D7.1 Project website and logo

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1.0	23.7.2023	Final	Aalto	First final version

Executive Summary

This deliverable describes the design and implementation of the HOLDEN project public website. The HOLDEN website includes an outline our network, and contain research information (e.g., project results, published papers, news items) for community building across the project while creating visibility within the research community, industry, and government.

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1. Introduction

1.1 About HOLDEN

The Ubiquitous perception, by sensing of objects, subjects and gestures, is a pivotal challenge for future technology: it enables personalized services such as smart living, automated logistics or interaction through free-space gestures. However, it also challenges ethical and moral boundaries and threatens privacy. HOLDEN proposes a radically new approach to perception by concisely analysing ethical constraints and privacy risks while re-thinking RF-based sensing. We establish necessary conditions for privacy preserving and ethically compliant sensing and develop new paradigms respecting these constraints.

For the first time ever, HOLDEN constitutes a concentrated effort to explore social aspects of RF-sensing to guide the technological advance and to derive technology for ethically and privacy compliant perception. Central to HOLDEN is the development of ethical and privacy constraints. We use these findings to derive privacy and ethically compliant concepts for RF-based perception. We will develop a system of distributed multi-antenna devices for simultaneous multitarget recognition and ubiquitous perception with unprecedented accuracy, which constitutes a radical paradigm shift from a technology-centric perspective to a privacy-centric one via privacy by design.

HOLDEN achieves this goal along three high risk, complementary, and privacy-centric paths:

Path 1: Continuous-space measurement points: Radio-based 3D vision by holographic image processing of RF wavefronts.

Path 2: Discrete-space measurement points: Advanced 3D beamforming for human-scale recognition and tracking through dense massive connected antenna arrays.

Path 3: Signal processing and learning: High-dimensional tensor processing for the distinction of complex activities and motion from massive-dimensional RF data. The resulting breakthrough approaches and algorithms will be compared against application-level benchmarks via usage scenarios in the fields of logistics, smart living, and free-space

1.2 Partners

The consortium consists of 4 academic partners and a high-tech SME partner: (a) Aalto University (AALTO), Finland, (b) Technical University Munch (TUM), Germany, (c) Consiglio Nazionale Ricerche (CNR), Italy, (d) University of Twente (TWE), Netherlands, and (e) Adant (Adant), Italy. This consortium features the specialized and complementary expertise required to achieve the project objectives. AALTO will be responsible for the project management (WP1), covered by an experienced and dedicated project manager. Ethical aspects (WP2), will be addressed by TWE (Prof. Ciano Aydin) who is a pioneer in the field. In particular, eventual gender differences in the ethical perception will be taken into account. TUM pioneered RF holography, which makes TUM (Prof. Thomas Eibert/Josef Knapp) the ideal leader of WP3. In advanced distributed signal and information processing, CNR has through Prof. Savazzi Stefano and Vittorio Rampa more than 14 years of experience. CNR will lead WP4. Since more than 10 years, AALTO is active in radio sensing and machine learning based activity recognition. This expertise makes AALTO (Prof. Sigg) the ideal leader of WP5. Adant (Daniele Piazza) will contribute to the market analysis, application possibilities, and validation (WP6). Led by AALTO, dissemination with the website as one the media will be addressed by all partners. All academic partners are committed to early publication of results e.g. via arXiv (open science).

2. Website design

2.1 General description

The HOLDEN website (holden-project.eu) functions as the main information hub gathering details about the project's background and main goals, partners involved, past and present activities, research information (e.g. project results, published papers, etc.) and future plans for community building across the project while creating visibility within the research community, industry and government. To make sure the site is engaging and up to date, it also involves a blog that will be populated with news from project activities. The web page was designed to be browsed both on traditional computer displays and on smartphones and tablets.

Future iterations of the website will include updates on publications, events, awards, and other news etc.

The current version of the project website was launched at the end of July 2023.

2.1.1 Roles and background

The website design, domain name and implementations plans were discussed and initiated at joint project meetings during June 2023. The lead beneficiary for creating the website is Aalto, and website was developed by Unigrafia, Finland and website server services provided by Seravo, Finland. Website servers are located in Finland within the EU borders and website uses Matomo open source website analytics platform to meet EU's data management regulations.

2.2 Sitemap

Based on initial meeting and conversations with WP leaders the following website sitemap was agreed to be used (see Table 1). The website is being developed in collaboration with appointed developer and project partners. The HOLDEN logo was designed and created by partners at TUM and the visual elements for the website by project partners and Unigrafia. Figure 1 shows a screenshot of the HOLDEN project website.

Table 1 – HOLDEN website sitemap

	Website drop-down menus	Description of the content
	Home	• HOLDEN logo, and visuals • A short HOLDEN project introduction
	Project Overview	• "About": short project content description • "HOLDEN Objectives": description of HOLDEN Objectives • "Key Work Packages": description of the project work packages with their anticipated outcomes
	Partners	• Lead beneficiary (partners) names and their logos.
	Deliverables	• List and a download link to public project deliverables published
	Publications & News	• List of project publications (updated frequently) • News feeds and short reports with the newest updates
	Contact	• HOLDEN Aalto Coordination Unit contact details

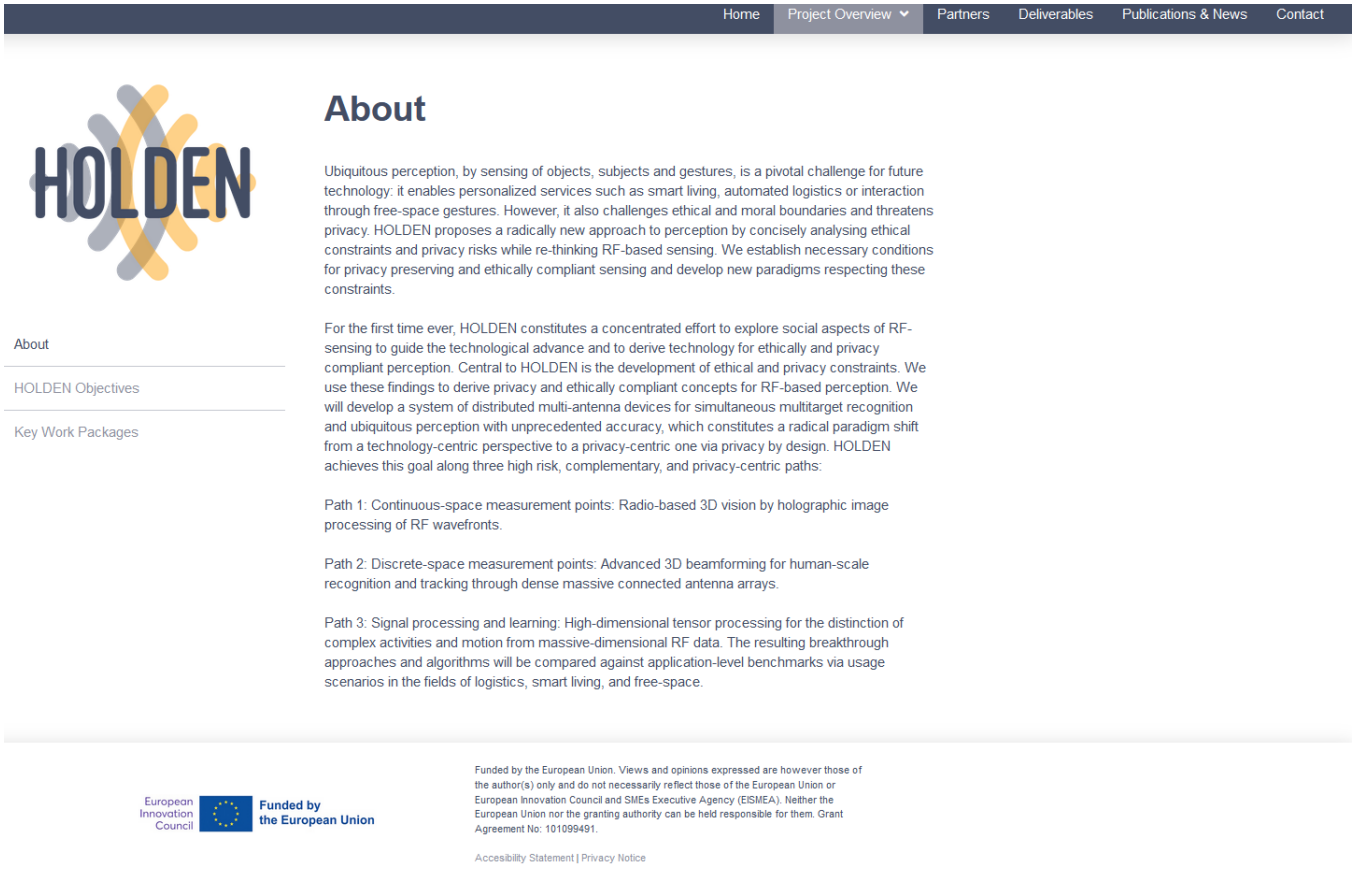

Figure 1 – An example screenshot of the HOLDEN website layout.

2.3 Visibility of the EU funding: Use of EU emblem

EU emblem in the website is accompanied with the following statement as required by the Grant Agreement:

“Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Innovation Council and SMEs Executive Agency (EISMEA). Neither the European Union nor the granting authority can be held responsible for them. Grant Agreement No: 101099491.”.

3. Summary and Website Updates

The HOLDEN website will be regularly updated during the project lifetime as the project practices and status evolves and requires adaptation procedures. The website updates are carried out by Aalto. The hosting of the website is secured for 4 years (2023-26) through an external service provider (Seravo, Finland). After 2026, the website will be migrated and archived as-is, on the Aalto University server.