take into account new requirements as they develop during the project's lifespan. This document will highlight the main current requirements that have been taken into account in the initial phase of the web-site set up and will also identify future possible requirements that need to be completed, to support Seccord project and CSP Forum activities.

The main goals of the Seccord project CSP Forum web portal is to

- To support the activities of the CSP Forum funded via SecCord CSA
- To support CSP Forum as a dissemination tool
- To support the CSP Forum clustering activities once up and running
- To support the CSP EU Forum Conference and incorporate links to these event websites (last one held in 2012 and up and coming 2013 conference), as well as highlighting their activities.
- Other aspects that will be considered during the phased development approach will include the following
 - T&S Collaboration Community – how best to inform and utilise the website, maximising its potential for the trust and security clustering working groups.
 - Support various social media dissemination aspects as required during the project.
 - Build in informative aspects into the website relating to member state trust and security initiatives and events.
 - Link with and track external trust and security initiatives ongoing , their outputs, events etc.
 - Link with other relevant websites - deemed useful to the ict security community (H2020, cordis, digital agenda etc)
 - Look towards the inclusion and linkage with current educational and tutorial aspect in the ICT security domain, to advertise and make available to the wider community. It will be investigated how best to accomplish this (videos, webinars, reports, NoE outputs etc etc) . this will be a longer term phased goal of the web development process.

2.3 Design Principles

The Seccord project, CSP FOURM web portal incorporates ‘best practise’ design principles, including:

- Identify main purpose and objectives of the web portal;
- Organise website navigation, page layout, graphics, etc. based on same;
- Consider different target audiences;
- Prioritise content and establish an intuitive hierarchical structure;
- Ensure overall design is flexible enough to incorporate new functionality and content, as required.

2.4 Target Audience

SECCORD as a coordination support action, will have specific target audiences, based on its activities and objectives. The general target audience can be broken into 6 main areas. The following list details the specific needs we would see such target audiences as having.

Target Audience Their effects plus web portal interests

- *General public* : The web portal needs to take into account the general public, that may visit the website, for visitors not within the research domain, having a clear message on the web portal is important in order to convey the work the project is completing.
- *External Trust and security initiatives*: SECCORD will have direct links with external trust and security initiatives and member state initiatives, the content included in the web portal will also need to consider such activities, the types of information they may be looking for and provision of news item functionality to advertise their activities to the wider community –thus increasing collaboration amongst both type of groups.
- *European commission*: The website needs to clearly convey the projects goals and achievements and highlight the projects progression, through the dissemination of planned events and output results of the project.
- *Collaborative clusters*: SECCORD via CSP FORUM is responsible for the creation and coordination of trust and security clusters, hence the web portal look at the specific requirements and needs to support such activities.
- *Trust and security Research projects*: Actively funded research projects will utilise the CSP FORUM website to advertise their achievements and outputs, increasing their dissemination and exploitation opportunities.
- *Trust and Security external stakeholders*: this website will provide relevant information to the wider community on state of the art research activities funded by the commission. Stakeholders would include policy makers, SME’s , large industries, multinationals , academic experts in the domain.

3 Branding of the website

In order to link with the CSP EU Forum annual conference, the following naming convention will be adopted.

The SECCORD project is the main funding instrument of the clustering activities (its predecessor was EFFECT+). In order to have a seamless handover from EFFECTS+ funded project to SECCORD funded project the following approach has been adopted.

A domain name for seccord www.seccord.eu has been obtained and purchased.

The EFFECTS+ domain name will remain live for the duration of the project www.effectsplus.eu .

For the CSP EU FORUM conference we have the following active domain name www.cspforum.eu .

Branding for the portal will link with the explicit branding for the main yearly conference, this will be completed as follows.

1. The main website for the trust and security clustering activities will become www.cspforum.eu .This will be the main website and branding advertised for all clustering related activities in the trust and security domain (under Unit H4).
2. Acknowledgement to the Seccord project that is the funding instrument , will be provided on this website, with a dedicated section , highlighting this and also acknowledging it is funded by the European commission, and the FP7 framework programme.
3. A suitable logo for Seccord will be completed and this in turn will be included on the website and on all promotional material for the CSP Forum , again acknowledging the funding source, the project Seccord.
4. Once EFFECTS+ project finishes, a redirection to the new trust and security clustering website CSP FORUM will be included.
5. The currently obtained Seccord domain name will also adopt such a redirection to the main CSP FORUM website .

At all times on the website and via organised clustering events, acknowledgement of the Seccord project, the commission and the FP7 programme that is funding the clustering activities will be included , to highlight the funding instrument for the CSP FORUM.

4 CSP FORUM Website User View

4.1 Web Development and Design Process for CSP Forum Website

As web technologies and methodologies advance, websites and web applications have become progressively more complex. Throughout the creation of the website, consideration of the UX (User Experience) and how a user interacts with the website, is an important element throughout the GUI design and development process. This is essential in laying the foundations of a intuitive and interactive experience for the end user. Thus, continual evaluation and refinement of the main CSP Forum GUI elements is completed throughout the design and development stages.

4.1.1 Planning Stage

Key stages of the website planning process included:

- **Requirements analysis and gathering** : This includes client goals, target audience, detailed feature requests and as much relevant information e.g. incorporating the CSP EU Forum 2012 event conference links and also planning for scaling the site e.g. future events including CSP EU Forum 2013, as well as ongoing needs to create news and cluster information spaces.
- **Site map**: A initial site map of key elements in the CSP Forum website was created and a hierarchy of page organization (See Figure 1 of initial hierarchy of main menu elements).
- **Gain access to servers and build folder structure**: First phase development of the CSP Forum website included the creation of a test site upon which the core navigation structure and content management system were created. This included hosting checks, as well as provision of username and password; control panel log-in information for content creators.

4.1.2 Design Phase

The design stage involved moving the information outlined in the planning stage further into reality. Visual representation outputs include initial wireframes, colour schemes, moodboards and draft designs of key page style. Upon completion of the design phase, the websites main look and feel is completed.

Wireframe and design elements planning: This is where the visual layout of the CSP Forum website begins to take shape. Using information gathered from the planning phase, the initial layouts were created in wireframes and used to determine placement of key elements on the page. Core page navigation was determined based on task sorting and prioritization of the content gathered at the requirements stage (See Figure 1 and Figure 2)

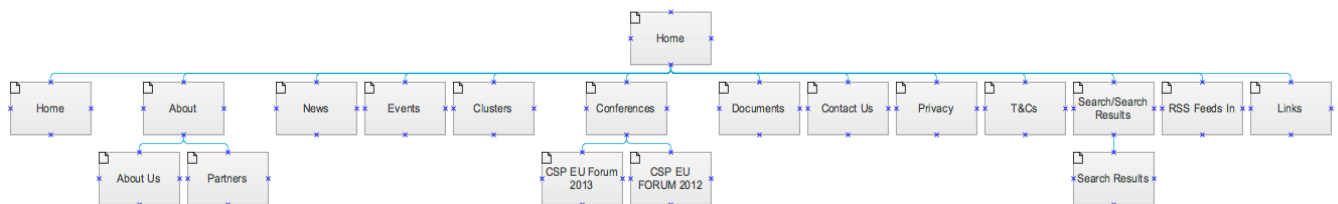


Figure 1 Core Navigation Hierarchy Diagram for CSP EU Forum



Figure 2 Homepage Wireframe for CSP EU Forum

Mock-ups based on requirements analysis: Initial design mock-ups were created, taking details through the next phase of visualization and so that flow of key elements, highlighting, emphasis, etc. was more apparent and what main important elements needed to be emphasized first e.g. CSP Forum Name, Key Purpose Message, Up and Coming Events, News, etc. (See Figure 3).



Figure 3 . Design draft of CSP Forum website and placement of key elements e.g. Project Name, Key Message/Project Explanation, Up and Coming Events, News, etc.

Review and approval cycle A cycle of reviewing, tweaking and approving the mock-ups will continue until all key web requirements are met.

Slice and code valid XHTML/CSS The design is cut and exported during this stage for code and development and writing of the HTML and CSS code for the basic design begins. Interactive elements such as animated graphical sliders and jQuery come later: for now, this phase completes the main screen visualizations, and main code is validated (also using WC3 [2] markup validation service) before moving on and completing the theme to be used within the content management system.

4.1.3 Development Phase

Development involves the bulk of the website programming work, as well as loading content for CSP Forum website onto the chosen content management system –*Expression Engine* This stage follows a strategic development approach, and try's to reduce future test errors, by constantly testing as we develop.

- **Build development framework.** Completing this early ensured that the server can handle the installation and set-up smoothly.
- **Code templates for each page type.** The CSP Forum website has several pages types (e.g. home, general content, blog post, form) and similar page development is duplicated through the core templates created.

- **Develop and test special features and interactivity.** At this stage extra interactive elements for example an interactive slider on the homepage and banner adverts for events are developed and tested.
- **Content Writing and upload.** Essential time is allocated for loading all of the content typography, link and proofreading at this stage.
- **Final Test and verification.** Each page of the CSP Eu Forum website is tested for any visual or functionality errors. Cross browser analysis and testing is also completed at this stage (the foundations of the CSP Forum website will be developed and designed for current web browsers – Firefox version 18.0, Safari 6.0, Chrome version 23.0.1271.101 and Internet Explorer 9 &10).
- **Transfer to live server** – transferring from test site to live site. Final review of the live website is completed at this stage.
- **Final support Documentation** Final support documentation including a web style guide and *ExpressionEngine* support details for content writers is created during this stage.

4.2 Key Design principles used for CSP Forum website

To create an effective website the following design principles were considered for creation of the CSP Forum web portal.

1. Identification of the main purpose and goals of the website.
2. Once identified, the nature and content of the website will be based upon its purpose.
3. The purpose will determine the level of complexity of the website.
4. The design and layout of the site (site navigation, page layout, graphic content etc) should also take into account the purpose of the site.
5. Target audience should be taken into consideration and the design of the website should consider this.
6. Having a well designed web site, limits a boring, overwhelming, cluttered or distracting feeling for visitors.
7. It is important for the website to download quickly over the internet, especially key pages like 'Home' page.
8. Having a well designed web site, should provide an easy-to-use navigation system.
9. A good website, changes over time, adding new functionality and content as required and available.

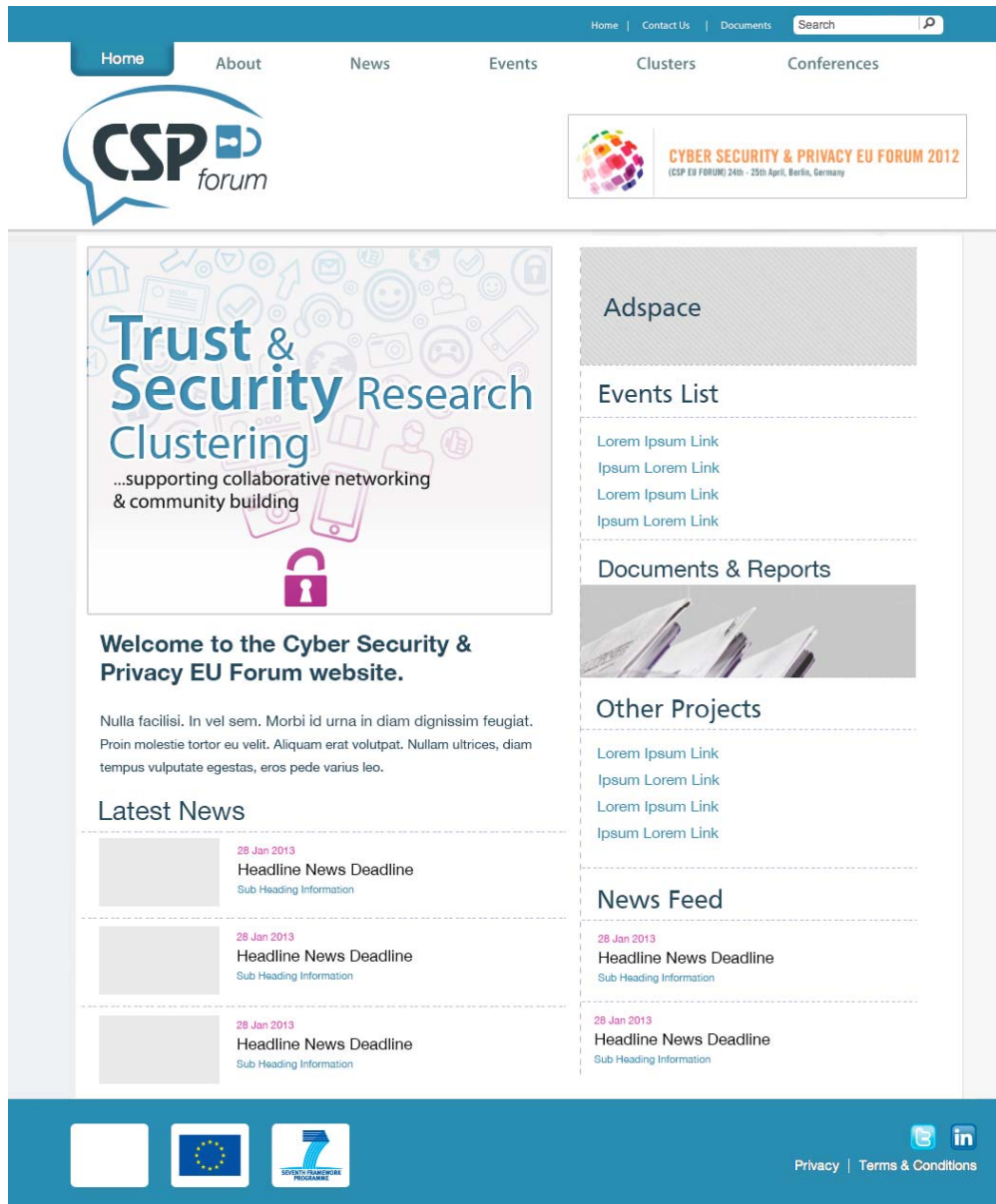


Figure 4. First design drafts of CSP Forum website

4.3 Optimizing the visitors experience

The following main guidelines will be taken into account during the development of CSP Forum website.

- Visitors should not be required to wait for more than a few seconds for a page to load.
- Visitors should be capable of printing information easily.
- Unsolicited windows should not be pushed towards the visitor.
- Ensure the web site is always up to date.
- Ensure the site has an archive of past content, which is available to the end user.

4.4 Navigation of the CSP Forum website

CSP Forum main website, has a defined navigational main menu on the Home page that will serve as a high level point of information to guide users towards their preferred point of interest for their desired information. Figure 5 provides a visual representation of how this navigational menu appears on the main Home page of the CSP Forum web portal.

To enhance the user experience and to increase easy access to further navigation, sidebar navigation elements were also planned (see Figure 6 and 7), as well are important features for the footer e.g. constant access to social media links and quick access to Privacy and Terms and Conditions section.



Figure 5 CSP Forum web portal main horizontal navigation menu



Figure 6 CSP Forum web key sidebar navigation on homepage



Figure 7 CSP Forum footer navigation

The website will also comply with the New EU cookie law (e-Privacy Directive) where, Regulation 6 states that consent for the cookie type device should be obtained from the subscriber. The website will incorporate a cookie acceptance aspect into the website development phase, to accommodate this requirement.

The following subsection of 4.4 will provide a brief overview of the main core elements listed in the main menu.

4.4.1 Home

The Home page is the main Index page of the web portal. The main aim of the Home page is to convey the following updated information on a regular basis to the trust and security community.

1. Provide clear message of the function of CSP FORUM for clustering.
2. Provide easy access to relevant reports coming from the security ICT space.
3. Highlight in an informative way news items coming from research
4. Include a dynamic changing rss feed – that will disseminate the research projects news.
5. Look to include a webinar, video aspect in the Home page that can be utilised to advertise research project results.
6. Include a dedicated document and reports section, where up to date information from the security ICT domain can be accessed.
7. Have dedicated news items section – constantly being updated, promoting other projects events, workshops, results, reports etc.
8. Include relevant social media dissemination channels on the home page to be utilised and accessed by viewers.

4.4.2 About Us

‘About Us’ section details the following information

1. Details of the SECCORD project that funds the CSP FORUM
2. Details of the SECCORD project consortium partners and leading WP leads
3. Main contact details of the SECCORD project coordinator.

4.4.3 News

A dedicated News/Events section has been included in the CSP Forum web portal. It is an essential role of a coordination and support action to provide access to updates on related happenings and developments coming from the trust and security research domain, so it is given a prominent position here and latest headlines are presented on the homepage. Also information and news bullets coming from external security focused initiatives and member state initiatives will also be included and featured in this News section as deemed suitable.

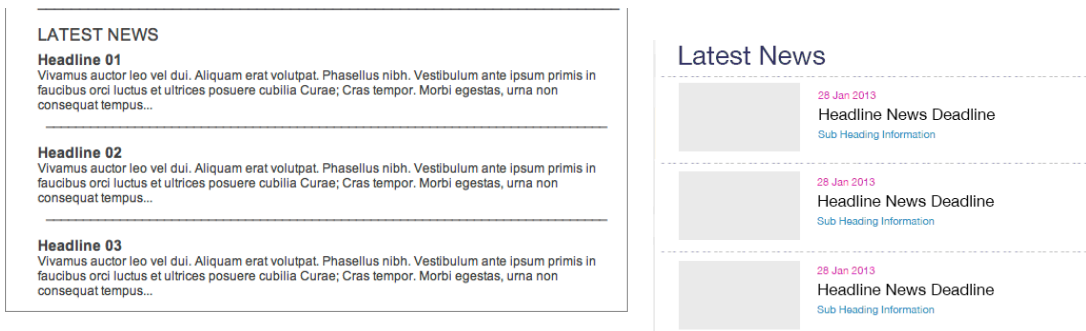


Figure 8a & 8b: Latest News feed of top news stories feeds into other segments of the website e.g. homepage

4.4.4 Events

For the clustering activities, events are a main part of the core work, providing opportunities for research projects and experts in the area to come together to create synergies, network and collaborate together to maximise their impact.

Events that will be displayed and advertised on the main CSP Forum website will constitute the following

1. CSP FOURM clustering events – funded and organised via the SECCORD project
2. CSP EU FORUM conference – annual event funded and organised via the SECCORD project and the consortium partners.
3. Active research projects – planned workshops, summer schools, dissemination events.
4. External initiatives in the Security ICT domain events and member state events.
5. European commission and specifically Unit H4, public consultations, workshops or events.

4.4.5 Clusters

A dedicated section of the CSP Forum web portal will be assigned for the CSP Forum Trust and Security clustering activities. This section will be dedicated to conveying the active working groups of the CSP FORUM clustering community. It will highlight ways for interested participants to become involved, main contact details, upcoming active sessions etc.

It will state the benefits of clustering and participation to such an events and activities.

4.4.6 Conferences

The CSP FORUM is committed to having an annual CSP EU FORUM conference on a yearly basis until 2015. The CSP EU Forum brings together Cyber Security and Privacy experts in academia, industry and government as well as practitioners, standards developers and policy makers, in order to engage in a discussion about common goals and explore important research directions in the field. The CSP EU Forum also serves as a venue for learning about state-of-the-art in security and privacy research, giving delegates the opportunity to network with experts in the field.

This will have a prominent place on the main HOME page to advertise it on a regular basis.

4.4.7 Documents

This section will be dedicated to making available relevant documents of interest to the wider security ICT space. A sample of such documents would include the following

- SECCORD public deliverables
- CSP FORUM event reports and cluster reports.
- External initiative reports and documents – eg ENISA reports
- Member state security related documents and reports.
- Research projects reports and important strategic and roadmap related documents.

4.4.8 Contact Us

Here a main ‘contact us’ plug-in will be utilised for the CSP FORUM website –this will provide interested parties with a direct enquiry channel to the SECCORD project coordinator.

4.4.9 CSP Forum RSS Feed

Other aspects such as privacy and terms and conditions relating to the website will also be included and listed on the main HOME page of the website.

A dedicated RSS feed will be set up on the CSP Forum website to allow available information from other sites relating to CSP Forum cluster, FIA events, T&S research project feeds. Here we will build upon the yahoo pipes RSS feed that was utilised in EFFECTS+, working to maximise its potential for disseminating dynamic posts and news items.

5 CSP Forum Website Administration and maintenance

CSP Forum web portal uses the backend content management tool *ExpressionEngine* to support the main requirements of the website, and as an administration tool.

Expression Engine version 2.3.0 [1] from Ellislab is the CMS used for this project. Thousands of web sites are powered using ExpressionEngine every day, it is an extremely flexible framework and works very well for websites with lots of content updates and creation. Furthermore, while it simplifies the process of managing your web site it also gives designers complete creative control.

Expression Engine provides excellent support and has a very large active community. It also supplies a number of third party add-ons which extends the functionality of the CMS.

5.1 4.1 System Requirements for Expression Engine

5.1.1 Server Requirements

- PHP version 5.1.6 or newer
- MySQL version 4.1 or newer
- 32M memory allocated to PHP
- Your hosting account must have the following minimum MySQL grant privileges for database tables:
 - SELECT
 - INSERT
 - UPDATE
 - DELETE
 - CREATE
 - INDEX
 - ALTER
 - DROP
- 10 MB of free space on your server for the ExpressionEngine software and modules.
- 2 MB of Database space. Note: The database will increase in size as you add new content.
- The GD (or GD 2) library compiled into PHP.

5.1.2 Browser Requirements

The Expression Engine Control Panel is tested extensively with the final-release versions of the web browsers listed here. Please note that these are the minimum browser requirements necessary to use the Control Panel. These requirements do not necessarily apply to an Expression Engine-powered website's front-end pages.

- Internet Explorer 8 and above
- Firefox 13
- Safari 5.1
- Chrome 19
- Opera 11.64

5.2 Overview of the CMS Structure

Here is a general overview of the CMS structure:

5.2.1 The Control Panel

The control panel is used to publish and edit content and to manage and administrate the website.

5.2.2 Channels

A ‘channel’ is where your information is stored. It is often described as a ‘container of items’ and these items can be anything from a media archive to a graphic library or simply text. A number of different custom fields can be used here.

As the official documentation states: “Because ExpressionEngine makes no assumptions about the placement or format of a channels content, you can present the content of your channels on your pages in thousands of ways, structured and organized in a way that makes the most sense for your content.”

5.2.3 Template

A template is similar to a webpage and could be considered the skin of your website. A template file can look similar to a HTML file however Expression Engine tags are used throughout to generate dynamic content.

5.2.4 Template Groups

A template group is used to group your site wide templates such as information in the header, navigation or footer for example. They can often be used to define the URL structure on your website also.

6 CSP Forum website engineering

This engineering section will provide details on search engine optimization, and recommended SEO actions to be considered for CSP Forum. This section also provides details on google analytics and how these have been setup initially to be used within CSP Forum.

6.1 Search Engine Optimization (SEO)

Search Engine Optimization (SEO) is the process of organising content across a website to increase its potential relevance to specific keywords on search engines. It also means ensuring that there are a large number of correctly titled external links to the site. The aim is to achieve a higher organic search listing and thus increase the volume of traffic to the site. In this regard, a number of SEO actions have been identified for the CSP FORUM web portal:

- Encourage relevant sites to add links to the CSP FORUM site
- Submit sitemap to Google
- Submit site to relevant directories
- Ensure a clear hierarchy and text links on the CSP FORUM site
- Clearly describe content, useful, information-rich – primarily for users, not for search engines.
- Keep links on each page to a reasonable number

5.3 Website Analytics

Various different available web analytics will be looked into to see which might be the best option to adopt to suit the requirements of the project. The use of a web analytics tool will help the project attempt to understand the actual web usage and to progress towards optimizing the web sites usage.

Web analytics will help the CSP FORUM measure the results or impact of their website, providing an overall view of the effectiveness of the website. Within your Google analytics[3] administration gui, there exists a main Dashboard containing core elements such as Intelligence, Visitors, Traffic Sources, Content, Goals, Custom Reporting. This analysis in turn will feed into the phased development stages, working to maximise the impact of the website and in the long run benefit the end user.

Where Google analytics are used the privacy policy active on the home page, will be updated to declare such an interaction.

More detail on the analytics tool to be utilised will be documented in the website operation deliverable D4.2 highlighting the various aspects such as map overlaying, traffic sources overview, content overview and custom report, to mention but some.

7 Conclusion

The CSP FORUM web portal for the SECCORD project, has built upon its previous website experience in EFFECTS+, to identify more suitable and effective requirements and design functionality and features for the CSP FORUM web portal. The needs of the clustering activities are constantly changing, but a clear feature that is required is a one stop shop for dissemination purposes of all the state of the art work and research outputs and initiatives ongoing in the security ICT space.

The requirements gathering phase for the CSP FORUM has been completed and now the development phase has started. THE CSP FORUM web portal will take over the clustering activities following a seamless handover from EFFECTS+ (once EFFECTS+ project finishes end Feb 2013). Once this handover is complete the CSP FORUM site, funded by the SECCORD project, will continue to be updated and developed further on a regular basis to meet the needs of the community.

The end aim is to have a user friendly, easily accessible, informative and beneficial web portal for the trust and security research domain.

References

- [1] <http://ellislab.com/expressionengine>
- [2] <http://www.w3.org>
- [4] <http://www.google.com/analytics/>