EMPOWERING ELDER'S INDEPENDENT LIFE THROUGH INTERACTIVE TV

Executive Summary

T-Seniority objective is to significantly improve quality of life and ensure efficient health and social care for the **ageing population** by specifying and demonstrating **innovative ICT enabled products and services**.

The proposal is based in the **integration of digital services addressed to elders and info-marginated audiences that will be accessed by TV channels** and where the important segment of people already acquainted with the TV remote control can be included in the digital society and benefit from it.

T-Seniority main *target* is a "*user-centric*" integration of services *throughout TV*, especially assistance programs (including *trans-borders services*) for disadvantaged social groups, focusing mainly in *older* people and "*early stages of getting older*" people, to cover a diverse range of care needs in a wide range of service modalities (home care, tele-assistance, mobile telecom services, tele-alarms, nursing services….).

It is **a new service provision model that will use digital TV** as the most widely available and preferred channel for *info-marginated* sectors, helping to reach *difficult-to-reach* audiences, such as "*disabled people getting older*", who may have less access to other forms of digital technology, improving current situation and affording the demands of a growing elderly population.

Digital inclusion is, therefore, **social inclusion with an ICT TV stream**.

It emphasises the **digital inclusion** *through TV* in Prevention and Early Action side of the Social Care, in order to avoid undesirable situations or to correct them at the shortest time. According to this, is a set of integrated *care e-Service throughout TV* oriented towards the *Elders* (and/or *dependent* people), and their *Informal* Carers. Informal Carers play an important part in the lives of many elderly people. supports these carers as well as the sufferers themselves, because, in many cases they are also *info-marginated*.

What is T-Seniority?

T-Seniority is a *SaaS* ("Software as a Service") *via TV* to *empower the Independent Living* of Older People. Its final goal is to contribute to maintain and improve **Elder's independence** through a set of Service Offers that puts him as a *central stakeholder* with Needs, Preferences and Rights, using the "TV" as the **most widely available** and **preferred channel (for accessing and using services)**.

T-Seniority Services are made to be accessible to the *greatest number of people*. **T-Seniority** tries to understand the needs of older and disabled people and thus wants to *minimize designs that are excluding them* from the benefits of Information Society, by thinking *beyond the conventional media* and creating a better overall experience *throughout TV.*

It emphasises the **digital inclusion** *through TV* in Prevention and Early Action side of the Social Care, in order to avoid undesirable situations or to correct them at the shortest time. According to this, **T-Seniority** is a set of integrated *care e-Service throughout TV* oriented towards the *Elders* (and/or *dependent* people), and their *Informal* Carers[1]. Informal Carers - both families and neighbours carers - play an important part in the lives of many elderly people. **T-Seniority** supports these carers and families, as

---

[1] One important thing to note is that **T-Seniority** focuses ONLY in the most *info-marginated* people. So the other stakeholders that interact with older people will continue using the standard version of **Seniority** sharing the same back-office from conventional PC or other equipments.

well as the sufferers themselves, because, in many cases they are also *info-marginated*.

Other stakeholders (formal careers, local government administrations, socio-political and economic players, service providers, etc…) can keep holding the interaction with older people using the *conventional* means (Internet web browsers through PC, PDA, mobile phones…) for providing or monitoring the services and for the control, evaluation and improvement of mechanisms within the whole Offer of Social Care e-Services. By deploying a Care e-Services platform like this, **T-Seniority** ensures the creation of a **virtuous circle** of elder's independent living empowerment services.

In summary, **T-Seniority** offers a flexible combination of *General Public* e-Care Services and *Personalised* e-Care Services demonstrating the versatility of its technological platform according to the user's preferred or available ICT media.

But **T-Seniority** services are not only "*multi-modal*" over interactive TV alternatives. **T-Seniority** is also able to deal with *complementary* communication channels following user journeys across a sea of devices and services to create a *continuous "human" experience*, such as *mobile* solutions for tele-alert management or *touch-screens* devices for demanding services, contributing to increase older people independent living. In many cases this *multi-channel* feature of **T-Seniority** (TV, PC, Mobiles, touch-screen devices…) makes possible to extend the participation of other stakeholders (better acquainted in the use of other ICT devices) inside the circle of services provision to older people.

Giving access (including) the *whole stakeholders chain* in the care provision is important since some of the care e-Services, specially those dealing with "Tele-Monitoring" issues that provide information, can be critical and needs the intervention of more specialised people: formal carers (professionals), social services teams, …

T-Seniority is a *multi-modal* platform that works over different iTV alternatives, ensuring a *wide deployment potential* of its services at the same time: **DTT** (Digital Terrestrial TV), **IPTV** (Internet Protocol TV), **IPHN** (Internet Protocol Home Networking TV). IPHN is deployed by plugging small *media centres* (mini-PCs, Play Station or Wii devices, for example) to a TV screen. Then, normal TV broadcast can be naturally integrated with very interactive and personalised (at local level or at personal level) services.

T-Seniority in DTT

Not all the care e-Services can be reached using *any* TV technology, because it depends of the *level of interactivity* of each TV delivery mechanism. However, **T-Seniority** uses the same *"User-friendly interfaces"* for *all sorts of TV systems*, taking into account that many elderly people have impairments in vision, hearing, mobility or dexterity and without forgetting the informal Carers.

TV interactivity is *inversely proportional* to the **impact** that has on target users. **Interactivity** is enabling a wide range of activities that rely on *two-way* contact: personal communication, messaging, data sharing, shopping, trading, gaming... *is a user's centre-stage* solution *using TV* is as an ideal vehicle over which to provide interactive and personal communications services that can be found on PCs, but are beyond the reach of many residents. In **T-Seniority** different applications and services can work together – '*interoperate*' (e.g. ambulant services, care at home) and solutions are able to adapt to the needs of individual groups and to their changing needs over time.

T-Seniority *behaviour* changes according to the level of interactivity. Using a unique technological platform, **T-Seniority** is able to offer its Care e-Services adapting them to the features of each Interactive TV modality.

Accessibility Issues in T-Seniority

T-Seniority embraces all the critical "success factor" keys considered in EICTA ICT "White Paper of Inclusion"[2] as the main risks exclusion:

- *Availability*: People disadvantaged due to lack of geographical coverage
- *Affordability*: People do not have access due to a lack of resources. Either the average income of a potential consumer is too low or it is not profitable to provide service due to actual operating costs.
- *Accessibility*: This has two elements: 1) people with disabilities such as visual, audio, speech, cognitive or mobility related 2) people who are lacking in ICT skills.

To tackle properly these issues is considered by **T-Seniority** Consortium as the most outstanding *added value for users*. According to this, two highly relevant "*facts*" will leverage the deployment of **T-Seniority** care e-Services in Europe. This is, most of the *target* end-users (*older people* and *ageing people):*

1) **have access** to TV STB (small investments *directly* or *indirectly* done, previously to offer): **Availability** and **Affordability**. In the digital context, *television mass nature* is considered a basic access point to the Information Society, a tool to fight against the *digital divide*. Opposite to computers, which are *still lacking* in many European households, television sets are present in almost every living-room.

2) and **are acquainted** to use *remote control* to make decision according to their own preferences: **Accessibility**. In this context, **T-Seniority** wants to bring *simplicity to users* as the **first step towards digital engagement**.

Innovation in T-Seniority

In summary, the main innovative aspects of **T-Seniority** are:

1. The **absolute independence** of service from the media. This is, **T-Seniority** is *multi-channel*, presenting different users interfaces according to *interactivity capabilities*, but all of them *sharing* the same back-office.

---

[2] **EICTA**: European Information & Communications Technology Industry Association. *i2010: Toward an Inclusive Information Society. ICT industry White Paper on inclusion.* Brussels December 2006. The six key factors are: 1- Affordability 2- Accessibility 3- Availability 4- Fostering an enabling public sector environment 5- Integrating ICT & Inclusion 6- Strengthening stakeholder collaboration. Here we focus in the first three.

2. The capability to **integrate** present and future-emerging care e-Services (*business* side) *throughout TV screen* for independent living, **combining** (making interoperable) different branches of TV provision technologies (*technical* side).

Its *Integration* capabilities of:
   a. *Technologies*: "*borne to cooperate*" with existing services and departing from Information Society technology standards.
   b. *Services*: it creates Local, Regional and National Administration accredited and controlled multi-services networks.
   c. *Users*: Includes the full chain of stakeholders (elder, families, carers, Administrations, inspections agencies, providers, ...)
   d. *Persons*: it goes beyond the one-to-one; allows the communication from one to many in real time, from the elder to many to improve the efficiency of the service and the response time.
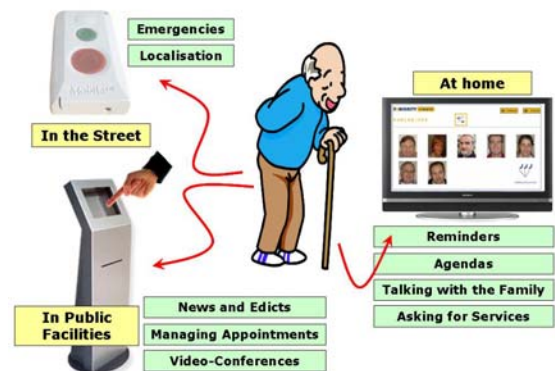
T-Seniority Multi-Channel Capabilities

3. It is **multilingual, non-location-dependent** and **trans-border**. It is customizable to any European language and cross national borders. This is, **T-Seniority** can be targeted at anything from a few households to the entire world. For example, one *local* DTT broadcaster in Spain launches the MHP version through the Carousel (multiplex) and a UK elder resident in Spain will receive his/her *personalized* set of services through the return channel from some UK providers in English.

4. *Available on-demand*: as opposed to traditional broadcast content which is available only at a particular time on a particular channel; they are not *frequency dependable*, they do not need to broadcast on frequencies that will become unavailable in the medium term.

5. *Personalised*: allowing audiences to select the content that appeals to them and repackage it in the way that works best for them. Its *flexibility* and *easy of use*:
   a. It is *Internet*, can be use from anywhere at any time, it generates information of utility for all the users that will reach them through different communication channels (Web, SMS, e-Mail, Voice, Image).
   b. It is *intuitive*: it uses visual metaphors and hides the technology behind TV remote control, touch screens, simple telephones (only 2 buttons) biometric fingerprint substituting the keyboard … The users have validated the model as "easy to use and quick to learn".