NR ⊕ Norsk Regnesentral NORWEGIAN COMPUTING CENTER

Inclusive Security & Privacy

The Norwegian Computing Center (NR) specializes in Security and Privacy, e-Inclusion and Digital Accessibility, and Smart Information Systems and Content. Our aim is to research and help build secure, privacy-aware, and inclusive solutions.

"The most secure solution is one that is not accessible."

It is not straightforward to build secure, privacy-aware, trustworthy ICT solutions that are simultaneously accessible and easy to use because these goals typically oppose each other. Yet, some of NR's special competences lie at the intersection of security and accessibility.

Key to success

While our Security Group addresses the topics privacy, security, and trust, the experts in the e-Inclusion Group take care of matters related to digital inclusion and universal design, accessibility, and usability. In addition, we rely on the knowledge and skills available

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Selected projects

- Inclusive design of ICT-based solutions for registration and authentication
- Accessibility and usability evaluation of the upcoming Norwegian electronic voting solution
- Usable trust in the Internet of Things
- Universal design of multi-modal user interfaces
- Situated Adaptive Guidance for the Mobile Elderly

in the Smart Information Systems Group, whose members build just about anything from heavy-duty server software to lightweight and mobile client applications while being responsible for content production, processing, and management.

Example achievements

Our past solutions include:

- an inclusive login server based on OpenID, with multimodal authentication and authorization mechanisms, and personalized user profiles;
- a highly usable and accessible social-media payment application for sharing of bills among friends;
- a simplified login mechanism for

secure and more inclusive access to public services;

- reports on accessibility, usability, and security evaluations of prototypes in payment solutions, smart homes, and smart offices;
- development of a tool for conducting surveys on mobile phones in a secure manner; and
- an evaluation report on the accessibility and usability of e-voting in the light of usable security and privacy.

Our work ranges from applied-innovation projects lasting a few weeks for customers in the private and public sector to multi-year international research projects funded by the Norwegian Research Council and the EU.

eInclusion Group at NR

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About our Group

The eInclusion Group works in the area universal design of Information and Communication Technology (ICT), eAccessibility, and Usability.

The Group is part of Norwegian Computing Center (Norsk Regnesentral, NR), a non-profit research institute established in 1952 and located near Oslo Innovation Center. NR's vision is *«Useful research results that make a difference».*

Our mission

The objective of our work is to let as many as possible participate in the information and communication society, and to give users great digital experiences. To accomplish this, we address the topics universal design, accessibility, and usability in all our projects. We are particularly interested in how solutions work on a variety of devices, in different contexts and situations, and with a wide diversity of users.

Target groups

Often, our target groups contain elderly and individuals with different needs, abilities, and impairments. This includes sensor, motor, and cognition deficiencies, such as reading and writing difficulties.

Collaboration

Our Group cooperates closely with other expert groups, such as NR's Smart Information Systems Group

Key personnel

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regarding for instance the application of multimodality techniques and multimedia content, and with NR's Security Group with regard to, for example, inclusive identity management. We also participate with both small and large national and international research group consortia.

Funding

While one part of our work is funded by the public, such as Norwegian Research Council and EU, we are also engaging in applied small-scale research and innovation projects for the private sector, organizations, and authorities.

Opportunities

We are constantly looking for new research opportunities; please contact our staff with your inquiry!

Selected customers:

- Ministry of Local Government and Regional Development
- Directorate of Health
- Agency for Public Management and eGovernment
- Labor and Welfare Service

Among our partners:

- Center for Usability Research & Engineering (Austria)
- Telefonica (Spain)
- Chemnitz University of Technology (Germany)
- Teamnet (Romania)

Services

- Accessibility and usability evaluations
- Technical, expert, and user studies and testing, tools, and methods
- ICT solutions from concept to prototype, re-/design, implementation, integration, testing
- Technical consulting and assistance
- Monitoring, reporting
- R&D leadership and innovation support
- Project proposals, tenders, and R&D funding
- PhD and student supervision
- Seminars, workshops, conferences, talks and presentations, training, teaching