This deliverable provides an ethical review of the First Open Call experiments in the EXPERIMEDIA project. After the reiteration of the general ethical principles and guidelines and a summary of the six First Open Call experiments (Digital Schladming, MEDIAConnect, CONFetti, 3D Gymnastics, BLUE experiment and REENACT), a detailed ethical review of these experiments is given. In this review the focus will be on the ethical evaluation of the First Open Call experiments through the principles of the ‘Ethical oversight principles for EXPERIMEDIA’.
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<tr>
<td><strong>Full title</strong></td>
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<tr>
<td><strong>Grant agreement number</strong></td>
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<td><strong>Activity 5</strong></td>
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<td><strong>Workpackage 5.1</strong></td>
<td>Legal, ethical and regulatory framework</td>
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<td><strong>Deliverable lead organisation</strong></td>
<td>ICRI - KU Leuven</td>
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<tr>
<td><strong>Authors</strong></td>
<td>Prof. Peggy Valcke (ICRI-KU Leuven), Aleksandra Kuczerawy (ICRI-KU Leuven), Yung Shin (Marleen) Van Der Sype (ICRI-KU Leuven)</td>
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<td><strong>Reviewers</strong></td>
<td>Stephen C. Phillips (ITInnov)</td>
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1. Executive Summary

This deliverable, based on the considerations raised in the Ethics Advisory Board (EAB) meeting of 5 October 2012, aims to clarify ethical oversight for the EXPERIMEDIA (Experiments in live social and networked media experiences) project and more in particular for the First Open Call experiments:

- DigitalSchladming: Experimenting with new digital services for Schladming;
- MEDIAConnect: novel mobile interfaces for situated media and interactive video;
- CONFetti: Remote and collaborative training for acrobatic sports;
- 3D Acrobatic sports/3D Gymnastics;
- BLUE Personalized museum experiment;
- REENACT experiment.

These experiments will take place in one of the EXPERIMEDIA venues: the Schladming venue, the CAR venue (High Performance Center) or the Foundation of the Hellenic World venue (FHW). For each of these venues there are two experiments starting soon. DigitalSchladming and MEDIAConnect will take place at the Schladming venue, CONFetti and 3D Gymnastics at the CAR venue and BLUE and REENACT at the FHW venue.

The purpose of this deliverable is to examine whether or not the six First Open Call experiments are ethically acceptable. This will proceed as follows: after a short introduction in the second section, the experiments will be shortly explained (Section 3) and an overview of the Ethical Oversight principles will be provided (Section 4). Finally, the six First Open Call experiments will be evaluated in the light of the ethical principles stated in the fifth section, to end with a conclusion in the sixth section.
2. Introduction

To understand how to provide meaningful collective experiences to individuals and society, EXPERIMEDIA (Experiments in live social and networked media experiences) is in particular interested in human behavior and experience with Future Internet technologies. Therefore EXPERIMEDIA conducts research with human participants. Such participants in social and networked media research should have confidence in the experimenters. Good research shall therefore only be possible when there is mutual respect and confidence between experimenters and participants. Since the ethical aspects of research are essential for the sake of the experiments, some areas of human experience and behavior may be beyond the reach of experiment, observation or other forms of investigation.

To reconcile with the ethical requirements, as for every Seventh Framework research program, EXPERIMEDIA will implement ethical oversight measures for each experiment, to clarify the conditions under which social and networked media research is acceptable. These measures include aspects like informed consent, deception, debriefing, right to withdraw and confidentiality in accordance with personal data legislation. In its search for the utmost information, EXPERIMEDIA introduces experiments as part of open calls. The First Open Call was already established, but the second one is only planned for next year. These open calls aim to incorporate experiments into the project. In this way, it is not possible to analyze all of the ethical issues, of all of the experiments in advance. However, as a result of the Ethical Advisory Board meeting of 5 October 2012, it is possible to analyze a first part of the ethical issues, namely the ones concerning the First Open Call experiments. These ethical issues were discussed in the Ethics Advisory Board as a stage in the ethics management process that incorporates ethical review of experiments to be conducted using the facility as part of its management structure.

In the EAB meeting of 5 October 2012 it was agreed upon that this report would focus on a data protection point of view.

The EAB was asked to provide an ethical oversight for the EXPERIMEDIA project concerning the First Open Call experiments. After all, it is the intention of the Consortium to ensure that ethical principles and the general legal requirements for EXPERIMEDIA are duly taken into account in the design and selection of the different experiments. Therefore the EAB’s role is to help to achieve this result by guidance and oversight.

The Ethics Advisory Board is composed of five external independent members:

<table>
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<tr>
<th>Name</th>
<th>Affiliation</th>
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<tbody>
<tr>
<td>Mrs Marit Hansen</td>
<td>Independent Centre for Privacy Protection Schleswig-Holstein – ULD (Germany)</td>
</tr>
<tr>
<td>Dr Jeanne-Pia Mifsud Bonnici</td>
<td>University of Groningen (The Netherlands)</td>
</tr>
<tr>
<td>Mr Jean Louis Pierquin</td>
<td>Pôle MIPI (France)</td>
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</table>
As mentioned before, the Ethics Advisory Board and several EXPERIMEDIA delegates met in Leuven on 5 October 2012. In this meeting the First Open Call experiments were discussed from an ethical and legal point of view. Based on these discussions a draft version of deliverable D5.1.4 was prepared, which was subsequently sent to the members of the EAB for written feedback. One member of the EAB provided detailed comments which have been integrated in this deliverable. Some remarks require further analysis and will be substantiated in D5.1.5.
3. Ethical Oversight Principles for EXPERIMEDIA

3.1. Introduction

This deliverable concerns ‘task 5.1.2. Ethical oversight for Experiments’, which is one of the tasks from ‘WP 5.1. Legal, ethical and regulatory framework’. This task aims to give an ethical oversight for experiments. The outcome of this particular task is the application of the general EXPERIMEDIA requirements to the different experiments, ensuring they are ethically acceptable and legally compliant.

In this matter it must be stated that the notion of ‘ethics’ is to be interpreted broader than only data protection issues. Also other problems are affected by this notion – as will be clarified in the following paragraphs.

3.2. Ethical Guidelines for undertaking ICT research in FP7

For an ethical overview of the First Open Call experiments, the ‘Ethical Guidelines for undertaking ICT research in FP7’¹ (hereinafter ‘Ethical Guidelines’) must be taken into account.

As stated in these guidelines, recently there has been an increase in the importance of ethical issues related to ICT research and technological developments. The decision of the European Parliament and the Council concerning FP7 research programs states therefore that research activities supported by the 7th Framework Programme should respect several fundamental ethical principles, including those reflected in the Charter of Fundamental Rights of the European Union and the opinions of the European Group on Ethics in Science and New Technologies (EGE). As a result of these Guidelines, three considerations can be distinguished:

1) First, all researchers shall take a ‘responsible approach’. Since most principles of the Charter of Fundamental Rights of the European Union will be relevant for the approach adopted by ICT researchers, it is important that researchers are aware of these principles concerning dignity, freedom, equality, solidarity, citizens’ rights and justice.

2) Second, all researchers shall respect all ‘individuals’ privacy and autonomy’. Since the right to privacy and data protection is a fundamental right, it should be applicable to ICT research. Therefore, researchers shall be aware that volunteers have the right to remain anonymous; their research shall comply with the data protection legislation in the Member States where the research is carried out; and shall be aware that freely given informed consent will be required whenever research involves volunteers.

3) Finally, specific guidance is necessary in some sensitive research areas concerning eHealth and genetics, implants and wearable computing and Bio/Nano-electronics. However, none of these cases occur in in the EXPERIMEDIA project.

3.3. Ethical issues table

Another interesting FP7 standard contained in the Ethical Guidelines for FP7 projects is the Ethical Issues Table. This table addresses a number of topics that are generally considered problematic from the ethical perspective. For each topic, the table contains several questions that need to be answered by the researchers. Such exercise makes it easier to evaluate the potential ethical issues rising from the projects and address them properly. For EXPERIMEDIA the two most relevant topics included in the table are: informed consent and privacy.

<table>
<thead>
<tr>
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<tr>
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<tr>
<td>Does the proposal involve patients or persons not able to give consent?</td>
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<tr>
<td>Does the proposal involve adult healthy volunteers?</td>
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<tr>
<td>Does the proposal involve Human Genetic Material?</td>
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<td>Does the proposal involve Human biological Samples?</td>
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<tr>
<td>Does the proposal involve Human data collection?</td>
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**Research on Human embryo/foetus**

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<tbody>
<tr>
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<tr>
<td>Does the proposal involve Human Foetus Tissue/Cells?</td>
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<tr>
<td>Does the proposal involve Human Embryotic Stem Cells?</td>
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**Privacy**

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<tr>
<td>Does the proposal involve processing of genetic information or personal data (e.g. health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction?)</td>
<td>Yes</td>
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<tr>
<td>Does the proposal involve tracking the location or observation of people?</td>
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**Research on animals**

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<tr>
<td>Are those animals transgenic small laboratory animals?</td>
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<td>Are those animals transgenic farm animals?</td>
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<td>Are those animals cloned farm animals?</td>
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<tr>
<td>Are those animals nonhuman primates?</td>
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**Research Involving Developing Countries**

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<tr>
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<tr>
<td>Use of local resources (genetic, animal, plant etc.)</td>
<td>Yes</td>
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<tr>
<td>Benefit to local community (capacity building i.e. access to healthcare, education etc.)</td>
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**Dual Use**

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<tr>
<td>Research having the potential for terrorist abuse</td>
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3.4. Ethical Oversight Principles

In order to meet the above mentioned basic requirements for ICT research in the FP7 programme, the following ‘Ethical Oversight of Principles’ is applied to the EXPERIMEDIA project².

3.4.1. In general

EXPERIMEDIA considers the ethical implications and consequences for the participants in their research. Therefore, all experiments are considered from the standpoint of the participant. As a consequence all foreseeable threats to their well-being, health, values or dignity will be eliminated. Since EXPERIMEDIA involves participants from different multi-cultural and multi-ethnic societies, people from different ages, as well as from different gender and from different social background, these differences will be taken into account.

3.4.2. Informed consent

Before participants are asked to join an experiment, they will be informed of the research objectives and all other aspects of the research that might reasonably be expected to influence willingness to participate. Therefore, the participants’ decision will constitute an informed consent.

3.4.3. Deception

EXPERIMEDIA will never intentionally deceive, mislead or withhold information from participants over the purpose and general nature of investigation.

3.4.4. Debriefing

Since EXPERIMEDIA collects personal data about participants during experiments, EXPERIMEDIA shall, at the end of an experiment, provide participants with any information to complete their understanding of the nature of research. EXPERIMEDIA shall also discuss with the participants, their experience in order to monitor any unforeseen negative effects of misconceptions.

3.4.5. Withdrawal from the investigation

Participants have a right to withdraw from the research at any time, irrespective of whether or not payment or other inducement has been offered.

3.4.6. Observational research

Since EXPERIMEDIA is expected to include observational research, it will respect the privacy and well-being of the individuals studied.

² Extract from Annex 1. Large-scale Integrating Project, ICT Call 7, FP7-ICT-2011-7, EXPERIMEDIA, 28 July 2011, 68.
EXPERIMEDIA includes two public venues (Schladming and Foundation of the Hellenic World). These public venues include individuals being observed without their given consent. Therefore such observations can only be made in situations where those observed would expect to be observed and possibly recorded by strangers.

### 3.4.7. Confidentiality and data protection legislation

The EXPERIMEDIA project must be developed and operated in full consideration of data protection principles. Therefore it must satisfy data protection requirements in accordance with the relevant European Union Directives and national implementations thereof.

EXPERIMEDIA’s three physical testbeds and online communities have each distinct privacy concerns in different legal jurisdictions. Nevertheless, all personal data will be captured and processed according to the applicable data protection provisions, such as Directive 95/46/EC on the protection of individuals with regard to the processing of personal data and on the free movement of such data and Directive 2002/58 on Privacy and Electronic Communications. Besides, the consortium and testbed providers must be fully aware of national data protection authorities and the requirements of national data protection legislation:

- **Austrian Data Protection Commission**: Federal Act concerning the Protection of Personal Data (Datenschutzgesetz 2000)³;
- **Spanish Data Protection Authority**: Organic law 15/99 of 13 December 1999 on the Protection of Personal Data⁴;
- **Hellenic Data Protection Authority**: Law 2472/1997 on the Protection of Individuals with regard to the Processing of Personal Data – as amended by Laws 2819/2000 and 2915/2000⁵.

Besides, the ethical issues of privacy will also need careful consideration in accordance with the European Convention on Human Rights and the Charter of Fundamental Rights of the European Union to ensure that socially and ethically acceptable systems are developed from the dimension of human rights. Therefore, EXPERIMEDIA will apply the principle of proportionality through a three-part-test: first, there is a ‘suitability-test’, which defines whether the measure is reasonably likely to achieve its objectives; second, there is the ‘necessity-test’, which evaluates whether there are other less restrictive means capable of producing the same result, and last there is a ‘proportionality-(sensu stricto)-test’, which consists of a weighing of interests the consequences of which on fundamental rights are assessed against the importance of the objective pursued.

Furthermore, EXPERIMEDIA is aware of the privacy challenges and best practice associated with experiments using the facility:

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• Since some of the applications in the EXPERIMEDIA project involve billable, personalised services or incentivised service contributions, EXPERIMEDIA cannot just use fully anonymous data. Therefore it will minimise the collection and processing of personal data and it will make use of anonymisation techniques to remove the ability to identify individuals where possible.

• EXPERIMEDIA will process two types of data in line with legal-ethical requirements\(^6\): first, service data including user queries which are often trackable and even traceable, and second, sensor data collected from users to provide services. For both types of data, EXPERIMEDIA will use the same channels.

• EXPERIMEDIA will only store user profiles with consent and only for the purpose and lifetime of experiments. There will not be any commercial exploitation of user profiles within the lifetime of the project.

3.4.8. Management of Ethics

Appropriate management of ethical issues can be guaranteed by the project management through a mixture of measures to ensure the most proper technical, physical and administrative environment.

It is in this framework that the Ethics Advisory Board gathered on 5 October 2012 to discuss the ethical aspects of EXPERIMEDIA’s First Open Call. Below, their observations are presented.

3.5. General compliance with the regulatory framework

To ensure legal compliance with the regulatory framework, at least the following requirements must be fulfilled\(^7\):

Basic data protection requirements:

• Actors identified as data controllers must be aware of the precise meaning of the definitions of national data protection legislation applicable to the processing under their control. Collaboration with the competent national Data Protection Authority will ensure a correct understanding of the specific national implementation of the definitions of the applicable notions.

• The data subject’s free, informed, specific and unambiguous consent must be obtained for legitimate processing of personal data. While such consent is only one of the possible justification grounds for legitimate personal data processing, it will in most cases be the only viable justification ground for personal data processing with relation to the EXPERIMEDIA experiments.

• Fair and lawful processing of personal data must demonstrate legality and transparency.

• The purposes of the processing of personal data must be clearly indicated in advance.

• The processing of personal data may only include relevant and non-excessive data, in relation to the specified purposes. Data must be collected for a specified, explicit and legitimate purpose and may not be further processed in a way incompatible with those

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\(^6\) It was pointed out that these two types of data must be clarified with the experimenters.

\(^7\) List from D5.1.2 – ‘Ethical, legal and regulatory framework for social and networked media, 12 April 2012.”
purposes. Duration of data storage must be limited and stored data must be destructed once the purpose for which that data was collected has been attained.

- Data minimization can also be achieved by employing methods for anonymisation or pseudonymisation of personal data. Here, data unlinkability should be kept in mind as linkability could lead to the identification of a particular data subject.

- The data controller must ensure sufficient information for the data subject.

- The data controller must ensure that the data subject can fully enforce his right of access, his right to correction and his right to object.

- The data controller must ensure confidentiality and security of the processing of personal data under his control.

- Due notification must be made to the competent national Data Protection Authority (or Authorities), in compliance with national legislation.

- Data transfers to third States must comply with applicable legislation.

**Consent requirements:**

- Carefully drafted privacy policies and consent forms must ensure compliance to the requirement of consent and the right to information. Note that such privacy policies and consent forms must be compliant with national data protection legislation. For instance, certain jurisdictions require written consent, while others allow for implicit consent in many cases.

- User-friendliness should be the focal point in obtaining the data subject’s consent. While unintelligible texts may lead to the data subject not reading a privacy policy or consent form, elaborate procedures to grant consent may result in the data subject refraining from using such service, thus damaging the business of the data controller. A balance between the interests of both parties should therefore be struck.

- When dealing with minors, elderly and/or persons with a mental illness, the data controller is advised to seek consent from both the data subject and its statutory or legal guardians. The general legal capacity of the data subject determines its capacity to consent.

- Informed consent must be given freely. In order to determine whether the data subject’s consent was given freely, one must analyse the external pressure exercised on his decision. Positive persuasion cannot invalidate his freely given consent, while negative coercion will invalidate his consent as it could not have been given freely.

- Consent should be limited in time and should be renewed for continuously on-going processing of personal data. Consent should also be revocable.

**Confidentiality and security:**

- In the processing of personal data, the data controller must restrict access to this personal data to the persons that need such access for the processing they perform under his authority. Such access need to comply with the proportionality principle, meaning

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8 This is a general requirement for experimenters. In general there is no processing of sensitive data in the EXPERIMEDIA project.
that no user may be awarded access to more data than strictly required for his processing tasks.

- In order to achieve proportional access control, the data controller must provide for differentiated access levels for different user groups in order to ensure proportionality. This must be combined with an access procedure that includes registration, identification, authentication and authorization.

- In the processing of personal data, the data controller must adopt appropriate and state of the art technical and organizational measures to ensure data security. Also the processor must be bound to such security policy.

- Such security policy should include, inter alia, actions to be taken in case of data breach, the use of cryptography to protect data and audit trails to log and trace data access and use. These security policies should also take into account user-friendliness and should require minimal user effort. When using audit trails, the data controller must define the purposes and scope of this logging and make transparent who can access these logs as audit trails constitute personal data processing.

- While previous requirements only apply in the context of the processing of personal data, adherence thereto in other cases of security and access management is strongly recommended as they provide valuable minimal requirements.

- Regardless of the technology used, the data subject should be made fully aware of the presence of the technology and of its activities and of the possibility for deactivation.

- Geolocation data must be viewed as personal data, the processing thereof must comply with the principles of the Data Protection Directive and the ePrivacy Directive and their national implementations.

- Prior informed consent must be obtained for the processing of geolocation data, as this will mostly be the only viable justification ground for the processing of this data. This consent must be revocable and must be regularly renewed.

- Geolocation services should be switched off by default. The user should be made aware of active geolocation services. The user should also be given the option to choose the granularity of his consent. The user should also be given the option to opt-out from databases containing Wi-Fi access points.

### 3.6. Checklist for experimenters

It was acknowledged by the EAB that the partners already made a major effort to comply with the legal requirements set out in previous deliverables and in their first feedback. Nevertheless, some new issues, questions and recommendations were raised during the October meeting. During that meeting it became clear that certain aspects of the planned experiments must be additionally specified. These questions and recommendations led to creation of a ‘checklist for experimenters’. Thereafter, all the partners were asked to fill in this ‘checklist for experimenters’ to provide the legal partner and the members of the EAB with more detailed information with regard to the planned experiments. The purpose of such request was to facilitate the evaluation of their ethical progress in the protection of personal data. The checklist consisted of:

**Checklist for general ethical issues**

- What are the key values behind the service/application?
• What are the conditions for participating?
• Where will the data be located?
• What is the content of the processing of data?
• What is the purpose of the processing of the data?
• What is the data lifetime?
• How is the informed consent obtained?
• Must the consent be written or not?
• Who are the participants of the experiment?

Checklist for location data issues
• Is it necessary to store the personal data?
• When should the data be stored?
• Does the user have any choice?
• Can the consent be withdrawn?
• Will the data be erased after use? Or after a certain period?
• Is it possible for the user to opt-out for one day or is such an opt-out a permanent choice? And in the former case, how long will you keep the information when the server is switched off?
• Is it possible for the user to change its pseudonym on a daily basis?
• Who can access the data?
• Is there an admin log for every data file? Who can change these logs? Who can access them and who can delete them?
• For what time period are the data stored?
• Can the administrator manipulate the data?

Checklist for profiling issues:
• Is it possible to connect the data from different locations?
• Is the data being used for profiling? Is location data used to reach other inferences: e.g. is the person rich? Does he live nearby?
• Is the processing of the data only for improvement of content? Or also for tracking characteristics/traits of persons?
• Does the service need to know the real identity of the users? Are nicknames enough?
• To which other data will the users’ feedback been linked to?
• Who can access the ECC?

Checklist for tracking issues:
• Will the user be followed between two usages of the service?

Checklist for consent issues:
• What happens when the mobile phone (or other device) is given to someone else?
• Real name? E-mail address?

Checklist for anonymisation issues:
• Will the data be anonymised?
• Where will the data be kept? Is this a territorial location? Is there a cross-border exchange?
4. The experiments

4.1. Three venue partners

Since the ins and the outs of the three embedded experiments were already studied closely in their ‘Experiment Design and Plan’ deliverables (D4.1.1, D4.2.1 and D4.3.1), it will suffice here to give a few brief quotes to fresh up what is already known.

4.1.1. Schladming as venue partner

“Schladming is a tourist place that depends on visitors and their satisfaction. The main objective for Schladming therefore is to provide visitors and citizens with innovative future Internet technology solutions that improve the visitor experience and improve the quality of life” (D4.1.1, p.4).

“The main objective of the experiment is to enhance the experience of a tourist venue like Schladming for the visitors and improve its quality of service for citizens. This will be done by providing them information around the venue and events happening at certain points of time with adequate possibility to reflect their experience. In addition, it will be eased for visitors and citizens to evaluate services within the city using technologies like social networks and augmented reality, alternative evaluation interfaces and immediate interactions done by the users” (D4.1.1, p.5).

4.1.2. CAR as venue partner

“CAR is an organisation which gives support to sport so that it can be competitive at an international level, optimizing resources of the highest technical and scientific quality. The aim is to provide the athletes with everything necessary for their complete training so that we can share the knowledge of their activities. As a public company CAR is aimed to share the knowledge learned on the practice of athletes’ preparation to other real world applications. As it could be: the values of the sport competition techniques applied on the regular enterprise like is in sport or application of sport medicine procedures for regular patient rehabilitation and recovery.

In the CAR experiment, metadata augmented reality and remote stream control is exploited. This experiment offers the opportunity to do research with synchronization of video, audio and metadata, and check how it improves the training process” (D4.2.1, p.4).

4.1.3. FHW as venue partner

“The experiment will be conducted at the Hellenic Cosmos, the Foundation of the Hellenic World's privately owned cultural centre in Athens. The Hellenic Cosmos boasts the Tholos, a unique dome shaped VR theatre that provides VR content that is rendered in real time, based on the commands issued by the personnel running the facilities and adapted to the needs and likes of each group of people that visit it” (D4.3.1, p.6). In the embedded experiment FHW shall “develop a testing setting that will relate the FHW 3D content and the FHW real-time rendering engine with new and innovative user oriented media services. Using this setting [FHW] will explore the possibility to present this content in different device and network contexts, to single users and to user groups, in real-time, whilst supporting the live interaction between all involved
4.2. First Open Call experiments

In this section, a detailed description of the First Open Call experiments is given.

4.2.1. DigitalSchladming

In general

DigitalSchladming is the first First Open Call experiment in Schladming. The aim of this experiment is to provide the necessary services to Schladming to engage with guests visiting the region. In the experiment the needs of visitors will be addressed for a wide range of information access, from practical issues during their stay to sharing their experiences. DigitalSchladming will help the users to find local businesses and practical information, but it will also make it possible for the users to easily share their experiences with their friends. Therefore DigitalSchladming encourages the tourists, as well as the citizens of Schladming to build a lasting relation with Schladming.

Scenario

Alan, Sue and their five year old daughter Katie are spending a one-week vacation in Schladming. As usual, they stop by the tourist information point during their first day, in order to get practical information. There they learn about the new free service offered in the region: DigitalSchladming.

Finding local businesses. That very same evening they decide to create an account just as they were getting ready to go for the first family dinner. Using her pad, Sue begins to browse the Schladming PinBoard and is amazed by the wealth of information available. She quickly notices that she can play with different filters on left-hand side of the screen in order to display only certain topics. Alan decides to put in a search for ‘food’, and he quickly receives a feed related on this topic. One of the pictures catches the attention of Katie; the caption reads “Dinner for 3, with complementary drinks on the house”. They click on this item and the video starts playing, introducing them into the specials for that evening. Already by the time Sue clicks to see where the restaurant is on the map, they have already decided where they will have their first dinner in Schladming.

Finding practical information. Next day Alan and Sue want to try a more advanced slope, but they are not sure what to do with Katie. Using the advanced search functionality of the Schladming PinBoard, Alan and Sue search for the closest nursery school to the slope. The system shows that there is one just 500 meters away and the parents are able to access all the necessary information, i.e. what their schedule is, telephone number, how much it costs and whether or not they can take care of kids over lunch as well.

Sharing experiences. Up on the slopes, taking a break at the cabin, Sue is taking a quick snapshot with her smartphone. She is sending it via email to their unique personal mailbox writing in the subject line “What a great view from up here! Who can recommend another great
route? #skiing @public”. The picture gets immediately stored in their online repository and is also posted on the Schladming PinBoard for everyone to see and comment. Later on Alan is taking some snapshots of his own and is uploading them to MySchladming. At the end of the day, the family is pleasantly surprised when they receive in their inbox a visually appealing electronic journal containing all of the great pictures of their day. Together with Katie they relive the great experiences.

Building a lasting relation with Schladming. At the end of their holiday, Alan is downloading an archive with all of the content that they uploaded during the family holiday. The system then asks if he would like to temporarily suspend the account and receive via email a bi-weekly newsletter containing the best posts of the Schladming PinBoard. Thinking he might go to Schladming again in the future, Alan follows this suggestion and over the course of the year, is intrusively reminded about the resort. After about 5 months, impressed with the summer pictures of Schladming that reached his inbox, he decides that it is time to see how the place looks without all the snow.

How does this work?

DigitalSchladming is centred around an information-rich, web-based media channel for the entire region (Schladming PinBoard) and a personal hub for media contents of each-user (MySchladming). These two systems are “seamlessly interconnected, allowing the end-users of MySchladming to effortlessly publish the content they want to the Schladming PinBoard. Together the two systems are able to create a “hyperlocal temporally bound community”. The Schladming PinBoard is able to aggregate data and media feeds into a unified media channel with powerful faceted search capabilities. Tags and categories are extensively used in order to allow the user to find the right information easily. MySchladming provides the visitors with an easy-to-use platform for storing the digital memories of their vacation in Schladming, allowing them those specific bits with the networks and groups of their choice.

4.2.2. Novel mobile interfaces for situated media and interactive video

In general

MEDIAconnect (novel mobile interfaces for situated media and interactive video) is the second First Open Call experiment, which will take place in Schladming. The experiment will investigate “the influence of novel user interfaces on the Quality of Experience in accessing digital content situated in the real world”. More specifically, MEDIAconnect will assess “how experiences based on Web data and services are influenced by a specific interface metaphor such as Augmented Reality, Virtual Reality or digital maps”.

Scenario

A participating family stops in front of a Schladming map hung up in the resort. They can interact with the locations on the map using AR and alternative interfaces, seeing useful information overlaid over locations around Schladming and browsing to related content sourced from both the resort itself and from other users. The mother’s profile, where she opted in to share her Facebook profile securely to get personalized recommendations, indicates that she likes
ponies – so the nearby stables are highlighted in her app. Selecting the location on her smartphone, she views videos taken by visitors. The ponies are so cute! She is fascinated that she can view within the video which type of pony it is and browse to more pictures and text about that type of pony. Not only can she see that they are open for another two hours, she is offered 2-for-1 entry for children! Visiting the stables, she takes her own video and shares it. The mother knows the type of horse she has in the video so she annotates the video with ‘Shetland pony’. Her daughter asks: “What is Shetland?” Her mother opens the annotated video on her smartphone, and now when the Shetland pony is shown in the video, she can browse to a map of the Shetland Islands and show her children that they are north of Scotland. She is happy not only that the family saw the ponies, but that she could save on the children’s entry fee and that they are learning geography at the same time.

How does this work?

This experiment works through two previously research projects regarding mobile AR (SmartReality) and online video tools (ConnectME). In SmartReality are objects in the camera view detected and tracked using computer vision methods and connected to additional content via their semantic annotations – the connection between annotations and content is handled by a dedicated server-side platform. In ConnectME were Web-based interfaces for non-expert annotation of video and play-out of annotated video with links to additional content developed. Both projects use a semantic smart platform to manage the content annotations, metadata processing, interlinking of media to online content, and the provision of these enrichments to the AR or interactive video clients. For MEDIAconnect a new integrated platform will be created from some of the platform components developed in these projects. The platform will also make use of a Social Web-based user profiling component (‘Beancounter’), which generates and maintains a user interest profile from analysis of the user’s Social Network activity – which is fully a transparent and opt-in choice of the user. The platform leverages this information to personalise the user’s experience. These components will be integrated and combined with the EXPERIMEDIA testbed. Filled with media, data and services from EXPERIMEDIA partners and the Open Web, these platforms will be enriched by semantic annotations and links to additional content, so that the user can access and browse content from different sources. Therefore, the access to a large number of participants on site within a real world usage scenario will enable MEDIAConnect a proper and informative evaluation of the new technologies, while extending the functionalities of the EXPERIMEDIA facility with SmartAR and interactive video.

4.2.3. CONFetti: remote and collaborative training for acrobatic sports

In general

The CONFetti experiment is the first First Open Call experiment which will take place at the CAR venue. CONFetti aims “to improve collaborative sport training experiences by introducing innovative videoconferencing and telepresence services as well as augmented reality training tools adopted for coaches, athletes and students in Centre d’Alt Rendiment (CAR). Both trainers and athletes will be able to dynamically create, modify, personalize and consult online augmented reality training scenes in high definition or even in 3D”.
Scenario

Josep is a diving coach working in CAR. He trains a group of professional athletes – divers, including Arnau, Sofia and Ramon. They have a training session planned for today, because they are preparing for a national competition. They are supposed to work and improve their technique in the first phase of the jump. Unfortunately, Josep’s car broke down and he is not able to arrive at the CAR venue in time. In this situation they decide to hold a remote training video session with augmented reality. Josep connects to the CONFetti system from his home over the Internet, while the divers connect from their terminal in the CAR centre. Josep tells them what he wants them to do this day, showing them videos of other divers performing that jump recorded with the centre’s video infrastructure in the past. Ramon performs the jump according to Josep’s directions. Josep observes the jump live and, additionally, it gets recorded. Ramon joins Arnau and Sofia by the video journal terminal. Josep displays Ramon’s jump in the videoconference. A 3D rendered model of a human body is superimposed on the video in real-time and it follows Ramon’s movements thank to motion tracking analysis. Josep pauses the video and shows the divers that in the top moment of the jump Ramon’s ankle was in the wrong position. He demonstrates the correct position in an interactive way on the 3D model. The next jump is Arnau. He performs the dive and it also gets recorded. When he joins the rest by the terminal, Josep pulls a 3D (stereoscopic) recording of his jump. It turns out Arnau did not make the mistake as Ramon, but thanks to the stereoscopic view it can be seen that the relative position of his legs was not perfect. Josep demonstrates the correct position on the model, which is also stereoscopic. Now it’s Sofia’s turn to jump. She does it and awaits Josep’s commentary with the others. Josep brings up his recording and it turns out she made the same mistake as Arnau. Josep adds the measurements from the electromyography and isocontrol sensors to the video signal. A slow motion display of the recording shows which of Arnau’s and Sofia’s muscles were responsible for the false movement. In the next series of jumps all three divers avoid the mistake thanks to Josep’s advice.

How does this work?

The experiment will combine and extend the existing videoconferencing, 3D video and remote GPU-based visualization technologies in order to deliver a new Future Media Internet platform for distant real-time training sport sessions. The usage of the interactive virtual sport scenarios based on virtual 3D human models and real scenes will enable the coach to meaningfully advise his protégés on technique and finally improve their performance. The rendered and augmented sport scenes will depict a model of the human body with adjustable parts that will be superimposed on recorded shots of CAR athletes, for example divers to jump. Furthermore, the athletes’ movements will be analysed with the usage of selected motion tracking algorithms, e.g. to position virtual 3D human models automatically in the proper area of the screen with the proper orientation and size. Besides, thanks to the usage of HD videoconferencing the coach will be able to connect from a remote location over the Internet or even high-speed GEANT connections without losing the feeling of presence.
4.2.4. 3D Acrobatic Sports

In general

3D Acrobatic Sports is the second First Open Call experiment, which will take place at the CAR venue. This experiment will “focus on high quality content production for assessment and improvement in gymnastics exercises by the use of motion capture technologies. The goal of this experiment is to record training sessions of gymnastics at CAR venue and automatically generate assessment data for helping the athletes improving their performance. These 3D motion capture data will also be used to compute metadata which will be synchronized and saved with the athlete’s motion in order to provide a valuable 3D graphics and augmented reality experience”.

Scenario

Gorka and Michael are two young boys who live in a small village located in the north of Spain. They have been class mates until the end of the last course and they are very good friends. They share the same enthusiasm for gymnastics and they have been part of the same club in the small village where they live. They are taking gymnastics very seriously, training very hard and devoting a lot of time to this activity. They both share the same dream: participating in gymnastics contest at the Olympic Games. Last semester they completed the secondary school and they are facing a tremendous change in their lives: they got the grants they applied for attending a High Performance Training Center (HTPC). Michael was accepted in a HPTC in London while Gorka was accepted in CAR in Sant Cugat. Once in their destinations they are in touch through Facebook, Whatsapp and email. After a few weeks Michael is getting frustrated because he is not able to improve his technique. He tells his friend that he has difficulties understanding the explanations of the trainer. Michael is not able to visualize in his mind the explanations given by his trainer about corporal expression, motion technique, etc. Gorka tells his friend about a new technique he is using in his training sessions at CAR: motion capture. This technique is based in the use of small wireless sensors which capture the motion of the different segments of the body of the athlete and save the digitalized motion on the cloud. A software displays the motion of the athlete in real-time in the computer screen thus allowing to visualize what the actual motion has been during the training session. Using this tool the trainer explains to Gorka how to improve his technique and Gorka understands everything instantaneously. Gorka says he was afraid about wearing the sensors for the first time. He was not sure how those sensors could affect his availability to perform a motion. However, since the very first time he used the sensors he felt very comfortable with them; he realized that the sensors did not affect at all his mobility. Now he is using this system every day. His training sessions are saved in a server so he can access them at any time. His trainer uses the software on a laptop or tablet to show Gorka how to improve his technique. In this way Gorka can visualize the improvements after specific training exercises and over a given period of time. Gorka explains to Michael other benefits of this tool such as getting advice from other trainers or colleagues who can access the motion files from the cloud from anywhere. These fellows can analyze Gorka’s technique and evolution and provide him with useful advice. Using the cloud Gorka can share his motion files virtually with anyone in the world despite where this person is located. Gorka shows his friend how to access the cloud and visualize Gorka’s training session. Michael finds this application amazing since its use allows understanding in a very simple way all the complexity of gymnastic training and techniques. He
would like to have the same tool in London. In this way he is sure he will improve his technique; moreover he would have another way to exchange his experiences with his friend Gorka even if they are in the opposite corners of the world.

**How does this work?**

This experiment works by the use of inertial sensors for motion capture in gymnastic training sessions. This can be an important improvement for the assessment and training of athletes, especially as thanks to its reduced size whereby the inertial sensors can be easily attached to the athlete’s body without compromising in anyway his mobility. Another striking point here is that each of these sensors includes its own Bluetooth antenna which allows it to connect directly to the device hosting the antenna. Several mobile devices, such as tablets and laptops, will be used to collect the inertial sensors data. On those devices, motion capture data will be displayed in real-time providing in this way instantaneous feedback to coaches and trainers. Platforms considered for these mobile devices are Windows and Android. The 3D motion data will be collected by a computer connected to mobile devices using the Wi-Fi access point. This computer will collect the data from the inertial sensors and will upload the information in a repository server. Finally, the 3D motion capture data and the synchronized metadata will be stored in the cloud.

4.2.5. **BLUE Personalized museum experiment**

**In general**

BLUE is the first First Open Call experiment which will take place at the premises of the Foundation of the Hellenic World in Athens. The target of the BLUE experiment is “to explore the use of users’ visiting and cognitive styles in order to personalize their experiences inside a museum. Before and after a visit, visitors will be able to respectively setup their cognitive profile and preferences, as well as to share their visits with others through a custom-made social network application, titled ‘My Museum Story’. During the museum visit, smart routing recommendations for exhibits and content to see, as well as personalized content descriptions are offered to them”.

**Scenario**

**Use case 1.** Visitor ‘Anna’ has used the ‘My Museum Story’ application before coming to the exhibition. From this, the BLUE experimenters know that her cognitive profile is ESFP (Extrovert Sensor Feeler Perceiver) and she prefers content about coins related to the region of ‘Mesopotamia’. The tracking of her movement in the first rooms of the exhibition shows that Anna generally moves in the centre of each room, only approaching certain coins, which are related to the subject of ‘Mesopotamia’ (shown from the ‘My Museum Application’), as well as coins related to the 5th century BC (shown by the items that she actually visits). Anna is hence categorized as a ‘fish’ type visitor, i.e. the type that accordingly to BLUE’s methodology, is most likely to be an extrovert, a deduction which coincides with the identification of her cognitive profile as ESFP. Given this, the personalized description provided to Anna through her smartphone, as she moves from room to room, are short and they cover the main theme.
information of the room. In parallel, the routing recommendations provided to Anna guide her towards the items that refer to her preferred topics of the exhibition (‘Mesopotamia’ and ‘5th century BC’), with preference to those that other ‘fish’ visitors have shown preference into. Finally, as an ESFP personality type, and according to the findings of BLUE’s approach, Anna should be provided with more support and less adaptability while using the personalization technology, therefore by default she is provided only with basic options, in order to avoid confusion. She still has the possibility to access additional options (e.g. more detailed descriptions of the items), from the main menu of the application, in case she wishes. Upon exiting the exhibition, Anna publishes her ‘Story Line’ through the ‘My Museum Story’ supplication to her Facebook page and chooses to link it with the Facebook application of FHW.

Use case 2. Visitor Marc has not used the ‘My Museum Story’ before his visit to the museum. Since his phone does not support the application, he is provided with the smartphone device from the museum premises and starts his tour. The tracking of his movement shows that Marc is an ‘ant’ type of visitor; he moves in line from exhibit to exhibit and shows some preference on exhibits related to ‘mythological figure representations’ (i.e. coins representing mythological figures). Given that we do not have prior information about the full personality type of Marc, the engine only assumes that he is an introvert type of person, judging by Marc’s visiting style and based on the BLUE’s approach. As an ant/introvert, Marc is provided with story-like, detailed descriptions over the items and he is routed towards the exhibits that are more related to his content-specific profile, as this is gradually being constructed throughout his visit. Nevertheless, shortly after the middle of the exhibition, Marc’s visiting style changes; he tends to move more linearly, turning more into a ‘butterfly’ visitor type. Identifying this, Marc is now being given more routing indications about where to find exhibits with content related to his topic of preference and increased control over the adaptability of the recommendations. In the end of the visit Marc chooses to participate in the researchers’ questionnaire regarding his perceived QoE. He also decides to subscribe to the ‘My Museum Application’, in order to share his items of interest with his social network circle.

How does this work?

The experiment will support the user experience in three phases, namely before, during and after the museum visit. “The EXPERIMEDIA BLUE experiment is based on a two-way continuous interaction between real-world and online communities. Specifically, through its custom-made Facebook application (‘My Museum Story’) it involves users in the museum experience, and extracts data (cognitive profile and content-related preferences) that will be useful afterwards during their actual visit to the museum premises. On the other direction, the real-world community also interacts with the online one, by enabling of users to upload online their personal museum ‘Story Lines’ (featuring exhibits that the users found interesting during their visit, as well as personal comments/notes to share with one’s friends) and share it with their social network circles. This way, data from the online community are used to improve user experience and data from the accomplished museum visit are used to spread user experiences, and motivate more users to visit the museum”.

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4.2.6. **REENACT: Augmented Reality for re-enactment of historical events and live social learning about their cases and consequences**

*In general*

REENACT is the last of the six First Open Call experiments and this one will take place at the Foundation of the Hellenic World museum in Athens. The experiment aims at “exploiting the spaces, equipment and contents available to the Foundation of the Hellenic World (FHW), together with the advanced technological capabilities provided by the EXPERIMEDIA facility, to enable new live and collective experiences that help gain understanding about major historical events”.

*Scenario*

Barbara and Carl, two 20-year-old students from the UK are visiting the Hellenic Cosmos exhibitions. When they enter the main building, they feel curious about a proposal to engage in an interactive collective experience to learn about the Battle of the Thermopylae. They have heard about this battle many times before, but they can barely give any specific information about its context and its impact in History, even though they recall from a recent movie that it was a fight between Spartans (handsome good guys) and Persians (abnormally-ugly bad guys). They also remember that the Persian army was overwhelmingly bigger than the Spartan opponent, so they won this battle after facing heroic resistance for a couple of days. For some reason, however, the Persians were defeated shortly afterwards.

Barbara and Carl decide to participate in the proposed experience, and they are taken to a room with other participants. Once there, a guide gives one tactile mobile device to each participant and asks them to choose a nickname and reply to a few multiple-choice questions about historical facts related to the Battle of the Thermopylae. The correct answers are not shown yet. When all the participants have completed the questionnaire, the guide provides a very brief introduction to the historical context of the battle with the aid of a video and a few static images. Then, the mobile devices offer the participant the possibility of choosing the roles they would like to play in a re-enactment of the battle. Barbara bids for the role of Persian king Xerxes, and she gets it. Carl bids for the role of a Spartan soldier, but there are already too many people for this role and nobody for others, so he ends up in the role of a Phocian infantryman—the roles are picked from a pool, and the distribution is supervised so as to have people in all the relevant roles. "What's a Phocian, by the way?" Carl asks to himself.

Barbara and Carl proceed to choose an avatar to represent them in the game: Barbara decides to use a close-up photo of herself with an angry face, whereas Carl chooses one pre-designed picture of a soldier. When everybody is ready, the mobile devices tell each participant to move to a specific zone of the room in order to start the recreation—the different zones are indicated by marks on the floor, including QR codes that confirm location changes when scanned. Once in their places, Barbara and Carl can see a 360° augmented reality view of a reconstruction of the landscape of the Thermopylae back in those ancient times. They can also choose to see a map depicting what each one knows at the moment: initially, the map on Barbara’s screen only shows the current position of the Persian troops and Athens in the far distance, whereas Carl’s depicts
the whole area with the two armies in place (the Spartans and their allies knew the place beforehand).

During the next 10 minutes, Barbara moves around certain zones (never too close to the opponents’ stand) and makes decisions about the movements and actions of the Persian troops by choosing among sets of options. Barbara’s map is revealed progressively as the Persians get to know new parts of the environment. Carl, in turn, tries to follow the orders decided by the participant who plays the role of Spartan king Leonidas. When he is sent to guard a path above the Thermopylae, he engages in a fight against Persian soldiers. At this moment, his mobile device displays a sword on screen, which Carl can move around to inflict damage on the opponents. Even though Carl notices that his sword is more powerful than the Persians’, the Phocian infantryman he represents dies. Nonetheless, the game is not over for Carl, because he can rejoin the game by picking up another role from a pool. He decides to become one Theban soldier, fighting next to the Spartans — other roles that existed at first, like Phocians and Immortals, are no longer available ("they may have died as well", Carl guesses). In the end, the Persians are victorious and the battle finishes with a number of Spartans and Thebans surrendering and joining them.

The guide announces that this is the end of the re-enactment stage. Now it is time to move to the Tholos projection room, which was one of the major attractions for Barbara and Carl to visit the Hellenic Cosmos. When all the participants are sat down, a woman called Doris appears on the big screen saying that she is an expert in Ancient History and she is going to explain how the participants’ recreation compares to the real happenings. Her explanations are supplemented by clips of a video recorded minutes ago from above, by an animation representing the map of the battle area and the main movements of the troops and by a number of other videos and images. At this time, the mobile devices given to Barbara and Carl are displaying keyboards that allow them to exchange comments in a virtual chatting room, with the possibility of sending text to specific individuals (identified by nickname or avatar) and posting to Facebook or Twitter. Barbara starts chatting actively with other participants who are sat two rows behind, while Carl posts several comments on his Facebook wall (such as "I don't think it was fair to depict Persians as orcs in the movie" or "Just learnt that there were slaves in ancient Greece"). The screen also shows a row of emoticons to let Barbara and Carl indicate their mood as Doris delivers her stuff.

At one point during her explanations, Doris shows anonymous statistics about the responses given to the questionnaires presented before starting the re-enactment. Barbara and Carl discover that they had gone wrong in most of the questions, but now Doris proposes a collective quiz game with more advanced multiple choice questions, and they make it to the last round. Later on, nearing the end of Doris’ explanations, she asks the audience what they think could have been the fate of Ephialtes (a man who betrayed the Spartans). Only 30% of the participants (including Carl but not Barbara) are right to guess that Ephialtes did not have time to enjoy any reward from the Persians due to their defeat in a subsequent battle.

When Doris finishes the comparison of the participants' recreation with the historical facts, she opens a collective debate about the consequences of the battle in the short, medium and long
terms. Barbara and Carl find it very engaging to comment and vote on the topics proposed by Doris: "up to what point would there be fewer ruins in Athens if Leonidas had stopped the Persians' advance?", "would the Parthenon ever have been built?", "would the Persians have conquered the whole of Europe?", "would there have been Persian equivalents to Socrates, Plato and Aristotle?", "what would our languages sound like?", "would we ever have heard of Christianism or Islam?". Barbara typically chooses the options with fewer supporters, but she is happy to see that she is often aligned with Doris' opinions and arguments. Doris invites "barbie1986" (Barbara's nickname) to tell all the audience about her thoughts; she accepts to do so through a video call, with her face appearing live on the Tholos screen. Participant "kickass18" (Carl) is also invited to address the whole audience once, but he is shier and opts to keep typing comments to be posted on the Tholos screen.

After a few minutes, Doris thanks everybody for their participation and finishes the debate. Prior to returning the mobile devices, Barbara and Carl are asked to fill in a questionnaire about how they liked the experience. Barbara provides very short and positive responses, but Carl is somewhat more picky and re-sends the questionnaire to his e-mail address in order to have more time to think and write extensive responses. Both return the mobile devices to the guide and move on to explore the other offerings of the Hellenic Cosmos.

**How does this work?**

REENACT wants to involve groups of people who visit the FHW in “the re-enactment of battles, relying on smartphones to provide an augmented reality vision similar to a multiplayer role game. The visits will start with a projection explaining the historical context of the battle in question. Then, the participants will be armed with their smartphones and assume a given role in the battle. Each participant will be represented by a customisable avatar, which will have a close-up photograph for easy recognition. Then the battle is fought. Having recorded the movements and actions of each participant, the whole group will then be taken to a projection room, where a group of experts (with the aid of multimedia contents) will tell them about how the recreation compares to the real historic events” and at the end the experts will drive a “collective debate about the consequences of the conflict. At this stage, the projection screen will display comments posted by the visitors, which the experts could move around as the debate goes on”. Besides, also voting and quiz games will be offered to support the entertainment aspect.
5. Ethical and data protection issues – specific ethics and privacy considerations on the First Open Call experiments

In this section it will be evaluated how the First Open Call experiments, which were discussed in section 4, comply with the ethical issues table, the Ethical Principles, the ethical guidelines, and thus in general, the compliance with the regulatory framework as mentioned in the third section.

In the 5 October meeting several questions were raised. These questions were translated into a ‘checklist for experimenters’ (see D5.1.3). Since the First Open Call experimenters filled in this checklist, it is possible to give an overview of the answers to the EAB’s questions in this deliverable.

5.1. Schladming

5.1.1. In general

Since Schladming is the venue with the most open environment and the broadest ecosystem, Schladming will be the most difficult venue to comply with all the requirements of the regulatory framework, such as for instance regarding the informed consent and other ethical issues. Therefore the Schladming experiments (DigitalSchladming and MEDIAConnect) were the most thoroughly discussed experiments during the 5 October meeting.

5.1.2. Specific considerations: DigitalSchladming

Ethical issues table

Since the DigitalSchladming experimenters will collect personal data of the participants, the experiment involves human data collection.

Application of principles

1° Informed consent – Before participants (visitors and citizens of Schladming) will join the DigitalSchladming experiment, they will be informed of the research objectives and all other aspects of the research that might reasonably expected to influence willingness to participate. The participants will register on a dedicated website of the experiment. There they will be informed that the purpose of the processing of the data is to index and enable retrieval (i.e. search). After that the participant will be asked to agree to the terms of service on the website. In that way the participants’ decision will constitute informed consent for the participation in the experiment as well as for the processing of personal data.

2° Deception – the participants will not be deceived or misled about the purpose and the general nature of the experiments. Neither will any kind of information be withheld from them.

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9 For an ethical review of the venue partners please read D.5.1.3.
10 Please check page 8.
3° **Data collection** – STORAGE. For the purpose of the DigitalSchladming experiment, namely the provision of hyperlocal services and matching service requests and service provisions for both visitors and citizens of Schladming, personal data will be collected in the form of social media posts and explicit posts on the experiment platform. The storage of this personal data is necessary and will start after a successful registration of the user. However the user can choose to turn off for example the location data information. Besides, the storage of a valid e-mail address is necessary, although no further checks beyond the validity of the e-mail will be processed. The data will be stored in the experiment server in Bremen, Germany. There will no cross-border exchanges.

The data will be stored for the duration of the experiment.

ACCESS. The data can only be accessed by authorised persons (including authorised system administrators) after instruction. Nevertheless, these authorised persons cannot manipulate the data since they are only instructed with the management of the data and not with manipulation.

USAGE OF DATA. Data will not be used for profiling during the experiment, nor for other purposes which are not facilitating indexing and retrieval.

4° **Withdrawal from the investigation** – Digital Schladming will inform participants about their right to withdraw from the experiment at any time, irrespective of whether or not payment or other inducement has been offered and even accepted and to require the destruction of generated data collected with their contribution. It is possible for the user to withdrawal his consent. In that case, the data will be erased immediately. This opportunity is a permanent choice, once the users opts-out all data will be deleted with immediate effect.

5° **Data protection regulation** – DigitalSchladming will adhere to all of the ethical oversight principles of EXPERIMEDIA. They will in particular pay attention to the Data Protection Directive (Directive 95/46/EC on the protection of individuals with regard to the processing of personal data on the free movement of such data), the Electronic Communications Directive (Directive 2002/58 on Privacy and Electronic Communications), the Media regulatory framework and the Intellectual Property Rights.

6° **Consortium partner responsibility** – EXPERIMEDIA partners are invited to monitor and follow the DigitalSchladming experiment. In case of any concern, it will be considered and treated accordingly.

7° **Concerns raised** – Schladming is a public venue. Therefore the EAB found it necessary to clarify issues concerning ‘observational research’.

### 5.1.3. Specific considerations: MEDIAConnect

**Ethical issues table**¹¹

Since the MEDIAConnect experimenters will collect personal data of the participants, the experiment involves human data collection.

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¹¹ Please check page 8.
Application of principles

1° Informed consent – The users (data subjects) will be informed about the experiment purpose, procedure, possible risks, data collection, benefits and confidentiality both in written (informed consent form) and in oral form. The users will receive a protocol with the details of the data processing, like the name and address of the research partners, the purpose of processing and the recipients of the data. Since it is required that the consent must be informed, only adults will participate (>18 years old). Besides, it is required that they should be able to use a handheld device. In the main experiment (in contrary of the pre-experiment) it is also required that the users should bring their own mobile device (smartphone or tablet). Moreover, there are no further requirements. The participants will be volunteers (general public, tourists) of age 18 and older. Their informed consent will be obtained prior to the running of the experiment.

The main experiment will run on personal devices. If they do not have multiple accounts on their device (as still common) MEDIAConnect cannot reliably identify if it is the user or a third person who is using the system. Thus, the situation, where the mobile device is given to someone else, will be included and treated in the informed consent form.

2° Deception – The participants will not be deceived or misled about the purpose and the general nature of the experiments. Neither will any kind of information be withheld from them.

3° Data collection – STORAGE. Observation and logging of users’ activity will take place solely within Austria. The data will be stored on the clients’ devices (smartphone/tablet) during the experiment, after the experiment the data will be stored securely on a territorial location, more specifically, at the Graz University of Technology. In that process, there will not be any form of cross-border exchange of data. The duration of the data lifetime is limited to the running of the experiment. After the ending of the project the data will be erased.

Demographic data such as gender, age range,… will be collected via questionnaires. Usage data will be stored on the device itself (and later it will be storage secured at TUG). Video and audio recordings will be stored on external recorders. Nevertheless, the users can opt-out for the recording of audio and video data.

ACCESS. Only the experimenter has access to the data, although he cannot manipulate the data in any way. There will no admin log for the data files.

PROFILING. It will be possible to connect the data from different locations. The data will not be used for profiling, the data will be used only for the improvement of services. The data will be associated with an anonymous ID. The data will be anonymised by MEDIAConnect. Besides, it is sufficient to have nicknames of the participants. The real identity of the participants is not necessary. The users’ feedback will not be linked to any other data.

TRACKING. The user will not be followed between two usages of the service.

4° Legitimate purpose – The purpose of the data processing is only focused to conduct the experiments in the context of this project. The purpose of the processing of the data can be found in the purpose of the experiment to get insight into usage patterns (time of usage of
different interface components, preference,…). Quantitative and qualitative data will be analysed to answer the following questions:

- Which interface will be used to access situated media?
- How will different interfaces be combined and why?
- Will participants actively use interactive video elements or rather passively watch videos?
- Which interface metaphor is sufficient for promoting or supporting services and products?

The data which will be analysed include: coding of interviews and usage of data (from notes, including audio and video recordings) and statistical analysing of usage time, touch events, locations and further sensor data (e.g. device orientation).

5° Withdrawal from the investigation – MEDIAConnect will inform participants about their right to withdraw from the experiment at any time, irrespective of whether or not payment or other inducement has been offered and even accepted. The withdrawal is possible at any time during or after the experiment. Although it is possible to withdraw, this choice is a permanent one. The related data will then be deleted and not used further.

6° Data protection regulation – The collection and processing of data will be done in compliance with the European applicable data protection provisions, such as Directive 95/46/EC on the protection of individuals with regard to the processing of personal data on the free movement of such data and Directive 2002/58 on Privacy and Electronic Communications. Besides, the data will also be handled according to the national legislation and recommendations and international fundamental rights.

7° Consortium partner responsibility – EXPERIMEDIA partners are invited to monitor and follow the MEDIAConnect experiment. In case of any concern, it will be considered and treated accordingly.

8° Concerns raised – Schladming is a public venue. Therefore the EAB found it necessary to clarify issues concerning ‘observational research’.

5.2. CAR

5.2.1. Venue experiment considerations
Since CAR is a closed environment it will give raise to much less ethical issues than an open environment like Schladming. Nevertheless a few striking questions and considerations were raised:

5.2.2. Specific considerations: CONFetti

Ethical issues table

Since the CONFetti experimenters will collect personal data of the participants, the experiment involves human data collection.

12 Please check page 8.
**Application of principles**

1° **Informed consent** – All users of the CONFetti experiment will be informed about the experiment purpose and all aspects around the usage of the CONFetti platform and how it contributes to the experiment to make sure that the users shows willingness to participate in the experiment. Besides, only gymnastics coaches or athletes at the CAR venue who were chosen for participation by CAR representatives can be part of the experiment. Therefore, the informed consent is thus obtained with the help of CAR representatives.

2° **Deception** – the participants will not be deceived or misled about the purpose and the general nature of the experiments. Neither will any kind of information be withheld from them.

3° **Data collection** – PURPOSE. The purpose of the processing of the data is to deliver recordings of previous performances as training aids and to generate 3D models of human bodies based on the video data and to research the relation between QoS and QoE. There will be no commercial usage of the user data.

STORAGE. The experimenter will only store user data necessary for the experiment. The users will be informed about what data is being stored and how it is being used in the experiment. User data will be anonymised in aspects where personalization is not needed. The data will be located on a place depending on how the ECC and AVCC will be deployed at CAR, as all the data will be stored using these components. The data lifetime is the duration of the experiment. The data will be erased after the finalisation of the experiment.

CONTENT. This data contains video data of athletes performing gymnastics and QoE data from all participants.

ACCESS. The user data that will be collected or logged during the experiment will only be available for the experimenter (video data and QoE data) and the experiment participants (video data). Any other parties will be excluded from access to the data.

4° **Withdrawal from the investigation** – Participants will be informed about their rights to withdraw from the experiment and to require the destruction of generated data collected with their contribution.

5° **Observational research** – Since CAR is a private venue, this clause is not applicable to the CONFetti experiment.

6° **Data protection regulation** – The collection and processing of data will be done in compliance with the European applicable data protection provisions, such as Directive 95/46/EC on the protection of individuals with regard to the processing of personal data on the free movement of such data and Directive 2002/58 on Privacy and Electronic Communications. Besides, the data will also be handled according to the national legislation and recommendations and international fundamental rights. To the extent the experiment allows the linking of 3D data with measurements from the electromyography and isocontrol sensors to the video signal, the specific rules on the processing of sensitive/health data will apply. This is a particular attention point that the experimenters will have to take into account.
7° **Consortium partner responsibility** – EXPERIMEDIA partners are invited to monitor and follow the BLUE experiment. In case of any concern, it will be considered and treated accordingly.

8° **Concerns raised** – It has to be clarified with the experimenters where the data will be located.

### 5.2.3. Specific considerations: 3D Acrobatic sports

**Ethical issues table**

Since the 3D Acrobatic sports experimenters will collect personal data of the participants, the experiment involves human data collection.

**Application of principles**

1° **Informed consent** – The targeted population in this experiment will be jointly defined by CAR and STT. It is foreseen to restrict the participation in this experiment to athletes who develop their training sessions at CAR premises. Therefore, the participants of the experiment are all athletes following training sessions at CAR. Before participants will be asked to join the experiment, they will be informed of the research objectives and all aspects of the research that might reasonably be expected to influence willingness to participate. The participants in the experiment will also be informed of all other aspects of the research about which they enquire. Since the athletes are being recorded in a way that their identification is possible, processing of personal data will occur, which implies that an informed consent is required.

2° **Deception** – The participants will not be deceived or misled about the purpose and the general nature of the experiments. Neither will any kind of information be withheld from them.

3° **Data collection** – PURPOSE. The purpose of processing the motion capture data is to provide information to the athlete about his motion so as to allow him to evaluate objectively his exercises and give him hints about how to improve his performance. So, the only goal in data processing is to generate contents, which will allow the athlete to improve his performance. There will be no commercial exploitation of this data.

CONTENT. The content of the processing data are 3D motion capture data, which consists of 3D trajectories of the different body segments of the athlete.

STORAGE. Personal data collected about the participants during the development of the experiment will be stored for as long as is necessary for the purposes for which the data were collected or for which they are further processed. This data will only be stored when the consent of the users is given and only for the purpose and lifetime of corresponding experiment’s session. All data will be removed at the end of the project. It is not expected to keep data longer than the project duration. The data will be recorded at CAR premises. There will be no cross-border exchange of the data.

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13 Please check page 8.
ACCESS. 3D motion capture data will be made available to the athlete himself, his trainers, coaches, other athletes and technicians participating in the development of the experiment. The administrators will be able to remove the files containing the recorded motion data, but will not be able to manipulate it. Motion capture data will be processed in order to generate contents, which will allow to improve his performance. This processing will not modify the originally recorded data.

4° Withdrawal from the investigation – Participants will be informed about their rights to withdraw from the experiment at any time, irrespective of whether some incentives has been offered and accepted and to require the destruction of generated data collected with their contribution. The 3D motion data of the athletes who withdraw their consent will be removed. Although, it is not possible for the participants to opt-out from the experiment for only one or a few days. A potential opt-out is a permanent choice.

5° Observational research – Since CAR is a private venue, this clause is not applicable to the 3D Acrobatic sports experiment.

6° Data protection regulation – All personal data will be captured and processed according to the applicable data protection provisions, such as Directive 95/46/EC on the protection of individuals with regard to the processing of personal data and on the free movement of such data, Directive 2002/58 on Privacy and Electronic Communications) and the Spanish data protection legislation that may be applicable. To the extent the experiment allows the linking of 3D data with measurements from the electromyography and isocontrol sensors to the video signal, the specific rules on the processing of sensitive/health data will apply. This is a particular attention point that the experimenters will have to take into account.

7° Consortium partner responsibility – EXPERIMEDIA partners are invited to monitor and follow the 3D Acrobatics experiment. In case of any concern, it will be considered and treated accordingly.

8° Concerns raised – The storage in a cloud computing system is a point of attention and must be clarified with the experimenters.

5.3. FHW

5.3.1. Venue experiment considerations
During the 5 October meeting questions were raised about the types of data that would be collected by the FHW experimenters. Since the FHW will try to avoid the use of most personal data (as well as possible), the experimenters still try to find a way to manage the experiment without gathering to much personal data in the consent form.
5.3.2. Specific considerations: BLUE

Ethical issues table\textsuperscript{14}

Since the BLUE experimenters will collect personal data of the participants, the experiment involves human data collection.

Application of principles and concerns

1\textsuperscript{°} Informed consent and profile of the user – Visitor’s consent will be explicitly required prior to the collection of any personal data related to the visitors’ experience, i.e. prior to installing the Facebook application or the use of the mobile application. The movement tracking consent inside the museum will be explicitly solicited through the mobile application before the beginning of its use. Since all of the interaction with the users is done through the application, any given consent will be in a written electronic format.

To be sure the consent is given freely only adult participants will be allowed. Besides, the adult must be able to use a mobile device, compliant with the hardware requirements of the experiment. Those with a Facebook account may also use the Facebook application. The mobile application will be available to anyone.

Visitors will also be notified of the means and purposes of the processing for which they grant their consent. A clear and informative written consent form will be drawn, that will be easy for visitors to understand. Consent will be revocable and will also be regularly renewed, thus limiting the validity of consent in time. The visitors will be made aware when tracking data are collected, for instance by a visible icon.

2\textsuperscript{°} Deception – the participants will not be deceived or misled about the purpose and the general nature of the experiments. Neither will any kind of information be withheld from them.

3\textsuperscript{°} Data collection – STORAGE. The data will be stored on a specifically designed server in FHW, so there will be no cross-border exchange. Nevertheless, it is not necessary to store location data. These location data can be processed online and precise movement data can be discarded. Anonymised trajectories might be kept for algorithm training purposes. Since only exhibit preferences and anonymised movement trajectories can be stored, this will be for the duration of the experiment.

CONTENT. The purpose of the data collection is to correlate users cognitive profiles with users movements and personal preferences, to see if this knowledge can enhance user experiences in their visit of museums. These cognitive profiles will be determined through the use of an appropriately designed Facebook game, corresponding to the use of a MBTI questionnaire. User movement will be recorded by means of a mobile application. Users might also be asked for some preferences and interests regarding museums.

PROFILING. It will not be possible to connect the data from different locations. Only the FHW location will be monitored. The data used for profiling will be used to deliver visiting

\textsuperscript{14} Please check page 8.
recommendations. Since the application will use any name the user has at his Facebook account, nicknames are sufficient for the BLUE experiment.

DATA LIFETIME. The data of the Facebook application (as preferences, game points, etc.) will be kept through the whole duration of a game. Other data (such as user movements) will be processed to derive visiting style and then be discarded. Anonymised user interests and preferences will be kept during the experiment lifetime or until the uninstalling of the Facebook or mobile application. However, data (such as exhibit preferences) published by the user (through the application) on the users’ Facebook wall, cannot be automatically deleted by the application.

ACCESS. It is the administrator who will be able to access the data. An admin log for every data file exists. These logs can be accessed, changed or deleted by the administrator.

4° Withdrawal from the investigation – Participants have the right to withdraw from the research at any time, irrespective of whether or not payment or other inducement has been offered. At any time the user can uninstall the Facebook or mobile application. By uninstalling the applications all related data will be deleted. As a consequence, it is not possible for the user to opt-out for a short period, once uninstalled, all data is deleted.

5° Observational research – Since the Hellenic World is a public venue it is expected to include observational research. This public venue includes individuals being observed without their given consent. Therefore such observations can only be made in situations where those observed would expect to be observed and possibly recorded by strangers.

6° Data protection regulation – All personal data will be captured and processed according to the applicable data protection provisions, such as Directive 95/46/EC on the protection of individuals with regard to the processing of personal data and on the free movement of such data and Directive 2002/58 on Privacy and Electronic Communications. Besides, the BLUE experimenters are fully aware of national data protection authorities and the requirements of national data protection legislation. Moreover, also the European Convention and the European Charter of Fundamental Rights is considered, given that this Convention ensures that socially and ethical systems are developed from the dimension of human rights.

7° Consortium partner responsibility – EXPERIMEDIA partners are invited to monitor and follow the BLUE experiment. In case of any concern, it will be considered and treated accordingly.

8° Concerns raised – Some points of attention must be clarified with the experimenters:

- It must be clarified how the collection and processing of data realized via the smartphone and how the transmission is done.
- Since special issues needs to be taken into account for location data, it must be clarified how the routing recommendations are calculated.
Other ethical issues raised by the EAB

1° During the 5 October meeting the EAB raised the question why it had to be a Facebook application. Some people indeed do not want to put data on Facebook. According to the EAB integration of the Facebook platform in the experiment would exclude privacy-aware people.

BLUE: Facebook was chosen for the appeal it has for casual gamers, i.e. it is among the social network platforms that people are most used seeing connected with a casual game (see for instance games such as Farmville etc.). Nevertheless, for people who do not want to use Facebook, the BLUE experimenters provide two other options:

1) One can use directly the museum application, during the visit. The application will then seek to identify the needed elements (cognitive styles and preferences) but may do so less accurately than it would have done with the additional data of the Facebook application, or;

2) Alternatively, the BLUE experimenters may allow a static, external website where users can state their explicit content preferences and also take the official MBTI test to identify their cognitive style.

2° The EAB wonders also what the Facebook terms and conditions for developers states in this regard, i.e. what you can do with the data?

The answer on this can be found on the ‘Facebook Platform Policies’ webpage of Facebook for developers15:

“II. Storing and using data you receive from us.

1. You will only request the data you need to operate your application.

2. You may cache data you receive through use of the Facebook API in order to improve your application’s user experience, but you should try to keep the data up to date. This permission does not give you any rights to such data.

3. You will have a privacy policy that tells users what user data you are going to use and how you will use, display, share or transfer that data. In addition, you will include your privacy policy URL in the APP Dashboard, and must also include a link to your app’s privacy policy in any app marketplace that provides you with the functionality to do so.

4. A user’s friends’ data can only be used in the context of the user’s experience on your application.

5. Subject to certain restrictions, including on transfer, users give you their basic account information when they connect with your application. For all other data obtained through use of the Facebook API, you must obtain explicit consent from the user who provided the data to us before using it for any purpose other than displaying it back to the user on your application.

6. You will not directly or indirectly transfer any data you receive from us, including user data or Facebook User IDs, to (or use such data in connection with) any ad network, ad exchange, or other advertising or monetization related toolset, even if a user consents to

15 http://developers.facebook.com/policy/.
such transfer or use. By indirectly we mean you cannot, for example, transfer data to a third party who then transfers the data to an ad network. By any data we mean all data obtained through use of the Facebook Platform (API, Social Plugins, etc.), including aggregate, anonymous or derivate data.

7. You will not use the Facebook User IDs for any purpose outside your application (e.g., you infrastructure, code or services necessary to build and run your application). Facebook User IDs may be used with external services that you use to build and run your application, such as a web infrastructure service or a distributed computing platform, but only if those services are necessary to running your application and the service has a contractual obligation with you to keep Facebook User IDs confidential.

8. If you need an anonymous unique identifier to share outside your application with third parties such as content partners, advertisers, or ad networks, you must use our mechanism. You must never share this anonymous unique identifier with a data broker, information broker, or any other service that we may define as such under our sole discretion.

9. You will not sell any data. If you are acquired by or merge with a third party, you can continue to use user data within your application, but you cannot transfer data outside your application.

10. If you stop using Platform or we disable your application, you must delete all data you have received through use of the Facebook API unless: (a) it is basic account information; or (b) you have received explicit consent from the user to retain their data.

11. You cannot use a user's friend list outside of your application, even if a user consents to such use, but you can use connections between users who have both connected to your application.

12. You will delete all data you receive from us concerning a user if the user asks you to do so, and will provide an easily accessible mechanism for users to make such a request. We may require you to delete data you receive from the Facebook API if you violate our terms.

13. You will not include data you receive from us concerning a user in any advertising creative, even if a user consents to such use.

14. You must not give your secret key to another party, unless that party is an agent acting on your behalf as an operator of your application. You are responsible for all activities that occur under your account identifiers.

3° It was also considered whether it is possible to encapsulate a Facebook application against Facebook’s observation or interpretation of the (personal) data following out of this application.

BLUE: it is not possible to connect to Facebook without using the Facebook API, therefore the answer to the above is ‘no’. However, as mentioned above, to BLUE’s knowledge there is no need to send back the interpretation of the data collected using the Facebook API.

4° Finally, a few questions were raised regarding the cognitive styles and personalized interests by the visiting style: it is published on or at least known by Facebook, what if an employer sees it? What if the cognitive style is identified wrongly? What if you are in a group and your friends have a different style to yours and yours is to be considered as boring? Should a teacher get to see the cognitive style?
BLUE: Since there is no obligation to send back to Facebook the interpretation or observations are made the cognitive profiles of the user can stay unpublished and unknown by Facebook. If however, the user chooses to publish these results on their profile, then they will be available to their friends, as well as to Facebook. In the same sense, if the cognitive style is identified wrongly, or partially wrongly, information will be presented to the users (during their visit inside the museum) in a less convenient way (e.g. information describing the exhibits containing more details than the user would have optimally preferred), but it is not expected to have further repercussions. Finally, cognitive styles describe the way individuals think, perceive and remember information. It does not change drastically during one’s lifetime (only one dimension can change due to age), nor does it depend much on the learning situation (it is actually situation independent). Since it is considered by research as a non-changing element users cannot try different styles, but the purpose is rather to identify their style in the most accurate manner, in order to provide them information (rather presentation of information) that suits the way that they process information. Also, the grand majority of users is not expected to already know their cognitive style, but for those that do, BLUE could indeed provide the option to select their style. In addition, cognitive styles show a preference for the presentation of the learning material, rather than preference for content. It also does not reflect interests and other personality traits (only cognitive aspects of information processing). In this light, sensitive psychological profiles cannot be drawn from cognitive styles.

What can affect groups of friends is the way the different members want to move (direction and pace of movement). Of course the movement can reflect cognitive preferences, but these are not obvious to the other group members. Having a specific cognitive style does not mean that you will not enjoy a museum visit that is not exactly following your style, but is a compromise between the needs of the different group members. Furthermore, having individual tablets for the different group members, implies that all group members can view the same exhibits and follow the same route, but they can be presented information differently according to their style. Finally, the complexity of group dynamics has provided very limited knowledge about the behaviour of groups in museums and in this particular project it will be of a significant value to study the behaviour of groups with identifiable cognitive styles of the individual members.

5.3.3. Specific considerations: REENACT

Ethical issues table

Since the REENACT experimenters will collect personal data of the participants, the experiment involves human data collection.

A few other ethical issues were raised by members of the Ethical Advisory Board. First, it must be made sure that everyone can play. That there is no exclusion of the handicapped, elderly, or others. Second, it has to be considered that some people will need comfort after they virtually killed an opponent and other people will need help to cope with their failure.

16 Please check page 8.
Individual participation during the replay and debate stages will be promoted, but no one will ever be forced to take part in an audio or video call aimed at the whole audience present at the Tholos projection room. Participants incurring in foul language or disrespectful/offending comments will see their comments discarded by the experts (even to the point of disabling any further input), but the process will be driven by identification on the device in question, not the person.

The REENACT experiment will comply with the Audiovisual Media Services Directive 2010/13/EU to the extent it is applicable. Due to the focus on historical conflicts, special attention will be paid to Article 6 ‘Prohibition of incitement to hatred’, by which the experiment must not contain any incitement to hatred based on race, sex, religion or nationality. In this regard, the vision of UVIGO is that “education is awareness and understanding, not indoctrination”. Therefore, the experiment will seek to promote the understanding of battles and wars from an objective and neutral presentation far beyond the traditional approach that labels the good and evil forces from the very beginning.

Application of principles and concerns

1° Informed consent – All users will be informed about the aforementioned aspects before the re-enactment stage starts, and they will have to agree on them by ticking a checkbox in the mobile application upon startup. To participate only two requirements are set for the museum visitors-participants: first, a basic level of English is asked for, and second, a certain familiarity with tactile mobile devices is necessary. Nevertheless, to be sure the consent is freely given only adults will be participating in the experiment. Minors are not allowed.

The experiment’s goals, the overall procedure, their role in the experiment, the nature of the gathered data, the handling of the data etc. will be explained in detail to every candidate, both aurally and in writing. A written consent will be acquired.

2° Deception – the participants will not be deceived or mislead about the purpose and the general nature of the experiments. Neither will any kind of information be withhold from them.

3° Data collection – STORAGE. Some key features of the REENACT experiences are enabled by having a detailed record of the actions made by visitors to the FHW during the re-enactment stage, as well as the comments, ratings and the like they enter during the subsequent replay and debate stages. This means, for each participant, UVIGO will be handling a record of the actions he performs through a tactile mobile device made during the re-enactment stage, and of the comments and ratings they enter during the subsequent replay and debate stages. In addition, offline questionnaires may be provided for the participants to fill in at the end of the experience or later by email.

The data will be gathered automatically during the REENACT experiences. Only the information from the questionnaires will be stored later.

The data will be stored in computers belonging to the proponent’s research group in the University of Vigo. There will be no cross-border exchanges.
The data will be stored permanently in servers of the proponent research group. Any information that might serve to identify a specific individual (e.g. email address) will be deleted at the end of the experiment.

CONTENT. The record will be totally anonymous, inasmuch as the data will be linked to the participants’ avatars in the augmented-reality world of re-enactment, not to any personal data that may serve to identify a given individual. Real names or email addresses will not be recorded, even if the participants return some questionnaires by e-mail. The data will be anonymised.

ACCESS. No third parties will be allowed to access the data, and no transfers will be permitted. Only the members of the proponent research group and whoever is granted access according to the rules of the project can have access to the data. There will be admin logs. The administrator can manipulate the data, even though the integrity of the data will be protected by hash codes.

4° Withdrawal from the investigation – Participants will be informed about their rights to withdraw from the experiment at any time, irrespective of whether some incentive has been offered and accepted and to require the destruction of generated data collected with their contribution.

5° Observational research – Since the Hellenic World is a public venue it is expected to include observational research. This public venue includes individuals being observed without their given consent. Therefore such observations can only be made in situations where those observed would expect to be observed and possibly recorded by strangers.

6° Data protection regulation – The REENACT experiment will fully acknowledge existing legislation as regards ethical issues related to privacy and personal data protection, which has been a focal point of the European Community actions since Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995, on the protection of individuals with regard to the processing of personal data and on the free movement of these data.

7° Consortium partner responsibility – EXPERIMEDIA partners are invited to monitor and follow the REENACT experiment. In case of any concern, it will be considered and treated accordingly.

8° Concerns raised – Concerning the possibility of sending text to specific individuals (identified by nickname or avatar) and posting to Facebook or Twitter, the issues on data protection and social networks has to be clarified.
6. Conclusion

The purpose of this deliverable was to provide an ethical overview of the First Open Call experiments in the EXPERIMEDIA project. To provide such an analysis the design, the concept and the methodology of each venue experiment was reiterated. Thus, the Schladming venue, the CAR venue and the FHW venue were shortly discussed in the first section. Besides, also the new First Open Call experiments, namely DigitalSchladming, MEDIAConnect, CONFetti, 3D Gymnastics, BLUE and REENACT, were illustrated through a clear scenario of the experiments, followed by a notice of the concept (section 3).

Thereafter the Ethical Oversight principles were reviewed. In this matter, the second paragraph discusses the ‘Ethical Guidelines for undertaking ICT research in FP7’, the third paragraph the ‘Ethical Issues Table’ and the ‘Ethical Oversight Principles’ and the fourth one the ‘General compliance’. In the fifth paragraph the ‘General compliance with the regulatory framework’ is repeated and finally in the last paragraph also the proposed ‘Checklist for experimenters’ is repeated (section 4).

Such a summary of EXPERIMEDIA’s logistics, principles and facts and figures made it possible to review each of the First Open Call experiments in the light of the project’s ethical requirements (section 5).

In that way it must be stated that the EXPERIMEDIA project partners are on a good way to ensure the ethical and legal compliance of their experiment. This current situation is achieved through a thorough cooperation between all technical partners with the legal partner KU Leuven (ICRI). Besides, the management of this process is additionally enhanced by the guidance offered to the project partners by the Ethical Advisory Board. The continuing cooperation to make the experiments socially and ethically viable and at the same time legally compliant led to the following concluding thoughts. First of all, the presented six First Open Call experiments will collect personal data of their participants, which means that the experiments involve human data collection. Therefore, participants need to be protected by national and European data protection legislation, such as Directive 95/46/EC on the protection of individuals with regard to the processing of personal data and on the free movement of such data. To comply with the EU data protection regulation, participants will be informed of the research objectives and all other aspects of the research that might reasonably be expected to influence willingness to participate – this information is of course given before participation. Therefore, the participants’ decision will constitute an informed consent. Moreover, participants will never be intentionally deceived or mislead. And finally, participants may withdraw from the research at any time. All these requirements have been well communicated to the participating partners by the EAB and the legal partner. The partners in charge of the experiments are determined to make sure that their experiments are legally and ethically accepted by the individuals involved and comply with the applicable legislations.