



The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

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Laureate

Organization:
Universidad Carlos III de Madrid

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<http://www.uc3m.es>

Project Name:
UC3MTitling

What social/humanitarian issue was the project designed to address? What specific metrics did you use to measure the project's success?

More than 5% of worldwide population has a sensory disability (blindness or deafness). In the U.S., around 12 million persons 5 years old and over have sensory disabilities, according to the U.S. Census Bureau, 2006 American Community Survey. In order to fully achieve the integration of people with disabilities with equal opportunities, it is necessary to provide them with elements of accessibility to any cultural event (theatre plays, conferences, galas, etc.). Also, the aged population is increasing and age-related visual and auditory problems are common today. Due to these facts, these groups of people are at risk of exclusion. Accessibility to live events, such as galas or theatre plays, is a key challenge in order to achieve shared leisure among people with and without disabilities. While non-live events (such as a projection of a movie) allow the possibility to check accessibility beforehand, live events require immediacy, and they are subject to variables that could be out of control (like improvisations), requiring the presence of technicians at the site at which the event is occurring. In order to avoid the above mentioned problems, a tool has been developed that incorporates the functionality required to control, via mobile communications networks, the synchronized projection of accessibility elements (captions, video with sign language and audio description) through various channels associated with the place where the event is occurring. For measuring the project's success, a number of attendants to pilot events were interviewed, obtaining unanimous acceptance (see video <http://youtu.be/X8oHwFs8EeY>).

Please describe the technologies used and how those technologies were deployed in an innovative way. Also, please include any technical or other challenges that were overcome for the successful implementation of the project.

The tool takes advantage of the current state of mobile communication technologies to achieve a new way of remote titling and in real-time of events for an audience, without the need for highly qualified staff. Its scope is live events based on a preset script, theatre, lectures, ceremonies, etc., allowing the issuance of any element of remote access in sync with the development of the live event at a low cost. The main advantage is that the technician can perform this synchronization without having to go to the room where the event is being performed live. Thanks to mobile communications and tools to make calls over the Internet (VoIP calls), he can follow its course from anywhere. Once the technician begins broadcasting the accessibility elements, they may be broadcasted in the room for different channels according to their characteristics: title text, audio for audio description and video for sign language. And thanks to the high compatibility of the chosen format, they can be accessed simultaneously from different mobile devices by the audience of the performance (Appendix 1). The current state of communications technology opens a wide range of possibilities for interaction in living room devices and for remote interaction with the technician in charge of the projection of subtitles. Communication between emission devices in the room can be made with direct connection between them, or using wireless connections or 4G or EG technology depending on availability. On the other hand, communication between the technician and the system is performed using direct communications to the Internet, if the place where the event permits, or by 4G or EG mobile communication technologies.

Please list the specific humanitarian benefits the project has yielded so far.

In order to check the success of the project, several theatre plays has been made accessible by means of the tool. Also galas of Goya awards (Spanish cinema awards) and San Sebastian International Film Festival (Appendix 2) were made accessible using the proposed tool. Attendants with disabilities or problems were able to follow and enjoy the events. The interviewed attendants expressed their satisfaction with the accessibility. Attendants without disabilities remarked that the accessibility elements also helped them to follow the event. All attendants remarked their satisfaction with the fact that people with deafness or blindness could enjoy the same event with their friends who have no disabilities. It was the very first time in which groups of friends (with and without disabilities) could enjoy the same event. The lack of accessibility in cultural events produces situation of discrimination and exclusion to people with disabilities. We would like to remark the fact that many people without disabilities will have vision or hearing problems due to aging. This could not be considered as a disability. However, it limits equal access to events. In this way, the humanitarian benefits are twofold: people with sensory disabilities and people whose vision or hearing capabilities are reduced due to the age are able to access the same events that the rest of the people (friends, familiars, coworkers). In any case, the project allows accessing the culture to people that usually have problems doing that. This is a great step in the way to achieve the shared leisure for integrating people with disabilities and in risk of exclusion.

Please provide the best example of how the project has benefited a specific individual, enterprise or organization. Feel free to include personal quotes from individuals who have directly benefited from the work.

Thanks to this project several sessions at Spanish theatres have been accessible via closed captioning for the hearing impaired. For example, the play "Woyzeck," at the Maria Guerrero theatre in Madrid, and the plays "Macbeth" and "La Celestina" at the International Classical Theatre Festival of Almagro have had functions that were accessible to people with visual and hearing disabilities. These are the comments of some of the attendees: 1) "I was in the theatre

watching Macbeth at the theatre in Almagro. I can only say that I was left with an open mouth. Even more than the staging I loved the subtitling that I "heard." It was great as always. It was a shame that I couldn't go to see the Celestina; we were a large group of people from Ciudad Real, but we only managed to get tickets in the henhouse, because we almost couldn't get any at all."

2) "All agreed they were great subtitles. As an anecdote, by my side was a woman who had been deaf for three years and was also very fond of the theatre and she was very happy because she thought that she could never go again, Her friends didn't know she had lost her hearing and told me the first time. I saw her crying and I assumed it was the due to the excitement." Finally, a special effort has been made to provide affordable entertainment for children and adults with disabilities over Christmas 2011 (Appendix 3); three plays have been subtitled and audio described from among the most highly valued by viewers. The collaboration has also allowed the Maravillas Theatre and the Abadia Theatre in Madrid to know the implications and acceptance of the accessibility by the public. View comments of children and parents in the video: <http://youtu.be/X8oHwFs8EeY> .