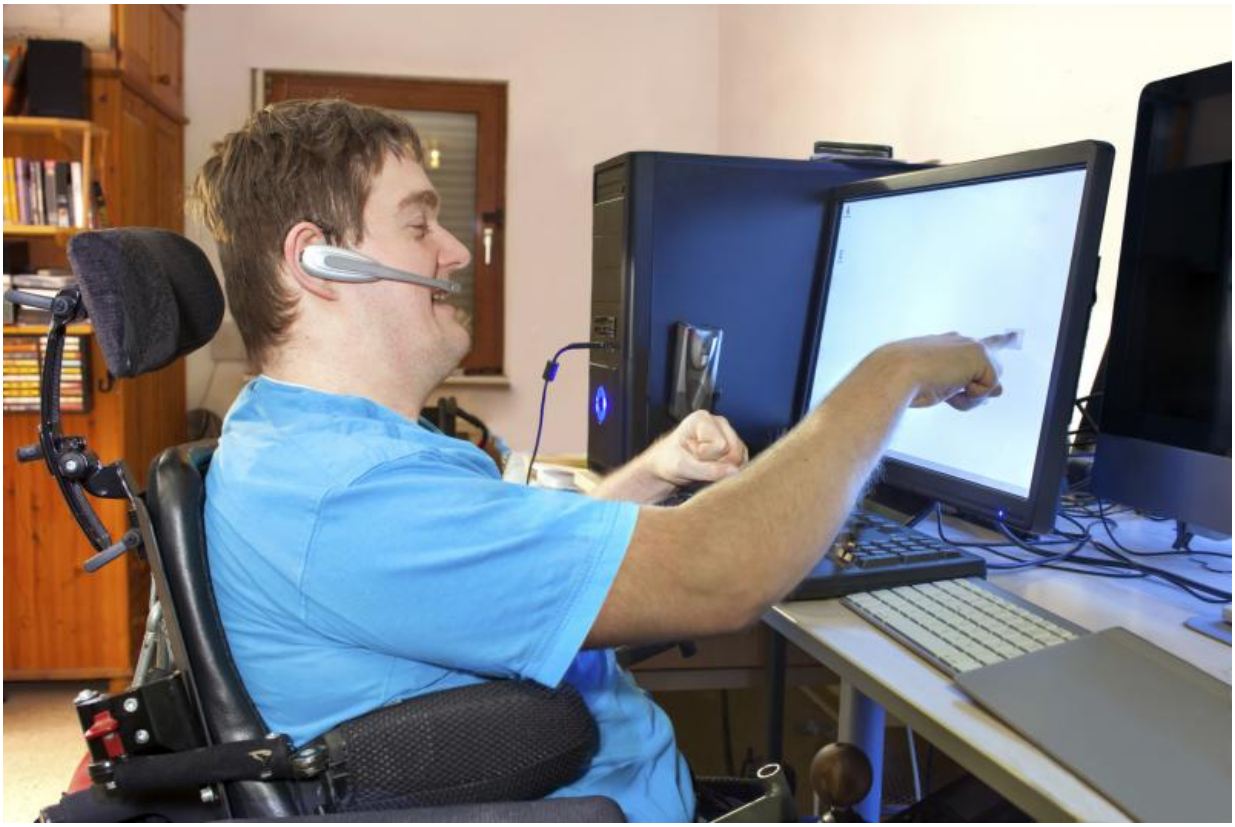
Cloud-based infrastructure for Internet users with special needs

July 7 2015



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EU researchers are developing a new, broad-ranging, cloud-based infrastructure that makes the Internet more accessible for users with special needs. The new 'ecosystem' enables people previously excluded

from ICT to get help using technology and aims to use their feedback to develop new apps and services.

Many people, such as the elderly, disabled, blind and visually impaired, feel excluded from Information and Communications Technologies (ICT) because they have difficulties using them. Others simply find technology too complicated and struggle to make sense of standard interfaces. The EU supports so-called 'e-Inclusion' projects, which aim to bring these potential users into the fold, whether to shop online, apply for a job or call for assistance.

PROSPERITY4ALL, a four-year project running until 2018, builds on the earlier CLOUD4ALL, which developed preference management tools for people with special needs to auto-configure their computers, tablets and smartphones, making them easier to use.

The task of PROSPERITY4ALL is to build 'behind-the-screens' technical infrastructure that allows these users to access assistive technologies and services. This also involves bringing together software and component developers to get them to innovate on behalf of people with special needs, as project coordinator Matthias Peissner, of Germany's Fraunhofer research institute, explains: 'By prosperity for all, we mean that the different stakeholders who offer accessible technologies also benefit from the setting up of this technical and social infrastructure.'

Building an ecosystem where end users meet developers

CLOUD4ALL allowed users to establish a common preference set or 'key' stored in the cloud, which contains their pre-selected personal preferences, for example screen colours, text size and fonts in which

they like information to be presented to them. The 'key' gives them access to any compatible device, anywhere (be that in a public library, museum or at home), and allows them to see information presented in exactly the way they prefer. Text-to-speech converters enabling blind people to listen to information published in written form, at the speed, in the language and voice they choose, is another tool that can also be 'carried' in the 'key'.

PROSPERITY4ALL's job is to help spread such technology and it is doing this through three interconnected platforms: the "unified listing", a searchable "online catalog" providing special needs users with a large range of different assistive products and services; "the developerSpace", bringing software and product developers together through a portal, giving them access to a large number of resources, from common application programming interfaces (APIs) to guidance on component standards, as well as opportunities for crowdsourcing, and; "the openMarketplace", a commercial platform where solutions can be offered internationally.

The project aims to create a 'pull' market for assistive technologies by exploring mechanisms for users to feed back to developers, telling them what works best and what is missing, so that they can 'pull' companies into coming up with new ideas that make their lives easier. It also plans to set up 'Assistance on Demand' services where vulnerable people can use their devices to call for help from relatives or carers should they fall or get lost, for instance.

EU involvement in the global e-Inclusion initiative

PROSPERITY4ALL feeds into the Global Public Inclusive Infrastructure (GPII), a larger international initiative that has more than 60 academic, industry and non-governmental organisations working in different e-Inclusion projects worldwide.

'You could say PROSPERITY4ALL is the European contribution to the wider global initiative to ensure that in some form or other the whole world population has direct access to technology, devices, services and the Internet,' said Matthias.

PROSPERITY4ALL, which is receiving investment of EUR 7.7 million from FP7, brings together 24 partners in 13 countries, ranging from end user groups and research institutes to developers and technology manufacturers.

Provided by CORDIS