

Call to order

The 1st meeting of IEEE CTsoc Human-Machine Interaction and User Experience Technical Committee (HMI) was held on Zoom on 2021-05-03 11:00AM - 12:35AM UTC.

Attendees

1. Bill Kapralos (Vice-Chair)
2. David Murphy
3. Davide Calandra (Secretary)
4. Luca Romeo
5. Kenichiro Ito
6. Kingkarn Sookhanaphibarn (Chair)
7. Takuya Hashimoto
8. Vasileios Kaburlasos

Agenda Items

- Reorganization from Stream to Committees
- Overview on P&Ps
- Tentative HMI-COM P&Ps
- Invitation of candidates to join HMI-COM
- Other issues
- Discussion, Q&As

1. Welcome by Chair [5min]

Kingkarn Sookhanaphibarn (Chair) welcomes the participants and starts sharing a presentation. The meeting agenda and the new Secretary (Davide Calandra) are presented.

2. Reorganization from Stream to Committees [20min]

The Chair explains the technical streams to technical committee transition. The requirement for bi-monthly meetings is highlighted.

The Chair explains the role of the objectives of the TC and the role of the TC Board.

The plan for starting up the activities is displayed, highlighting the following items:

- Finalizing the roster and define the charter;
- Define their P&P;
- Criteria for defining “active” members.

The Chair asks for questions. No questions from the participants.

The Secretary adds that the P&P should not be defined by every TC, but a single P&P document is going to be discussed in the following days.

3. Overview on P&Ps [10min]

Bill Kapralos (Vice-Chair) takes the floor and shares his screen. The document “HMI Mission and Objective” is shown and commented.

Vasileios Kaburlasos asks if he needs to be an IEEE member to be in the HMI TC. Vice-Chair responds that is not required.

David Murphy asks for confirmation that he, as former IEEE member, does not have the right to vote. Chair responds that until July 2021 the policy is that one (only CT members that are also CTSoc members can vote), then the policy may be changed.

4. Tentative HMI-COM P&Ps [10min]

The Vice-Chair illustrates the HMI-COM P&P, the organization structure, and the membership. The minimum requirements for membership are displayed:

- Have been active in the Technical Committee for the past three years.
- Participate in Technical Committee meetings.
- Assist in the conduct of Technical Committee business.
- Be included in the Technical Committee mailing list.

Role and duties of the elected and appointed officers are explained.

Nomination and election of subcommittee are illustrated.

5. Invitation of candidates to join HMI-COM and 6. Other Issues [5min]

Chair re-takes the floor and recover the presentation.

The invitation of candidates to join HMI-COM is discussed.

Other issues are reported.

Members are invited to update the e-mail and affiliation for the webpage of HMI-COM, also addressing duplicates in the Google group.

The elected editorial board of IEEE ACCESS-Section on CTSoc is reported.

7. Discussion, Q&As [45min]

David Murphy asks, regarding the voting right, if a non-IEEE member can vote within the CT (not for election). The Chair and Vice-Chair are not completely clear on that, so they will ask for clarifications and report them to all the CT members.

David Murphy suggests that it could be useful, for all the CT members, to draw up a code of ethics for designing experiments in VR. This could be done by drafting up some guidelines for people who run laboratories, involving aspects such health and safety. Inputs from the TC could be used to support the creation of best practice documents. For example, questionable aspects or dubious practices may be considered, such as the privacy issues with recent commercial VR

systems, constantly collecting user data (biometrics, bio signals, etc.). Vice-chair confirms that this is a hot topic, and he makes a reference to the use of such devices in hospitals.

David Murphy drafts a list of key points:

1. Accessibility (disability support and design perspective)
2. Localization
3. Multimodality (not only vision and sound, but also haptics, smell, which have no supporting frameworks, documents, or guidelines)
4. Interoperability

Vasileios Kaburlasos, regarding the multimodality aspect, highlights the importance for modeling and data. He mentions the need for new mathematical frameworks for developing models for HMI (Euclidean space, events in the probability space, symbols, and other mathematical tools to try to use with HMI).

The Vice-chair agrees and mentions the use of machine learning too.

David Murphy talks about full-stack development of XR applications, mentioning WebXR and OpenXR as examples of software and hardware-level frameworks. Then, he points out the lack of a middleware between them, that should be defined to enable true interoperability between software and hardware from the perspective of the user (e.g., to move from one experience or platform to another in a smooth way, for example for multi-user spaces and collaboration). A parallelism to video-conference solutions (e.g., Zoom, WebEx) is made, in which user has to adapt when moving from one service to another, but ideally the system should adapt to the user instead.

The Vice-chair reinforces the idea that the user interface should be adapted to the user. He hopes in further discussion on the topic. Other issues are mentioned: e.g., sanitizing headsets instead of buying extra headsets.

The Secretary returns on the “code of ethics” topic, pointing out the issues of submitting VR experiments to ethics boards for delicate aspects such as motion sickness. The previously mentioned guidelines would be helpful for this purpose.

David Murphy states that if standard framework for ethics in VR experiments will be created, it would be easier for ethical boards of research organizations to allow these experiments.

Vasileios Kaburlasos says these rules may be different from country to country.

David Murphy says that we could share out experiences to draw up a consensus that could be submitted to ethics boards.

Vasileios Kaburlasos point out the issues of the different cultural background that cannot be quantified easily.

David Murphy asks if participants can share our area of interest. Vice-chair asks to the members if they can provide a short description of the research interests to be shared with all the members and put on the website.