The European project 'digital.me' opens its code

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The EU's "digital.me" project brings Fraunhofer IAO together with seven research and industry partners to develop a system for user-controlled social networks and services that can serve as a central hub for managing a user's various digital identities. The project has now released the source code from its software development work as an open-source project.

The use of personal information for private and business life is a trend in our increasingly information-driven society. With the rise of social media, individuals are revealing more personal data online than ever before. This data disclosure provides value to users, such as enhancing social contacts or obtaining personalized services and products.

However, the existing social internet makes it difficult for using personal information in a controlled way while retaining privacy where required.

In 2010, a group of European research organizations and industrial companies started to investigate technology that would enable users to share their personal data in a controlled, trustworthy and intelligent way. Their collaborative project, digital.me (funded by the European Union Seventh Framework Programme (FP7/2007- 2013), grant agreement n° 257787), is aimed at researching social technology that incorporates user control deep within its design. The project's approach is to develop a technical platform with "di.me userware" as its central component. di.me userware is a personal tool that can run under the user's control and offers social networking functionality, e.g. messaging.

Central to the research is that the system should be thoroughly based on semantic technology to realize intelligent system recommendations and advice. The semantic model is also used to integrate external services. di.me allows connections with external information, e.g. from social networking platforms. This means profiles from other systems can be synchronized and integrated into the di.me semantic store. As a result, information can be compared across different sources and overviews of different data sources can be shown. The project consortium has developed the di.me platform incorporating new paradigms of social networking and service development:

- **Decentralization**: di.me realizes a decentralized social network that offers each person their own system holding their own personal data. A user can communicate via peer-to-peer technology with other users, without needing to trust an external server. di.me can operate in two different modes: as a group server hosting multiple user accounts, or as a single-user server that may run on a user's computer.
- **Multiple Identity Management**: The di.me platform is

designed to support many user identities within one system. By switching between unique profiles, a single user can assume names or aliases, and show different information to people. This means roles for several life spheres can be managed in a single system. The semantic core of di.me allows analysis of information revealed and generates warnings for the user, e.g. if disclosure might allow the identities to be linked.

- **Trust Management and Recommendations**: In di.me, users can tag data privacy or decide which of their contacts are trustworthy. This information enables the di.me system to become smart: A trust engine component analyzes user actions and presents warnings, e.g. when users are about to send critical data to untrusted contacts or share data in the wrong social context.

To involve users in the development, the di.me consortium has set up a prototype aimed at proving that this new paradigm is feasible. This trial allows participating users to give feedback for scientific evaluation.

The di.me consortium is now honored to announce the open-source publication of the di.me code. di.me is extensible and the publication of its code enables developers to use it as a basis for further initiatives. As trends change, further data sources can be connected, and this will permit the integration of more information from additional personal devices, gadgets, services, and social networks. The functionality currently covered in the demonstrator can be extended e.g. to specialized social services.

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