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LIST OF ABBREVATIONS

Abbreviation	Description
ViSH	Virtual Science Hub
GBL	Game Based Learning
IBL	Inquiry Based Learning
WP1	User requirement workshop
WP3	Scientific Infrastructures
WP6	Usability Assessment and Recommendation
WP	Work package
HTML5	Hypertext Mark-up Language version 5

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Executive Summary

The ViSH user manual for teachers aims to provide them with a comprehensive guide on the main functionalities of the platform and its services, enabling them to easily embark on their own activities and make the most out of the content provided by the einfrastructures. This user manual is also an important part of the training material developed in the course of this project. It shall guide users, mainly teachers, to familiarise with the ViSH and to exploit its potential for advanced science teaching.

The document starts with an explanation of ViSH's scope and the pedagogical concepts that lead to the idea of its development.

The advantages of the tool compared to other repositories are clearly identified while a full list of all technical requirements that users need to take into account in order to utilise the platform's functionalities to the maximum are also explained.

The document is then focusing on describing the use of ViSH, starting with the distinction between registered and non-registered users and the actions each group can implement.

We are then moving to a detailed tour of the whole portal starting with the main page and breaking it into various areas.

Extensive mention is given to the creation and use of virtual excursions (to be explained later on) which form one of the key functionalities of ViSH.

Introduction

1.1 Scope

The purpose of this document is to provide readers, mainly teachers, with information and instructions on how to operate and make the most out of the use of ViSH (Virtual Science hub). Readers will not only be provided with the pedagogical background and principles that govern ViSH but they will also get a step-by-step guide on all functionalities that the tool has to offer.

The document aims to serve as an introduction to newcomers and as a reference guide to more experienced users who wish to have a collective document to which they can turn to for inspiration and advice.

1.2 Pedagogical approach

From a pedagogical point of view the implementation of ViSH is particularly challenging since it aims to design and propose an effective way for the integration of e-Infrastructure resources and activities in the normal school curriculum.

Apart from its integration into regular school practice, the ViSH sets also an ideal framework for connecting formal and informal education, which becomes increasingly important in education, considering the modern pedagogical approach of individual learning. The aim of ViSH is to provide materials in form of online excursions and laboratories that are also available to students and teachers outside of the school environment to foster individual approaches and needs. By giving students the chance to access resources to real life research issues and problems also outside school, the capability to cope with related future problems is fostered and we are moving away from merely reproducing what was learned from books. ViSH aims to provide a variety of high quality content that is necessary to keep attention and excitement of learners to a high level.

1.3 Definitions

A list of definitions of the basic terms that have been used throughout both ViSH and this user manual can be viewed below:

Virtual excursion: "Virtual Excursion", is the online analogue to an on-site visit, during which the students discover science in Europe's top scientific centres. Several media such as flashcards, video-conference, virtual experiments and all sorts of resources can be combined into one excursion, allowing teachers and their students to experience science with real-world examples.

Resource: In the case of ViSH a **resource** represents a small learning unit, usually in digital form, that can be used for learning and teaching. A resource can be a lesson plan, image, sound, video, PowerPoint presentation, word file etc. that is made available under open licenses and can be used freely.

Flashcard: A **flashcard** is an alternative way to present a virtual excursion. Instead of presenting the content of the virtual excursion in a sequence of content elements, a flashcard offers a single interface to combine text with images in a way that can be easily used in the classroom.

1.4 Didactics and Activities on the ViSH

Following an open approach the ViSH is supporting a range of pedagogical models that can be implemented according to the teachers' preferences and needs defined by the school curriculum. It should be stressed that it is the teachers who have the control over the learning activity and they can design them according to their preferences. The main pedagogical models supported by the ViSH are presented below and exemplified by a possible activity on the ViSH:

Problem-based learning (PBL): In PBL students learn through facilitated problem solving. Problem-based learning concentrates on a complex problem that does not have a single correct answer. Students work in collaborative groups to identify what they need to learn in order to solve a problem. They engage in self-directed learning. In ViSH teachers can create challenging virtual excursions for their students including quizzes that students have to solve on their own. On their way to solve the complex problem, different resources can be offered during the virtual excursion.

Project-based learning (PBL): Project-based learning is an instructional method that provides students with complex tasks based on challenging questions or problems that involve the students' problem solving, decision making, investigative skills, and reflection that includes teacher facilitation, but not direction. PBL is focused on questions that drive students to encounter the central concepts and principles of a subject hands-on. Students form their own investigation of a guiding question, allowing students to develop valuable research skills as students engage in design, problem solving, decision making, and investigative activities. Through Project-based learning, students learn from these experiences and take them into account and apply them to the world outside their classroom. With the use of ViSH, teachers have the possibility to provide students with enough stimulus and guidance on the topic of their choice, encouraging them to continue their research within the tool and the eventual completion of their projects.

Inquiry based learning: Inquiry-based instruction is a student-centered and teacherguided instructional approach that engages students in investigating real world questions that they choose within a broad thematic framework. Inquiry-Based instruction complements traditional instruction by providing a vehicle for extending and applying the learning of students in a way that connects with their interests within a broader thematic framework. Students acquire and analyze information, develop and support propositions and provide solutions that demonstrate their thinking and make their learning visible.

Research shows that the amount of student learning that occurs in a classroom is directly proportional to the quality and quantity of student involvement in the educational program (Cooper & Prescott 1989).

At the ViSH, teachers may provide their students with a series of virtual excursions where they trigger students' curiosity by giving them access to real-word research data and ask them to explore it. Students can combine these excursion with the live interaction with scientist where they can pose their question and freely exchange.

Experiments and simulations: in science teaching these are typical elements of class activities, however they sometimes require expensive equipment. In the ViSH experiments can be made online with access to specific infrastructures such as the microscopes.

Group work and individual method: in the ViSH it is up to the teacher to define the learning context. Activities performed via virtual excursions can be either offered for groups of students and can be performed in class or they can be offered as individual exercise for students to perform on their own, at home or in school.

2 About ViSH

2.1 Using ViSH – advantages

The driving force behind ViSH is the wish to offer teachers a social and collaborative platform allowing them to create, manage and use pedagogical content using current web technologies based primarily on HTML5. The use of this latest technology contributed to the achievement of certain standards and advantages.

The first advantage is the possibility of collaborating among users in several ways. As a social network ViSH offers common features related to them like sending private messages, commenting in other user's timeline or sharing learning objects with the community (e.g. images, videos, presentations, etc.). In addition, ViSH integrates MashMeTV to allow real-time collaboration via videoconference. In this way, ViSH users can collaborate in a synchronous way while they are watching, for example, a virtual excursion.

The second major advantage is the easy accessibility derived from its technological foundation. Bearing in mind that the whole platform is based on web technologies, it is possible to access through desktop computers and mobile devices (i.e. smartphones and tablets) without the need of any special software installation.

In the third place, ViSH integrates two powerful tools named ViSH Editor (which allows both editing and viewing presentations) and ViSH Viewer (that allows viewing presentations). Having both tools available in ViSH is a clear advantage in terms of user experience. In addition, the resources used to create virtual excursions can be chosen not only from ViSH repositories, but also from third-party web platforms, like YouTube or Flickr.

2.2 Technical requirements

Since ViSH has been developed according to the latest web standards, it will be compatible and supported by any modern browser. The currently supported browsers are:

- Mozilla Firefox
- Google Chrome
- Internet Explorer (version 8 or later)
- Safari

ViSH follows the responsive design paradigm in order to support a huge variety of devices. In addition, a specific interface for mobile users is available. This interface provides a better user experience for mobile users, including not only a set of views optimized for the device, but also content (e.g. recommendations) which can specifically be consumed on mobile devices. As a result, ViSH supports mobile phones (i.e. Android and iPhone), tablets (i.e. Android and iPad) and desktop computers.

On the other hand, the ViSH Editor and the Viewer have been developed according to the HTML5 standard, and for that reason they will be supported by any browser that fully supports HTML5. The creation of excursions (ViSH Editor) is only available through desktop computers and tablets because of the limited screen size of mobile devices.

VISH Viewer is also responsive, so, it supports a huge variety of devices. It is currently supported on iPhone and Android mobile phones, Android tablets and iPads.

Last but not least, it is important to mention that the ViSH Editor allows the integration of third-party learning objects that are not based on HTML5 standards (e.g. flash objects, java applets, etc.). Therefore, some additional software might be needed in the cases where these non-HTML5 based objects are used to create virtual excursions. However, the flash plugin or the java runtime environment is usually installed in every desktop computer. In the mobile case, this kind of special objects will be skipped to avoid problems in the Viewer.

2.3 ViSH

2.3.1 Description

ViSH includes a variety of functionalities that aim to provide users with the right tools and enough flexibility, allowing them to make use of resources and put together quality excursions that they can use in their classrooms and enhance their teaching. A few of these functionalities that we are going to look into more detail are listed below:

- Social network
- Resources
- Excursions
- Videoconference

The ViSH is available for registered and non-registered users. Non-registered users can view both excursions and resources. Registered user can create excursions, upload resources and access collaborative features such as MashMeTv and social network.

2.3.2 Non-registered user

ViSH can be used in two different ways, depending on users' rights and identification within the system. A non-registered user is not excluded from the system but he can still use it while searching, viewing and using the available excursions and resources. Students are generally non-registered users, who can view the specific virtual excursions and even fill in quizzes without being registered.

2.3.3 User registration/login

If you are interested in using ViSH not only as a resource repository but also as a tool for creating your own resources and excursions, you first need to register and identify yourself within the system. For this reason and as soon as you reach the appointed URL

(<u>http://vishub.org/home</u>) you are asked to login using the username and password you have chosen during your registration.



Figure 1. ViSH Sign in

New users are invited to register by clicking on the link to be found just under the "Sign in" section of the page.

	VoOC Virtual Science	Hub	evita.tasiopoulou@eun.org Forgot you password? Register		Sign m
ලට feedbac	Register	Create your accour VISH is a social sci Name Email	nt with VISH ence platform evita.tasiopoulou@eun.org		
		Password Confirm password Areas of interest	Add tags Nanotechnology Biotechnology Life-Sciences Grid-Computing By clicking Accept, you agree to Conditions.	o our Terms and	
	Virtual Science Hub	© 2012 condition	s help languag	e 🔺	

Figure 2. ViSH - User registration

Once you complete your registration you are presented with a confirmation message on the screen while you also receive an email with your details which you can keep for future reference.

You are now ready to explore ViSH!

2.3.4 Main landing page



Figure 3. ViSH - Main landing page - top part

The main landing page of ViSH represents the heart and centre of all activity. From this page, users can obtain a quick overview of the latest activities of their network, access the latest resources and created excursions, update their timeline, search for resources or excursion and launch their own activities. All parts of the landing page are organised in a similar way, using tabs in order to provide different views and organise information. More specifically we have:

2.3.4.1 Excursions

Four (4) different tabs allow users to access and view the excursions in a variety of ways, depending on their individual needs.

In all the tabs, two options are always available: "Add" and "View all" buttons.

"Add", launches the creative process of putting a new excursion together. This process will be explained in every detail in Section 2.3.5.

The **"View all"** button presents the user with a full list of the excursions related to every tab.

2.3.4.1.1 "Network" tab



Figure 4. Network excursions

"Network" tab presents users with the latest four (4) excursions that have been selected by users within their network. Excursions are presented in the form of thumbnails accompanied by short information on:

- Title of the excursion.
- Name of the composer/user who has created this excursion.
- Number of times this excursion has been viewed by other users.
- Number of times this excursion has been marked by a user as a favourite (star).

2.3.4.1.2 "My" tab



Figure 5. My excursions

"My" tab, lists the excursions created by a specific user. In this tab, users have a quick overview of the excursions they have put together so far while they can also check very quickly how many time their excursions have been viewed and liked by other ViSH users.

2.3.4.1.3 "forMe" tab

The **"forMe"** tab presents a set of recommended excursions that are selected taking into account the profile, interests and past activity of the user and other ViSH users' activities with similar interests. By clicking on the title of the excursion, users can launch it directly. Adding a new excursion and viewing more excursions recommended is also possible by clicking on the appropriate buttons.



Figure 6 For Me (recommended) excursions

2.3.4.1.4 "*" tab



Figure 7. Starred excursions

In this tab, users have a quick overview of all the excursions they have identified as interesting and favourite while navigating through ViSH. As one can see at the bottom of their information, all these excursions have been awarded with a star (*).

2.3.4.1.5 Viewing excursions

By clicking on an excursion title or avatar, user can access and navigate through it.



Figure 8 Viewing an excursion

The user can use the arrows at the bottom and go back and forth to the different pages. Same result can also be achieved by using the arrow buttons of the keyboard. Below the excursion we can find three buttons. The first one is for exporting the excursion as an iframe which then allows us to embed it in an external site. The "Share" button is for sharing this excursion in Facebook, Twitter or Google Plus and allowing more people to see it, while the star button is for marking this excursion as favourite and having it appear in your homepage. In the right bottom corner we can find information about the number of views and the number of times that this excursion has been made favourite and a button to start a videoconference via web which allows users to share and talk about the excursion with some of their following contacts.

loom name		
enrique-79139	\supset	
nvite your contacts		
💮 Barbara Kie	💽 Evita Tasiop	🧖 Néstor Torib
668 Kitti Varga	Raquel Garc	🗿 Sandra Agui
🔬 Jose Viñas	Agnes Szeb	Teresa
() Aldo	🖂 Juanjo Molin	Sue Murkett
Rafael Garcí	crispin	

Figure 9 Start videoconference

When the user clicks on the videoconference button a light box like the one depicted in Figure 9 will appear where he/she will have to select among his/her contacts the ones to invite to the videoconference. After that, user will have to click on "Launch", starting the videoconference.

0	Earthqu	akeDiscoveryenrique-79139	Enrique Back to MashMe.TV
Welcome Enrique			
Room Chat Enrique joined the room	http://www.vishub.org/excursions/76.full	Cobrovae	Back
9	rrs are holding ithing snap. You and pr. h, and	Image: State Sta	Most earthqua oceanic and cc The earths cu. is made up of The plates und oceanic plates plates. The plates are a deepr part underneath the bumpin dro a each offer or your (mernelis)
Send a message	Ship Appart	Reverse Strike-slip C C C C C C C C C C C C C	occur where the other or sliding

Figure 10 Excursion in a videoconference

2.3.4.2 Resources

2.3.4.2.1 Type of resources

ViSH supports a set of resources that can be uploaded to the platform and be made available for all the users. More specifically, we have:

- Images
- Objects (flash objects)
- Videos
- Live objects: webcams or microscopes provided by the e-Infrastructures

These resources can be accessed following the same tab approach used for the virtual excursions, but now this zone is called the "Resources" box.

2.3.4.2.2 "Network" tab

"Network" tab shows a selection of resources that members of a user's network have contributed to the ViSH so far. Resources are presented in the form of thumbnails accompanied by short information on:

- Title of the resource.
- Name of the composer/user that has contributed or uploaded this resource.
- Number of times this resource has been used by other users.
- Number of times this resource has been marked by a user as a favourite (star).

ilter			🔶 upload
	500px-Solar_eclipse by crispin 3 views / 0 ★		solar eclipse.png by crispin 4 views / 0 ★
9	oneon0.2.swf by crispin 6 views / 0 ★	R	Doñana Sound Gallery by Juanjo Molinero 1 ★
R	Doñana Video Gallery by Juanjo Molinero	R	Doñana Image Gallery by Juanjo Molinero

Figure 11. Network resources

2.3.4.2.3 "My" tab

"My" tab offers a quick entry point to the resources that the user has contributed to the ViSH.

network my forMe ★	resources
filter	🔶 upload
mars-low-ridge_107 by Evita Tasiopoulou 1 views / 0 ★	
iew all	

Figure 12 My resources

2.3.4.2.4 "ForMe" tab

"ForMe" tab takes into account user's interests, as they have been expressed during registration and throughout the ViSH activity, and recommends a number of resources that might be of interest for the specific user.



Figure 13 ForMe resources

2.3.4.2.5 "*" tab

The "*" shows those resources that the user has previously marked as favourites.

network my forMe	* resources
filter	🔶 upload
Doñana Sound Gallery by Juanjo Molinero 5 views / 1 ★	GridCafe : The place by Barbara Kieslinger 17 views / 2 ★
by Barbara Kieslinger	The strange new wo by Sue Murkett 20 views / 1 ★

Figure 14 Starred resources

2.3.4.2.6 "Upload" function

If a user or e-infrastructure provider wants to add a resource to ViSH, the following steps need to be followed after having pressed the "Upload" button:

- 1. Click on documents, links or embed tab.
- 2. If you want to upload a document, click on browse to choose a file from your computer. If your resource is a link or embed code, you can paste it into the text box.
- 3. Type a title and description.

Browse_	
lame for this resource	Title
dd a description here	Description
Add tags	Topics
(Language independent)	Language
4 - 20	Age



- 4. Add related tags to your resource in order to specify the topics related to it. Your areas of interest have been assigned by default. However, you can delete them or add new topics. This information is crucial for recommendation purposes.
- 5. Choose a required language, if necessary.
- 6. Select an age range. This information will be used for recommendation purposes.
- 7. If you want to embed a live streaming video, click on Live option in the embed tab.
- 8. Finally, click on save button to upload your resource.

2.3.4.3 Contacts

"Contacts" is mainly related to the people that a user is somehow connected with. There are two (2) different levels of involvement.

2.3.4.3.1 "Following"

"Following" tab lists the ViSH users that you have decided to closely follow their activities and actions within ViSH.



Figure 16 Following contacts

2.3.4.3.2 "Followers"

"Followers" tab, lists the ViSH users that have opted for following your activities and actions within ViSH. These users usually share the same or similar interests with you and are interested in keeping up to date with your activities.



Figure 17 Followers

A mouse over people's thumbnail reveals their name. Clicking on it takes the user to a short profile (Figure 18), providing him/her with some basic information on the person in question.

A more detailed profile can be accessed by clicking on the "See details" button which can be found at the bottom right of the same window.



2.3.4.3.3 "Find" function

By pressing the "Find" button, users in the platform can be searched by name. The "Find" tool will be explained in section 2.3.8 Search functionality in more details.

2.3.4.4 Timeline

2.3.4.4.1 "Network"

In this tab, you can obtain an overview of the latest activities that yourself and the people you are following, have recently performed within ViSH. All users' names are clickable which allows you to easily navigate through other users' profiles and discover other interesting people, excursions and resources.



Figure 19 Network timeline

2.3.4.4.2 "My" timeline



Figure 20 My timeline

"My" tab collects and displays all the activities and actions that users have performed since they started working on ViSH. In this way, users are provided with a summary of their activities to which they can easily revert to and use as a reference.

2.3.4.4.3 Attach

Like all social networks, ViSH also provides users with the possibility to post some text/status on their timeline. On top of this, users are also able to attach a file, picture or document to go with their status update. To do so, users need to click on the appropriate

icon knowse and find the file they wish to attach to their network and finally fill in the description field.

Title		
Recommendations in ViSH.gdoc		
Add a description here		
Seleccionar archivo Recommendations in	ViSH.gdoc	

Figure 21 Attachment

2.3.4.4.4 Post

As soon as the user has completed the composition of his status and attaching the file of his choice (if needed), he is then ready to post his activity on his network. To do so, users just

need to click on the Post button

2.3.5 Private messages

As in many social networks, ViSH allow private communication among users by sending private messages. To do so, the user has to press the envelope icon \cong in the upper right corner that is placed between the home \cong and the network icon $\stackrel{\text{res}}{\rightleftharpoons}$.

Following a common interface for this kind of tools, four (4) options are available:

- **New message**: to create and send new private messages.
- **Inbox**: to manage the new messages received. A number between brackets indicated the number of unread messages.
- Sent box: shows the private messages previously sent.
- **Trash**: shows the erased messages.

VoSC	Virtual S	Science Hub	🔤 vish 🛑 💟	ب پر م
	New me	ssage		
New message	Recipient: juan que	mada		
Sentbox	Subject	First release		
Trash	Body	B Z ∐ wie x x° nT-н- ≔ ■ % ⇔ HiJuan,		
			Send message	

Figure 22 Private messages creation

2.3.6 Excursions

In the excursions section users can find a "+ add" button that allows them to access the ViSH Editor tool so as to create a new excursion.

	welcome	VoSCI
12	Title	eartor
	Excursion title	beginners tutorial ③
	Description	use this icon eventime it
	Describe the excursion in a few words	
	Nanotechnology × GridComputing × Add tags	
	Thumbnail	
		Continue
0		
0		

Figure 23 Welcome screen to ViSH Editor

The first screen that appears when creating an excursion is the "Welcome screen" where users have to choose a title, description, tags and a thumbnail for their excursion.

There is also a beginner's tutorial button that they can revert to every time they need help. This same button will be available in many places in the excursions' creator to offer help.

Once users have filled in the "welcome screen" they have to click on "continue". The "welcome screen" will disappear and the "main screen" will come into view.

In the main screen users can find three zones: a toolbar, a pages area and a thumbnails bar. All sections will be explained in more detail in the following subsections.



Figure 24 ViSH Editor's main screen

2.3.6.1 Toolbar

The toolbar has three zones. The first one is a drop down menu with options to save the excursion, preview it, convert it to flashcard and get help.

The second zone will only have one button and it will act on the whole the excursion. It is a button to change the theme or change the background.

And the last zone is to act on the selected area. This is a variable zone and it can contain buttons to edit the text, to zoom in/out the image or video or to create a web snapshot, depending on the type of object that the selected zone contains.

2.3.6.2 Pages area

The pages area takes up most of the available space. This area will show the excursion pages as the user completes them. The pages are composed of areas that allow them to add different kind of objects or resources, i.e. text, images, flash objects, web pages, HTML5 and flash videos, and live content (such as a microscope or a live webcam).

The user will be the one in charge of choosing the adequate resources to compose the excursion. These resources can be searched in the ViSH repository, in external services such as Flickr or YouTube or directly uploaded to the ViSH when creating an excursion.

At the time-being, nine ready-made templates are available to create excursions. Once an excursion has been created, the user can convert it to a flashcard (information graphic). In this way, an excursion can be converted to a type of picture that blends data with design.



Figure 25 ViSH templates

2.3.6.3 Thumbnails bar

At the bottom of the excursions creator tool we can find a thumbnails bar that will grow as we add new pages with the "+" button. In this bar we can also find a settings button that will display the excursion settings to modify them and a save button to store the excursion in ViSH. Finally we can find an eye button to show a preview of the excursion that the user will be able to see when finished.

2.3.6.4 MashMe TV



ViSH allows users to view an excursion through MashMe TV which offers a service of videoconference and collaboration tools like a chat.



Figure 26 Mashme tv

2.3.6.1 Flashcard

Excursions can easily be shown as Flashcards. At the top of the excursion page, in the menu section, they need to click on the little arrow and from the available options choose "Convert to" and the "Flashcard" as show in Figure 27.



Figure 27 Convert to Flashcard

User will have to choose a background for the flashcard and drag and drop the arrows with the numbers to the positions where the pupil will have to click to open the slides.



Figure 28 Flashcard creation

2.3.7 User Profile

By pressing in a user's avatar and clicking the "see details" button, the user profile screen is shown. This screen provides information about the activity of the user, like the excursions and resources he/she has created; his/her timeline, the followers/following contacts and the possibility of viewing his/her detailed profile.



Figure 29 User profile

It is important to stress though that there are some differences between viewing your own profile and viewing other users' profile. Figure 29 illustrates a user's profile; while Figure 30 depicts the screen a user sees when he/she is viewing another user's profile. As we can see, options to send a message to that user and to start/stop following him/her appear.



Figure 30 Viewing other user's profile

With regard to the detailed personal information, it is also important to say that trying to fill in the areas of interest will be very important to help the recommender engine working correctly, as the more ViSH knows about you, the more personalized will be the recommendations provided.

2.3.8 Search functionality

Bearing in mind the great variety of educational content (i.e. virtual excursions and resources) and users existing in ViSH, a search tool is needed to help users find easily whatever/whoever they are looking for.

Search function can be reached from various places and in various ways:

• Using the "filter" inputs related to the excursions, resources and contacts boxes

🚢 find

- Using the "find" button in the contacts box
- Using the generic "search bar" that is in the upper right corner of ViSH, below the user name and home/messages/network buttons



Therefore, a user can search a specific item/user in the methods described above, or he/she just have to press enter while he/she is the input bars in order to go to the general search tool illustrated by Figure 31.



Figure 31 Search content and people

The search engine is really powerful. It can either look through all types of items or just search into a specific type (i.e. excursions, users, resources and activities).

In addition, there is a panel called "advanced options" to allow users filter all the results by creation date, and the results related to excursion, resources and activities also by their relevance or novelty and by their type.

3 Future releases

The ViSH team is currently working on plans for future releases which will include the following features:

- Cloning an excursion to reuse the generated content: This feature will allow users to use and existing excursion as a basis on which thay can create a brand new excursion.
- Adding survey features to the excursions: Users will be able to set up and run their own surveys.
- Group management: Possibility to control and manage groups of users.
- Using metadata standards for describing resources and excursions: Development of a metadata system that will allow users to categorise and find resources and excursions in a more systematic way.

4 Other support material

Apart from the ViSH user manual, the ViSH team has also put together a screencast explaining the main functionalities of the platform. The screencast is accompanied by audio which completes the tour in a lively and engaging for user way.

- The screencast can be accessed through ViSH: <u>http://vishub.org/links/42</u>
- GlobalPlaza: <u>http://stream.globalplaza.org/vish_screencast</u>
- YouTube: <u>http://www.youtube.com/watch?v=o2q9u1WF51U&feature=youtu.be</u>
- Dropbox: <u>http://dl.dropbox.com/u/102506750/ViSH_screencastHD.flv</u>

5 Conclusions

ViSH is a platform that connects users/teachers with a variety of e-infrastructures that have been imported into it in the form of resources and excursions. Teachers have the possibility to not only take advantage of this material but to also use in any way they find fit for their classes and curriculum. At the same time, ViSH offers various social functionalities allowing teachers to connect with other teachers with similar interests and also get in touch with scientists and experts that they can virtually bring into their classrooms. In parallel with the evolution of the ViSH, this users' guide will be updated in order to reflect all latest developments and functionalities that the platform will bring to the teachers. Moreover, a section including real examples of how teachers and their students have used ViSH within their classrooms will also be added. The aim of this section will be to inspire and provide teachers with practical ideas that they can transfer and adapt for their needs. As soon as platform reaches its final form, the users' guide will be updated, printed and made available to teachers in order to support their first steps into ViSH. A first suggestion for the design can be found in Annex I.

6 Annex

6.1 Front page



Figure 32 Users' manual - Front page

6.2 Internal page



Figure 33 Users' manual - Internal page