Ambient Assisted Living

AAL Joint Programme

AAL-2011-4-040

ASSISTANT

Aiding **S**u**S**tainable **I**ndependent **S**enior **T**r**A**vellers to **N**avigate in **T**owns

Orientation and Navigation

D 1.5 Ethical Watch

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0.8	04/07/2014	Chapter 4	Update according to the feedback received from the European Commission in the mid-term project review	TECN

Executive summary

Beside an introduction referring to basic texts regarding ethical issues, the deliverable has two main purposes:

First, this deliverable will be a basis addressed to researcher to help them to organize the testing phases in order to harmonize it in the three countries (Spain, Austria and France) where it will take place. To achieve this goal, a template has been created, to be filled by researchers, as well as some advices to take into account before planning any test. This template will be adapted to the different stages of the testing phase in ASSISTANT project.

Then, the deliverable has, in its section 5, a document addressed to participants explaining how the testing phase will be organized, their rights and duties. It will be given to participants with the inform consent form. This document is an additional precaution to be sure that each participant is fully aware of how the testing phase will be managed and their role into it.

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1. Introduction

This deliverable summarizes the work done in Task 1.5 regarding ethical aspects during the project. It is complementary to the work of deliverable 5.2 Ethics Guidelines Handbook.

Ethics in the field of Ambient Assisted Living relates to what stakeholders involved in the process 'should' do, for the well-being of participants in the project, and of others who might be affected as a result of the project's activities. Consideration should also be given to "the common good". Ethics have importance for all stakeholders, at all levels of activity. This is why this deliverable focuses on procedures to follow before any interaction with third parties. The goal of this guideline is to protect the different stakeholder involved during the project's 36-months life-time. This document about ethical issues is applicable to all partners in the project.

As the ASSISTANT project has involved end-users' requirements since the beginning of the project, the establishment, and following, of an ethical procedure is fundamental. During the interview phase, ethical issues were covered at the beginning, by briefing each interviewer on what was required with respect to ethics. The French, Spanish and Austrian researchers, during the interviews with end users, have followed the following steps:

- Explain the ASSISTANT Project's aims,
- Explain the aims of the phase of the project in which they are participating
- Explain the role of the end-users.

A template has been created, and will be given to the end-users. The completed template in section 6 will be kept with the informed consent forms by the partner responsible for project ethics (e-Seniors).

It is important to note that this deliverable is not the only one dealing with ethics. The deliverable D5.2 Ethical Handbook also covers these issues. Deliverable D5.2 provides guidance on three main issues: experimental protocol, informed consent and anonymous data.

2. Ethical Watch updates

This deliverable will have an « in progress » dimension. At different stages of the project, the deliverable will be updated.

3. Opinions of the European Group on Ethics in Science and New Technologies

The group has formulated two opinions that are relevant to this project.

3.1. Ethical Issues of Healthcare in the Information Society, opinion n° 13, 30th of July 1999.

Even if this opinion was formulated fifteen years ago, these concerns are still relevant today. In this opinion, the group focuses on "ethical implications of the use of person identifiable personal health data"[1].

The group has drawn attention to different issues:

"- The pervasiveness of a technology which many people do not understand.
- The lack of transparency of the work of healthcare professionals and its effects on the doctor/patient relationship.
- The difficulty of respecting privacy and confidentiality when third parties may have a strong interest in getting access to electronically recorded and stored personal health data.
- The difficulty of ensuring the security of shared personal health data.
- The lack of adequate infrastructure in certain regions, and the absence of computer literacy in certain sections of the population, which may reinforce existing inequalities"[2].

Finally, the group issues a reminder that special care needs to be exercised regarding "vulnerable groups in society"[3].

3.2. Ethics on Information and Communication Technologies, opinion n°26, 22nd of February 2012.

During this recent opinion, the group developed an argument focused on ethical aspects. It is focused on several litigious issues, for instance, the "challenge of the concept of identity"[4]. This point is crucial for our project. The concept of identity is, indeed, fundamental to the issue of the protection of personal data, which is one of our main concerns regarding ethics.

The group expresses concern regarding a new set of problems arising as a result the "common sphere"[5] that has been created by the advent of the Internet.

4. Current EU frameworks for Personal Data Protection

The European institutions provide important legislation concerning the personal data protection, and these different regulations are ratified in the national laws within the European Union's member

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[1] Opinion 13 of the European Group on Ethics in Science and New Technologies, *Ethical Issues of Healthcare in the Information Society*, 30 July 1999, p.3.

[2] *Ibid*, p.8.

[3] *Ibid*, p.9.

[4] Opinion 26 of the European Group on Ethics in Science and New Technologies, Ethics of Information and Communication Technologies, 22 February 2012, p.37.

[5] *Ibid.*

countries. In this chapter, we will observe the regulations that set the legislative framework for the processing and management of all personal data, which concerns the ASSISTANT-project and all individuals that are involved in the project. Furthermore, the ASSISTANT consortium will carry out the project activities in the respect of these regulations. The European regulations will be the main guideline for all involvement of end-users and individuals in the different project phases, from the research phase (User-Centric Requirements Gathering and System Design – WP1) to the User Validation phase (WP3).

In order to understand better this chapter, it is important to give the definition of the notion "**Personal Data**" that can be any data that identifies individuals, such as a name, a telephone number, or a photo. The personal data is collected and used in many aspects of everyday life.

4.1. European Regulations on the Personal Data Protection

The European Union Charter of Fundamental Rights, adopted in 2000, has set out a whole range of civil, political, economic and social rights of the European Union's citizens and all persons resident in the EU.

Article 6, Article 7 and Article 8 explicitly state that liberty, security, privacy and the protection of personal data are fundamental rights. These articles are, therefore, a basis for our whole work regarding ethical issues. The charter even explicitly sets out the right of older people to lead a life of dignity and independence, with the ability to participate in social and cultural life. If we put this general statement in the context of ambient assisted living, some basic principles have particular relevance:

- Respect for privacy and private life
- Protection of personal data
- Respect for the integrity of a person
- Non-discrimination

The European Data Protection Directive (95/46/EC) was came into force in 1995, and until today it is the key regulation setting the common measures for the personal data protection within the European Union. The ASSISTANT consortium will pay special attention to be in line with this regulation, and especially its articles 6 and 7 that foreseen the following:

Article 6[6] of the Directive states that personal data must be:
1. Processed fairly and lawfully.
2. Collected for specified, explicit and legitimate purposes and not further processed in a way incompatible with those purposes.
3. Adequate, relevant and not excessive in relation to the purposes for which they are collected and/or further processed.
4. Accurate and, where necessary, kept up to date; every reasonable step must be taken to ensure that data which are inaccurate or incomplete, having regard to the purposes for which they were collected or for which they are further processed, are erased or rectified.

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[6] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31995L0046:en:HTML (consulted on the 23/05/2014)

5. Kept in a form that permits identification of data subjects for no longer than is necessary for the purposes for which the data were collected or for which they are further processed. Member States shall lay down appropriate safeguards for personal data stored for longer periods for historical, statistical or scientific use.

Furthermore, in Article 7 of the Directive, all processed personal data will be collected during the ASSISTANT project only with the given consent of the data subject (i.e. the individual who is the subject of personal data).

Another European directive that will be taken into consideration in the ASSISTANT-project actions is **the European Directive on Privacy and Electronic Communications (02/58/EC)[7]** because the personal data of ASSISTANT users will be saved in the "cloud". The Article 3 of the this directive states that: *"shall apply to the processing of personal data in connection with the provision of publicly available electronic communications services in public communications networks in the Community."*

Furthermore, the Article 4 precises that: *"The provider of a publicly available electronic communications service must take appropriate technical and organisational measures to safeguard security of its services, if necessary in conjunction with the provider of the public communications network with respect to network security."*

4.1 The Current Reform of the European Data Protection Directive

In recent years, with the advent of information technology, interest in the right to privacy has increased. With regard to the processing of personal data, the European Union aims to reform the Data Protection Directive (95/46/EC) in order to make it more simple and efficient.

The European Commission proposed this simplified and more effective directive in 2012. In March 2014, the European Parliament pronounced the favourable position of the majority within the Parliament and now the European Parliament starts the negotiation with the Council of the European Union. The final decision will be taken later this year by the Council of the ministers, as foresees the ordinary co-decision procedure of the European Union.[8]

The key changes in the European Data Protection Directive reform would be the following[9]:

- A 'right to be forgotten' will help people better manage data-protection risks online. When they no longer want their data to be processed and there are no legitimate grounds for retaining it, the data will be deleted.
- Whenever consent is required for data processing, it will have to be given explicitly, rather than be assumed.
- Easier access to one's owns data and the right of data portability, i.e. easier transfer of

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[7] http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32002L0058 (consulted on the 23/05/2014)

[8] http://europa.eu/rapid/press-release_MEMO-14-186_en.htm (consulted on the 23/05/2014)

[9] http://europa.eu/rapid/press-release_IP-12-46_en.htm?locale=en (consulted on the 23/05/2014)

personal data from one service provider to another.

- Companies and organizations will have to notify serious data breaches without undue delay, where feasible within 24 hours.
- A single set of rules on data protection, valid across the EU.
- Companies will only have to deal with a single national data protection authority – in the EU country where they have their main establishment.
- Individuals will have the right to refer all cases to their home national data protection authority, even when their personal data is processed outside their home country.
- EU rules will apply to companies not established in the EU, if they offer goods or services in the EU or monitor the online behavior of citizens.
- Increased responsibility and accountability for those processing personal data.
- Unnecessary administrative burdens such as notification requirements for companies processing personal data will be removed.
- National data protection authorities will be strengthened so they can better enforce the EU rules at home

The ASSISTANT-consortium will monitor this legislative reform throughout the project.

4.2 The measures of the ASSISTANT-project for Personal Data Protection

In the beginning of all end-user involvement in the project, the end-users will be given a presentation about the ASSISTANT-project and its goals, which enables them to understand their engagement vis-à-vis the project. All information of the participants' information document (chapter 5) will be given for the end-users before their involvement.

At the same time, the participants will be explained all issues related to the use of their personal data (such as their name, age or pictures) and they will be asked to give their consent for the scientific use of their personal data in the strict framework of the ASSISTANT-project. The end-users are free to ask questions and it will be underlined that no actions will be taken without their consent. All the end-user participants are asked to sing the informed consent form (see Annex 1) before they take part in the project.

Furthermore, the participants' experimental data, response forms and recording media will be kept in a secure place (either physically, or on an appropriately password protected computer file system). Extra care must be taken when using lengthy transcriptions of participants' responses, or location data, to maintain anonymity.

Participants' consent forms and all experiment data will be destroyed within one year of the ASSISTANT project's end (1st of June 2016).

5. Participants' information document

This document will serve as the guideline document regarding the necessary information that needs to be provided for all the end-users before the involvement in the project. This document ensures that the individual are aware about all the different aspects of their engagement for the project. Once the participants have received all necessary information and their questions have been responded, they will be asked to sing in the informed consent form (annex 1) that states notably that their participation in the project is voluntary and that they allow the ASSISTANT partners to use their personal data for the strictly defined scientific needs of the project.

The participants' information document will be adapted by each partner carrying out trials. An English version is available, followed by versions in Spanish, French German and Finnish.

PARTICIPANTS' INFORMATION DOCUMENT

INFORMATION ABOUT THE ORGANIZATION:

Name of the organization: ………………………………………………………………………………………………………

Address: ……….

Telephone number: ……..

Project title: ASSISTANT- Aiding Sustainable Independent Senior Travellers to Navigate in Towns (AAL-2011-4-040)

Name of the project manager:………………………………………………………………………………………………………

ABSTRACT OF THE PROJECT:

The ASSISTANT Project contributes to maintaining the mobility of older people in Europe, in order to safeguard their social and economic participation in an increasingly ageing society. It does this by helping them to travel safely and independently by public transport, and enabling them to relax and enjoy the journey whilst doing so.

ASSISTANT provides an on-line means of planning a trip, guidance on transfers when making multi-step journeys, an alert which tells the user when it is time to leave the vehicle, and assistance with getting from the vehicle to the final destination. Essentially, the project will offer seamless support for the entire length of a journey, across different means of public transport and in both rural and urban environments.

The system will use simple, but effective and robust, technology which can be accessed using a home computer and a mobile phone, and provides only information that is relevant at a particular time, using visual, audible and haptic cues. The system will have the capacity for detection and correction of any errors the user makes on a journey, and will be customized according to the precise needs and preferences of each user.

The project's end product will be a purchased application which is supported by a maintenance service, sold by the application producer.

DESCRIPTION

1- Methodology

In order to develop a product adapted to end users' needs, we need pertinent feedback. To gather needs, expectations and feelings about ASSISTANT, several methods will be used:

- Focus groups: questions asked in an interactive group setting where participants are free to talk with other group members.

- Interviews: questions asked during a face-to-face meeting.

- Trials: testing of the device in realistic conditions. The trials will cover use of the route design tool, as well as the Personal Navigation Device. Information about the field trials will be captured by,

    ▪ Think-aloud protocol

    ▪ Participant and simple observation

    ▪ Instrumented Personal Navigation Devices

2- Instruments used

During your participation, you could be asked to fill in some questionnaires and to express your opinions of the device. You will be asked to use devices such as a tablet or smartphone. In order to make you feel more comfortable, (and ensure trial uniformity), a short training workshop will be organized.

3- Recording issue

During interviews and focus groups, discussions will be recorded. Please fill in the informed consent form before starting any activity related to the project.

Similarly, during field trails, audio and video recording may be used, with appropriate user consent.

4- Time requirement

Interviews: one hour each

Focus groups: two hours

Tests: For the first phase, two iterations of one week each during which the device, and the route editor, will be lent to you in order for you to evaluate its accessibility, ease-of-learning and usability. For a week, you will use the ASSISTANT system during your journeys. You will be required to test the application and give us your feed-back on ASSISTANT's usability. The experience will be repeated for another week.

During the second phase, the most critical functionalities of the system will be evaluated. This will take place in a semi-controlled environment.

During the third and final phase, you will be asked to evaluate all aspects of ASSISTANT during a focus group, and then you will be able to use the ASSISTANT system at home during the following two weeks.

5- Tasks to be performed by the user

You are free to cease participation at any time, without notice.

You should read and understand the informed consent form before signing it.

You can ask any question, at any moment of the procedure, to the staff.

You commit yourself to take care of any item that is lent to you by the project.

RISKS

Risks for the participants are minimal, or the same as when they perform daily activities.

DATA PROTECTION

ASSISTANT partners guarantee the anonymity of end-users involved in the project.

Participants' consent form and all experimental data will be destroyed within one year of the ASSISTANT project's end (1st of June 2016).

DOCUMENT INFORMATIF A L'ATTENTION DES PARTICIPANTS

INFORMATIONS CONCERNANT L'ASSOCIATION :

Nom : Association e-Seniors

Adresse : 19 cité de Phalsbourg 75011 Paris

Numéro de téléphone : O6 24 39 64 34

Nom du projet : ASSISTANT- Aiding Sustainable Independent Senior Travellers to Navigate in Towns (AAL-2011-4-040)

Nom de la personne responsable du projet : Monique Epstein

RESUME DU PROJET

Le projet ASSISTANT a pour but de favoriser la mobilité des seniors afin de sauvegarder leur participation sociale et économique dans une société vieillissante. Pour se faire, ASSISTANT les aide à prendre les transports en commun de manière sûre et indépendante et leur permet ainsi de se détendre pendant leurs trajets.

ASSISTANT fournit un moyen en ligne de planifier un trajet, de guider l'utilisateur lors des correspondances (même en cas de correspondance entre deux moyens de transports différents), d'avertir l'utilisateur au moment où il doit quitter son moyen de transport et de lui permettre d'atteindre sa destination finale en lui fournissant un itinéraire. ASSISTANT est exploitable en milieu rural et urbain.

Le système utilisera une technologie simple mais efficace et robuste, accessible depuis un ordinateur et un téléphone portable. Il fournira des informations pertinentes au moment opportun en utilisant des alertes visuelles, sonores et haptiques. Le système aura la capacité de détecter et corriger n'importe quelle erreur faite par l'utilisateur lors de son trajet, et pourra personnaliser les itinéraires en fonction de ses besoins et préférences.

Le résultat du projet sera une application, couplée à un service de maintenance, qui sera vendue par le producteur de cette même application.

DESCRIPTION

1. Méthodologie

Afin de developper un produit adapté aux besoins de ses utilisateurs, nous avons besoins de consulter ces personnes et d'analyser leurs retours. Pour rassembler les besoins, attentes et impressions concernant ASSISTANT, plusieurs méthodes seront utilisées :

- Focus groups: questions posées à un groupe de personnes où ces dernières sont libres de discuter entre ells. Méthode interactive.

- Interviews: questions posées durant un entretien en face-à-face.

- Trials: tester ASSISTANT en conditions réelles. Les essais serviront à tester deux fonctions : le créateur d'itinéraires et l'outil de navigation personnelle. Les informations pertinentes de cet essai seront mises en lumière par :

- o Le fait qu'il sera demandé aux participants de penser à voix haute,

- o L'observation simple des participants,

- o Les appareils de navigation personnelle.

2. Instruments utilisés

Durant votre participation, vous pourrez être amenés à remplir des questionnaires et à donner votre avis sur ASSISTANT. Pendant la phase test, vous aurez à manipuler des objets (comme des tablettes numériques ou des smartphones). Afin de vous familiariser avec ces derniers (et de permettre l'uniformité des phases test dans les trois pays), une session de formation sera organisée.

3. Enregistrement

Les interviews, focus groups et discussions seront enregistrés. Un formulaire de consentement vous sera remis et les activités relatives au projet ne pourront commencer qu'une fois ce formulaire rempli.

De la même manière, durant la phase test, des enregistrements audio et vidéo pourront être effectués avec le consentement adéquat du participant.

4. Timing

Interviews: ils dureront une heure.

Focus group: durée de deux heures.

Tests: Pour la première phase, vous testerez ASSISTANT, et le créateur d'itinéraire, pendant une semaine. Ceci sera répété une fois. Vous pourrez donc évaluer l'accessibilité, la facilité et l'ergonomie d'ASSISTANT. Donc pendant une semaine, vous utiliserez ASSISTANT dans vos déplacements et nous donnerez vos retours et impressions.

Pour la seconde phase, les fonctionnalités les plus importantes seront évaluées. Ces tests seront effectués dans un environnement semi-contrôlé.

Enfin, dans la troisième phase, vous évaluerez ASSISTANT en focus groupes et vous pourrez emmener ASSISTANT chez vous pendant deux semaines afin d'évaluer les derniers aspects de l'application.

5. Droits et devoirs du participant

Vous savez que vous êtes libres de quitter la phase test du projet quand vous le voulez et sans préavis.

Vous avez lu et compris le formulaire de consentement.

Vous savez que vous pouvez poser toutes vos questions, à tout moment de la procédure, à l'équipe en charge des tests.

Vous vous engagez à prendre soin du matériel prêté par l'association.

RISQUES

Les risques pour les participants sont minimes, ou les mêmes que dans n'importe quelle activité de la vie quotidienne.

PROTECTION DES DONNEES

Les partenaires au projet ASSISTANT garantissent l'anonymat des personnes investies dans le projet.

Les formulaires de consentement ainsi que toutes les données collectées lors des tests seront détruits dans l'année suivant la fin du projet (au plus tard le 1er juin 2016).

INFORMACIÓN AL PARTICIPANTE

INFORMACIÓN DE LA ORGANIZACIÓN:

Nombre de la organización: TECNALIA

Dirección: Parque Tecnológico de San Sebastián. Paseo Mikeletegi, 1-3. 20009. Donostia-San Sebastián

Número de teléfono: 946 430 850

Título del proyecto: ASSISTANT- Aiding Sustainable Independent Senior Travellers to Navigate in Towns (AAL-2011-4-040)

Nombre del responsable del proyecto: Stefan Carmien

RESUMEN DEL PROYECTO:

El proyecto ASSISTANT contribuye al mantenimiento de la movilidad de las personas mayores en Europa, con el fin de salvaguardar su participación social y económica en una sociedad cada vez más envejecida. Para ello se pretende ayudarles a viajar en transporte público de manera segura e independiente, permitiéndoles relajarse y disfrutar del viaje.

ASSISTANT proporciona un sistema on-line para la planificación de viajes, guía en los transbordos, alertas para avisar a los usuarios cuándo deben bajarse del vehículo, y asistencia para llegar al destino final desde que dejan el vehículo. En esencia, el proyecto ofrecerá apoyo sin fisuras para todo el viaje, a lo largo de los diferentes medios de transporte público y tanto en entornos rurales como urbanos.

El sistema utilizará tecnología simple, pero efectiva y robusta, que podrá ser accedida utilizando el ordenador en casa y un teléfono móvil, y proporcionará solamente información que sea relevante en cada momento, utilizando señales visuales, auditivas y hápticas. El sistema tendrá la capacidad de detectar y corregir cualquier error que realice el usuario durante el viaje, y se podrá personalizar de acuerdo a las necesidades particulares y preferencias de cada usuario.

El producto final del proyecto será una aplicación que se podrá adquirir y tendrá un servicio de mantenimiento soportado por el productor de la aplicación.

DESCRIPCION

1- Metodología

Para desarrollar un producto adaptado a las necesidades de los usuarios finales necesitamos sus comentarios al respecto. Para reunir las necesidades, expectativas y sensaciones de los usuarios acerca de ASSISTANT se utilizarán los siguientes métodos:

- Focus group: se realizarán una serie de preguntas en un ambiente interactivo donde los participantes serán libres de hablar con otros miembros del grupo.

- Entrevistas: preguntas realizadas durante una reunión cara a cara.

- Pruebas: se evaluará el dispositivo en condiciones reales. Las pruebas cubrirán el uso de la herramienta de diseño de ruta y del Dispositivo Personal de Navegación. La información acerca de esta evaluación se recogerá a través de:

  - Método *pensar en alto*

  - Simple observación del participante

  - Los dispositivos personales de navegación

2- Instrumentos que se utilizarán

Durante su participación se le pedirá completar algunos cuestionarios y expresar sus opiniones acerca del dispositivo. Se le pedirá que utilice dispositivos tipo tabletas o teléfonos inteligentes. Para que se familiarice con el dispositivo (y asegurar que las evaluaciones realizadas en los tres países son similares) se organizará un taller de formación.

3- Grabación

Tanto las entrevistas como los focus groups serán grabados. Si está de acuerdo, complete por favor el consentimiento informado antes de empezar cualquier actividad relacionada con el proyecto.

Igualmente, es posible que se graben en vídeo o audio las pruebas de campo, siempre con el apropiado consentimiento del usuario.

4- Tiempo necesario

Entrevistas: una hora cada una

Focus groups: dos horas

Pruebas: para la primera fase, dos iteraciones de una semana cada una. Se prestará un dispositivo y el editor para las rutas para que evalúe su accesibilidad, facilidad de aprendizaje y la usabilidad. Durante una semana, utilizará el sistema ASSISTANT durante sus viajes. Se le pedirá que evalúe la aplicación y nos comente sus opiniones acerca de la usabilidad. La experiencia se repetirá durante una semana más.

En la segunda fase se evaluarán las funcionalidades más críticas del sistema. Esta fase se realizará en un entorno semi-controlado.

En una tercera fase final se le pedirá que evalúe todos los aspectos de ASSISTANT durante un focus group y luego utilizará el sistema ASSISTANT en casa durante las dos semanas siguientes.

5- Tareas a realizar por el usuario

Es libre de abandonar el estudio en cualquier momento, sin previo aviso.

Deberá leer y entender el consentimiento informado antes de firmarlo.

Puede realizar cualquier pregunta al personal investigador en cualquier momento.

Se compromete a hacerse cargo del material que se le preste durante el estudio.

RIESGOS

Los riesgos para los participantes son mínimos o los mismos que cuando se realizan tareas cotidianas.

PROTECCIÓN DE DATOS PERSONALES

Los socios del proyecto ASSISTANT garantizan la privacidad y el anonimato de los usuarios finales que participen en este estudio.

Los consentimientos informados de los participantes y cualquier dato personal y experimental serán destruidos un año después del fin del proyecto ASSISTANT (1 de Junio de 2016).

TEILNAHMEINFORMATIONEN

ANGABEN ZUM UNTERNEHMEN:

Name des Unternehmens: ………

Adresse: ……….

Telefonnummer: ………………………………………………………………………………………………..

Projekttitel: ASSISTANT- AidingSustainable Independent Senior TravellerstoNavigate in Towns (AAL-2011-4-040)

Projektverantwortlicher:……………………………………………………………………………………………………

KURZFASSUNG DES PROJEKTS:

Das ASSISTANT Projekt trägt zur Aufrechterhaltung der Mobilität von älteren Personen in Europa bei, um ihre soziale und wirtschaftliche Teilnahme in einer immer älter werdenden Gesellschaft sicherzustellen. Dies geschieht durch ein sicheres und unabhängiges Reisen mit öffentlichen Verkehrsmitteln und ermöglicht ihnen sich während der Fahrt zu entspannen und die Fahrt zu genießen.

ASSISTANT bietet eine Online Reiseplanung, Anleitung beim Umsteigen von mehreren Verkehrsmitteln, einen Alarm, wann der Nutzer auszusteigen hat und Unterstützung um vom Fahrzeug bis zum Zielort zu gelangen. Das Projekt bietet im Wesentlichen eine nahtlose Unterstützung für die gesamte Länge einer Fahrt, über verschiedenen öffentlichen Transportmitteln in einer ländlichen und städtischen Umgebung.

Das System nutzt eine einfache, aber effektive und robuste Technologie, auf die man mit einem Heimcomputer oder einem Mobiltelefonzugreifen kann und bietet nur relevante Informationen zu einem bestimmten Zeitpunkt an. Dazu werden visuelle, akustische und haptische Signale verwendet. Das System ermöglicht, Fehler zu erkennen und diese auch gleich zu korrigieren, wenn der Benutzer sich verfahren hat. Des Weiteren wird ASSISTANT auf die Bedürfnisse und Vorlieben der jeweiligen Benutzer angepasst.

Das Endprodukt des Projektes wird eine Applikation sein, die man käuflich erwerben kann und dieüber ein Wartungsservice unterstützt wird. Der Verkauf erfolgt durch den Anwendungshersteller.

BESCHREIBUNG

6- <u>Methode</u>

Um ein Produkt zu entwickeln, das auf die Bedürfnisse des Endbenutzers angepasst werden kann, brauchen wir ein relevantes Feedback. Um Bedürfnisse, Erwartungen und Empfinden über ASSISTANT zu sammeln, werden verschiedene Methoden verwendet:

- Fokusgruppen: Fragen in einer interaktiven Gruppe, wo die Teilnehmer frei mit anderen Gruppenmitgliedern sprechen können.

- Interviews: Fragen, die bei einem persönlichen Treffen gestellt werden können.

- Versuche: Testen des Geräts unter realistischen Bedingungen. Die Studien decken die Verwendung des Routenplanerssowie des persönlichen Navigationsgerätes ab. Informationen über die Feldversuche werden erfasst durch,

  - Think-Aloud Protokoll
  - Teilnahme und einfache Beobachtung
  - Persönliches Navigationsgerät

7- Verwendete Instrumente

Während Ihrer Teilnahme, ist es möglich, dass Sie einige Fragebögen ausfüllen und Ihre Meinung über das Gerät äußern müssen. Dazu sind Sie aufgefordert das Smartphone zu nutzen. Für ein besseres und einheitliches Verständnis während der Studie, wird eine kurze Schulung organisiert.

8- Aufnahmeprobleme

Die Gespräche werden während der Interviews und Gruppendiskussion aufgezeichnet. Bitte füllen Sie das Formular mit der Einverständniserklärung aus, bevor Sie irgendeine Aktivität im Zusammenhang mit dem Projekt ausführen.

Während der Feldversuche können mit Zustimmung des entsprechenden Benutzers, etwaige Aufzeichnungen in Form von Audio- und Videoaufnahmen gemacht werden.

9- Zeitanforderung

Interviews: jedes eine Stunde

Fokusgruppen: zwei Stunden

Test: in der ersten Phase werden zwei Iterationen von jeweils einer Woche durchgeführt. Während Ihnen das Smartphone mit dem Routenplaner geliehen wird, dürfen Sie die Zugänglichkeit, die Leichtigkeit des Erlernens und die Bedienbarkeit des Gerätes bewerten. Sie verwenden das ASSISTANT System während Ihrer Fahrt für eine Woche lang, um dabei die Anwendung zu testen und uns Ihre Rückmeldung über die Nutzbarkeit von ASSISTANT mitzuteilen.Die Tests werden in einer weiteren Woche wiederholt.

Während der zweiten Phase werden die kritischen Funktionen des Systems beurteilt.Das wird in einer halb kontrollierten Umgebung durchgeführt.

Während der dritten und letzten Phase sind Sie aufgefordert, alle Aspekte über ASSISTANT zu bewerten und im Anschluss dürfenSie das ASSISTANT-System zu Hause während der nächsten zwei Wochen verwenden.

10- Aufgaben, die vom Benutzer ausgeführt werden müssen

Sie können die Teilnahme jederzeit ohne vorherige Ankündigung einstellen.

Sie sollten sich die Einverständniserklärung durchlesen und verstehen, bevor Sie sie unterzeichnen.

Sie können zu jedem Zeitpunkt des Verfahrens Fragen an das Personal stellen.

Sie verpflichten sich auf das Smartphone, welches Ihnen für das Projekt zur Verfügung steht, aufzupassen.

RISIKEN

Die Risiken für die Teilnehmer sind minimal oder gleich wie bei normalen täglichen Aktivitäten.

DATENSCHUTZ

Die ASSISTANT Partner garantieren die Anonymität der Endnutzer, die an dem Projekt teilnehmen.

Die Einverständniserklärung der Teilnehmer und alle experimentellen Daten werden innerhalb eines Jahres nach Projektende vernichtet (1. Juni2016).

6. RESEARCHERS' GUIDELINE – TEMPLATE

The purpose of this document is to provide to each institution in charge of testing ASSISTANT (in Vienna, San Sebastian and Paris) a methodology, in order to harmonize the testing phases. Furthermore, for maximum validity, testing phases need to be as similar as possible. Due to the differences between the cities where ASSISTANT will be tested, a template will be created to guide researchers in this task.

This document will be updated for each phase of testing. It has to be signed by each participant and researcher involved in the project.

TEMPLATE TO BE COMPLETED BY RESEARCH TEAM

Research/evaluation phase: <fill in with appropriate tag/label>

This stage of the ASSISTANT research project is conducted by

(name) ....

('phone number) ....

This project is conducted under the direction of Dr Stefan Parry Carmien from TECNALIA Research and Innovation, located Paseo Mikeletegi 7 - Parque Tecnológico, E-20009 Donostia - San Sebastián (Spain), telephone number (+34) 667 119 685.

Informed consent form for this stage of the project attached ☐

Method: (Below are examples. The protocol for each evaluation session type needs to be spelt out explicitly and in some detail and identically across all three test sites. The detail should be sufficient to allow other researchers to replicate the trial with identical ASSISTANT tools)

- *You will be asked to create a travel route on a PC that guides the ASSISTANT end-user from a typical starting point to a typical route goal. You will be asked to speak aloud your thought process while performing the task described in this protocol.*

- *You will be asked to use ASSISTANT during a journey and to speak aloud your thoughts while doing it. You will be asked about specific parts of your experience and your general impressions regarding ASSISTANT.*

- *During this first phase of testing, you will be asked to focus your attention on the ergonomic aspects of ASSISTANT. User questionnaires and recorded sessions will be used to verify and validate the design specifications. Researchers will attend these sessions and oversee them, but not interfering with your judgement. The role of the researcher in this kind of interview is to record any reaction (verbal or physical) of the user.*

- *You will be given a personal navigation device running ASSISTANT and use it to navigate from your home (for instance) to a goal appropriate to you. ASSISTANT researchers will be monitoring your progress, either alongside in "participant observer" mode, or from a distance. Your ASSISTANT personal navigation device will keep a record of your interactions with it while travelling.*

The study will be conducted at……………………………………………………………………………………………………….

(in case the sessions take place somewhere other than at the participant's home, transport costs will be fully reimbursed).

Before the start of the trial, remind the participant that their participation is voluntary and they have the right to discontinue participation at any time. They also have the right to refuse to answer any question(s), for any reason.

Investigator
In (place)……………., the (date) ………………………
Signature
Name and function
....

7. GUIDANCE FOR THE RESEARCHER

- Place to conduct interviews

If a special place is not needed to conduct the interview, the preferred option is to go to the participant's home. In a well known place, the participant feels free to speak and to express his/her thoughts.

- Regarding the recording issue

Be sure to warn the participant that the interview will be recorded, but in an anonymous way, and that the files will be kept in a locked place only accessible to people working on the project. It is also important to mention that data will be destroyed within a year of the end of the project.

- How to use ASSISTANT

Seniors are not always used to using smartphones, so, before the trial phase, a session of courses about how to use one will probably be necessary.

- Make yourself available

It is important to tell users that researchers are free to answer any question at anytime, even concerning "how to do" issues.

Annex 1

CONSENT FORM

Partner			
Address			
Zip Code		Email	
Tel..		City/Country	
Name of the project	ASSISTANT (AAL-2011-4-040)		
Name of responsible project partner			
Project Contact information (tel. and e-mail)			

I, the undersigned

…………………………………………………………………………

………………………………………
(LAST NAME, FIRST NAME)

residing in

………………………………………………………………………………

Freely and voluntarily agree to participate, free of charge, to test the personal navigation prototype of the ASSISTANT project. I certify that I have been informed about the ASSISTANT project and have received all the information necessary for me to make a decision about my participation in the test. I confirm that I have been able to ask questions of (intake ASSISTANT member) regarding the prototype and they have been answered to my satisfaction.

I understand that this experiment consists of the following tasks:

1. One researcher will come to my home to show me how the on-line route planner works.
2. I will register myself on the ASSISTANT system and create some routes.
3. A researcher will lend a smartphone to me for use with the ASSISTANT application.
4. I will use public transport with the ASSISTANT system and I will be followed by at least one researcher who will take notes about my experience with the ASSISTANT application on the smartphone. The ASSISTANT system will also monitor me with the purpose of ensuring my safety and ease.
5. Finally, I will be driven back to my home.

These tasks will not have any cost for me.

I understand that my participation is voluntary and that I can stop the test at any time and without notice and for any reason. I have been informed that there are no risks related to my participation, except the ones typical of doing activities of daily living.

I authorize (*name of the organisation*) to store my personal data for the sole purpose of the project. I authorize the disclosure of such information by (*name of the organisation*) to share it with other project partners for the sole purpose of research and development in the ASSISTANT project. I understand that a public report will be produced on this test, which will incorporate anonymised data relating to participants.

I understand that the personal data collected will be stored on-line (in the 'cloud') in a system that has taken careful measures to guarantee privacy, beyond those of standard best practice and within EU legal constraints. If I desire, all the data stored during the system testing as part of my participation will be removed on request at the end of the project.

I authorize the taking, scanning and use of photographs and audio-visual recordings made during my participation in the project, on the understanding that these will be used only for the purposes of the project's research. (Note that participation in the ASSISTANT project is not dependent on your giving permission for photos etc.):

<div align="center">☐ YES   ☐ NO</div>

I authorize the use of anonymised and aggregated information and conclusions at conferences and scientific publications exclusively related to the ASSISTANT Project:

<div align="center">☐ YES   ☐ NO</div>

In accordance with the European Data Protection Directive (95/46/EC), I understand that I have a right of inspection, correction and deletion of personal data.

By signing below, I give my consent to my participation in the evaluation phases of the ASSISTANT Project.

ORGANISATION NAME	Participant
Name of the city Date and Signature	Name of the city Date and Signature
(Responsible of the project)	…………………………………………… Name

This document will be produced in two copies: one for the organisation and one for the participant.