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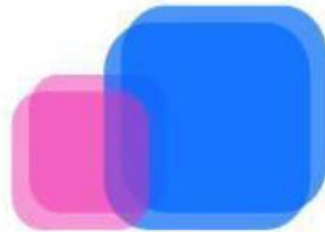
SeniorChannel

An Interactive Digital Television Channel for Promoting Entertainment and Social Interaction amongst Elderly People

D4.1 Content Requirement Framework

Deliverable			
Start Date	09/2010 (M7)	Termination Date	02/2011 (M12)
Release Date	02/2011 (M12)		
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Partners	Audemat, Brainstorm, UNIPD, M31		
Report Version	Final		
Circulation	Project Partners and CMU AAL		

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Objective of the deliverable

This deliverable will seek to achieve a number of complimentary objectives and, in so doing, will become a critical document that guides the development of the Senior Channel solution both during the project lifecycle and beyond it. Fundamentally, this document will set out a series of potential content streams and functional elements that could be usefully and effectively integrated into the Senior Channel platform.

The basis for the plan set out here is the work done in WP2 and presented in deliverable D2.2. This deliverable set out the principle user requirements as defined through a series of workshops and other research activities with primary end users (seniors) and secondary intermediate users (carers and support staff). This work was carried out in early 2011 and involved the participation of over 100 primary and 20 secondary users. In addition to the work presented in WP2, the consortium conducted group sessions with both primary and secondary users to further inform this deliverable and to expand on the findings subsequently presented in D2.2.

The aim of the work completed in WP2, and the subsequent group sessions, was to understand to a greater detail the relationship that seniors have with technology and, particularly, to explore how they engage with the technology they use. The particular focus was on two things: first, we explored how seniors interact with television, what sort of television they liked to watch, and how this affected their lives. Second, we wanted to understand more about the relationship seniors had with other technology and, in particular, with the internet. We wanted to know what they used the internet for, how comfortable they felt in an online environment and what particular elements of online technology they were most likely to engage with.

The results of this work were revealing and have provided a sound research base for the development of the Senior Channel solution. What's more, the relationships developed during that first phase of research will be further utilised as the project moves forward. Having created an overarching content requirement framework here, the subsequent deliverable – D4.2 – will further develop a small number of specific content and programming ideas and these will be individually user tested with the same participants to see whether the ideas are sound, whether we have accurately reflected the user requirements and, where possible, to improve the quality and effectiveness of the ideas we present.

In the second section of this deliverable, we summarise the findings from the initial research process (as presented in D2.2) and identify the key learnings that will provide impetus and direction for the rest of this deliverable. Having done this, we then go on to identify two distinct elements that could be potentially integrated into the Senior Channel technology: first, we identify primary areas of content that could be offered through the Senior Channel solution and second, we explain specific areas of functionality.

It is important, at this point, to make a distinction between these two things. First, when we talk about 'content', we are referring either to existing content – audio, video, images, text etc – that could, in some way, be integrated into the Senior Channel technology and then accessed, on demand, by end users. Whilst Senior Channel is fundamentally about providing the opportunity for seniors to develop their own TV content, we believe that creating a platform for existing content will both help engage end users in the platform itself and will provide stimulus to support them in developing their own content. In addition, one of the ways that seniors may be able to participate in the Senior Channel experience will be to respond to existing content (by commenting, rating or classifying something they see for example). Furthermore, by creating a platform that can comfortably distribute third party content that seniors are interested and

engaged in, we create a greater set of commercial opportunities once the Senior Channel technology is commercialised.

The second area we will be focussing on is functionality. This refers to specific functions that the Senior Channel solution will offer to end users. Within this, we will be thinking about a range of different things. On the one hand, we will be looking at the types of programming we will facilitate seniors to create when they are using the Senior Channel technology. This may mean that we are thinking about creating debate shows where end users can participate or it may mean that we offer the function to create personal testimony accompanied by images and music. On the other hand, we will also be thinking about the sort of things end users who are watching and interacting with Senior Channel might do. For example, we may provide some facility to participate in a programme; or we may offer the ability to organise a library of content; or it may be that we offer some sort of communication tools that allow end users to connect with friends and family via the TV.

While there will be some crossover between what we consider as 'content' and what we consider to be 'functionality', we have made this distinction in part because content will need to be generated and/or sourced and functionality will need to be designed and developed. In terms of the ongoing development of the Senior Channel solution, this distinction is, therefore, necessary.

In terms of describing and elaborating content, we will also include some detail regarding the potential partners or sources for content. In terms of functions, we will explain how each function will work and give an indication of the resource implications for development.

Finally, it's important to restate that the framework presented in section 5 of this document is designed to present an overarching set of requirements for the Senior Channel technology including all potential future developments. Not every one of the elements in the framework will be developed during the project lifecycle. The final element of this document – section 6 – will suggest a number of these content and functional elements that we believe should be developed during the project based on a range of criteria explained there. These elements will then be further elaborated and, in effect, 'designed' in D4.2 prior to being user-tested with seniors and secondary users.

1. What are the main user needs as identified during the user testing phase?

The main detail from the user requirements testing can be found in D2.2. However, it may be useful to summarise what we discovered during that phase of engagement. Furthermore, additional work was undertaken specifically to input into this document by way of individual and group interviews with both primary users (seniors) and secondary users (those who work with or care for seniors).

1.1. Main Conclusions from D.2.2

One of the goals of the user requirements for system functionalities obtained in deliverable D.2.2 was to identify the kind of TV content that the elderly community could produce and broadcast via Interactive Digital TV. It seems that the TV content that is mostly appreciated by the sample is news, debates and documentaries. The appreciation for these contents is shared by men and women, and is expressed both in terms of fruition and in terms of production; thus these contents would be both interesting to develop and interesting to watch according to this community of elderly people.

Regarding the specific functionalities to interact with the broadcasted programs, at the moment elderly people seem interested to interact with shows they like. Even though interactivity can in principle increase the interest in any TV show, it is recommended to start implementing interactive services during programs that meet their appreciation and taste.

The kind of interaction users foresee is based on expressing opinions or ideas, in modalities that depend on the program and on their desire to go public. It is then suggested to always allow a small gamut of interactive tools that includes voting, sound clapping and phone calls.

Participants seemed generally very interested in interacting with the TV set; in particular, they would be interested in accessing supplementary information, both about the TV shows and about other topics. The remote control finds some appreciation as a tool to browse this information, because of its convenience, but not a great enthusiasm; it is then recommended to make navigation extremely easy, intuitive an similar the navigation metaphors present in tools they know, such as the Internet.

Respondents also would like to access other services that are not generally available through the TV, such as emails, videocalls, photoalbum, and calendars. This sample, which is already very familiar with interactive services offered by the Internet, is attracted by all these four categories of services, without responses been grouped in favour of one or the other.

Finally, it is recommended to allow for a wide variety of roles in the content production so as to accommodate users' preferences, talents and shyness.

1.2. Questions for Primary User Group Sessions

In order to explore further the relationship seniors have with technology and, therefore, to inform the design of Senior Channel content and functionality, we developed a series of supplementary questions that were asked of every participant in the research undertaken as part of WP2. These

questions were designed to elicit responses around technology use, the relationship that seniors had with the internet and, more broadly, how engaged they were with emerging technologies like digital TV, digital radio and internet-enabled mobile phones.

The guidance questions were as follows:

- *What sort of activities do you use the internet for?*
- *Do you use digital technologies to communicate with others? If so how?*
- *Do you use messaging or video conferencing services?*
- *How do digital technologies help you access information? What sort of information do you access?*
- *How do you use digital technologies for entertainment?*
- *What kind of entertainment content/services do you access using the internet?*
- *Do you use the internet for shopping?*
- *What would stop you from using the internet for shopping?*
- *Are you involved in any education or courses?*
- *If so, do any of these use technology as part of the delivery of that course?*
- *What sort of games do you play?*
- *Do you play any games online or on your computer?*
- *Do you listen to the radio?*
- *What sort of radio do you listen to?*
- *Do you listen to digital radio or radio through your TV?*
- *Do you have access to digital TV?*
- *If so, what do you use your digital TV for?*
- *Do you watch on-demand programming?*
- *Do you have a mobile phone?*
- *Do you use your mobile phone for texting?*
- *Do you have a smartphone?*
- *Do you access the internet or e-mail on your mobile phone?*

Working in groups of four or five seniors, these questions were explored with each group. The objective of asking these questions was to analyse the relationship that seniors have with emerging technologies. As the Senior Channel solution is underpinned by both television and the internet, developing an understanding of this relationship gives us significant inputs for deciding on the content and functionality we should be building into the Senior Channel solution.

The next section summarises the findings from the group sessions.

1.3. Summary of Comments from Primary Users

The discussions were wide ranging and covered various different areas. The summary of comments below has been divided into different sections in order to make analysis easier. This will help feed into the different elements of the framework later in this document:

LEVELS OF INTERNET USAGE

- Many of those surveyed – around 75% - use the internet daily
- Of the others, none use it less than 2-3 times per week

- There were some suggestions that this was not necessarily typical with some seniors (not present), particularly in the older age group, still not using the internet at all

GENERAL ENGAGEMENT WITH TECHNOLOGY

- Users were generally very engaged with new technologies although in different ways
- Aside from high levels of internet usage, around 50% of those surveyed currently have digital TV, with this figure mostly being made up of men; they have generally bought digital TV as a way of getting access to sports and, particularly, to football which is only available through digital TV; awareness of what digital TV is seemed quite low amongst the female participants with little knowledge of what this can actually offer
- Of those who have digital TV, most have used it to buy on-demand content (mainly films) and are aware of the ability to watch content as and when they want (rather than when it's scheduled as you have to with analogue TV)
- All participants expressed a very high level of use of radio across the board with nearly 100% of respondents saying that they regularly listen to the radio and many saying that they listen on a daily basis
- Most do not listen to digital radio, or listen to radio through their TV or internet; it is still very much an analogue pastime; there seemed very little awareness of the different channels through which radio can now be accessed
- All participants have mobile phones and all are regular users of mobiles; they all text on their mobile phones, as well as making calls
- None of the participants have the internet or e-mail on their phone – most seemed surprised by the idea that they could have this but also some were very aware of the cost of data on mobile phones and were put off by this
- Some participants mentioned the use of a laptop so that they could take the internet with them and, connected to this, an awareness of and use of wireless technology; however, this is not, currently, common
- The technology itself is not particularly a barrier for many participants – the barrier is often the motivation to engage: if they are motivated – by the desire to get cheap football on TV for example, or cheap calls using Skype – they will learn to use the technology; where they don't see the point – for example in getting the internet on their mobile phone or contributing to an online conversation – they will not use the technology, simply as they see it as a waste of time or, even worse, a waste of money
- Most participants have no problem with the idea of trying new technology but they have to understand how it fits with their lives
- There is evidently a kind of competitiveness amongst some participants in regard of their use of and relationship with technology – they like to feel plugged in and switched on and they are proud to be able to demonstrate their technological skills
- There is, clearly evident, a culture of passive consumption in relation to digital content (TV/radio etc) – none of the participants expressed any great sense of engagement with the idea of creating content or contributing their own thoughts and ideas: their use of new technologies is, currently, very focussed on doing the things they have always done (communicate; watch TV; read newspapers) in a new way
- Technology is a clearly viewed as way that seniors can connect with younger people, particularly younger members of their family: they are fully aware that they now live in a

digital age and they embrace the idea of being a part of that and see how important that has become

USE OF TECHNOLOGY TO COMMUNICATE

- Most participants have used digital technologies to engage in some form of communications activity (as an alternative to the telephone): most are regular users of e-mail but many have also used Skype or other chat or video conferencing engines
- There is particular awareness of the value of Skype and chat engines for communicating with those friends and family who live overseas as the cost is low – cost is clearly another key driver for engagement with any technology solution
- Whilst, audio conferencing and IM services were popular, there was some use video conferencing (incl. Skype); this was seen as particularly useful as a means of connecting with younger members of their family (grandchildren etc)
- Participants broadly like the idea of connecting with people around the world and they completely understand that technology is the mechanism by which this can happen – a number of participants had developed new friendships in new parts of the world using the internet and this excites them: they are socially quite ambitious in this regard

USE OF TECHNOLOGY FOR KNOWLEDGE

- Across the different user groups, the principle use of the internet expressed by the majority of users was to read news (in particular to go to the websites of daily newspapers) – this suggests that this groups are very much engaged with the world around them and are interested in keeping up to date
- They are interested in local news and events and what's happening in their region but they are also interested in global events and world news
- Sport, and sports news, is a key driver for engagement in digital technologies although this is almost exclusively amongst the male users
- YouTube is commonly used by female participants to check on recipes and to watch cooks complete recipes
- A number of participants expressed an interest in culture and museums and use the internet to explore places they might want to visit; this extends also to exploring potential destinations for day trips and holidays
- There was, in general, high levels of awareness of online dictionaries and Wikipedia – there was an often expressed desire to find out facts and details and a clear understanding of how the internet makes this possible
- More generally, Google is in common use across most participants with many mentioning the search engine by name and no one mentioning any other search engine
- Some respondents (predominantly male) said that they used the internet to look at or print out maps; they also mentioned using the internet to update their GPS systems

USE OF TECHNOLOGY TO SOCIALISE AND CONTRIBUTE

- There is very limited use of social networks although growing awareness of applications and services like Facebook; many participants have watched videos on YouTube although they do not consider this to be a social exercise, rather a way of watching things they are interested in

- Most participants do not see the point in contributing to the internet in any way (via social networks for example) – why would they do this? Some that the reason for a lack on engagement in this regard is that they don't have the time to contribute but to many, it is not something they have even thought about

- The awareness of social networks is growing – they all 'know' about Facebook and one or two have joined - but there is general confusion about how social networks are used and what they are for; also a sense that social networks are for young people

- A lack of engagement with social networks and other contributory forms of technology could, in part, be as a result of a lack of confidence around the technology itself – when you are passively consuming, you are not in any danger: when you are actively contributing, you lose a certain sense of control

- One female participant was gathering old pictures, scanning them in, creating an album using Photoshop and then uploading this to a website; she was also engaged in some basic video editing; however, this story was very much the exception

USE OF TECHNOLOGY TO SHOP

- Participants demonstrated very little use of the internet for shopping – this is partly because they are not sure about how safe it is (although one participant had set up a new bank account with a set limit so that if he is defrauded, he will not lose too much cash); generally, the safety of online payments was a significant barrier to use, with the sense that this is more question of feeling like online shopping was not safe rather than any specific awareness of how online fraud works or how prevalent it is

- The female participants broadly see shopping as a social exercise and, therefore, they don't want to relegate this to a solo 'at home' activity; they also have ample time to shop so time pressures are not an issue

- Many participants actually perceived the internet as being more expensive and not less expensive than shops although no one seemed to have real evidence of this – again this was more of a feeling they had than anything based on experience

- Participants increasingly use the internet to plan their holidays and excursions, and part of this process will be to check prices; however, often they will stop short of booking things due to reticence around using a credit card online

- There was some reported use of internet to buy tickets for shows/theatre but often, the decision to buy online was online taken when that was the only option available or when what was being bought was sold at a fixed price; even then, significant fear remained around online fraud

USE OF TECHNOLOGY FOR HEALTH

- Participants are very plugged into the notion of using technology as a means of keeping them healthy and, more generally, are very interested in exploring all ways of maintaining physical and mental health

- There is particular interest in brain training type challenges (IQ tests are popular) but also and interest in exploring how they can be more physically engaged with the world
- There is a string association between the digital world and passivity: this is a challenge when thinking about increasing digital engagement amongst this group
- One participant suggested that she liked using a computer keyboard as it provided good exercise for her fingers; a number of other participants agreed with this

USE OF TECHNOLOGY FOR ENTERTAINMENT

- YouTube is used predominantly to augment participants' news/sport intake; some do use it to catch up on programmes (drama) and there is limited use of YouTube for listening to music
- Many participants expressed regular use of the internet to download films although it is not clear what form this downloading takes (whether this is video on demand, the downloading of paid-for content or illegal downloading through file-sharing websites); certainly the notion of accessing video content via the internet is strongly apparent

USE OF TECHNOLOGY TO PLAY GAMES

- There is limited use of gaming technology – although some participants did mention using their computers to play Scrabble, or to play quizzes, not many play online or with others although playing offline games (i.e. board games or card games) remains a popular pastime and a familiar way of socialising
- A number of participants mentions the use of games consoles (like the Nintendo DS) with a focus on brain-training games
- The idea of playing games online to sharpen mental agility was strong; however, more general game playing is seen as a fundamentally social activity and therefore not something associated with digital technology

USE OF TECHNOLOGY FOR EDUCATION AND LEARNING

- Interest in ongoing training and education is high – with particular emphasis on 'learning new skills' like dancing or a language
- Some have experienced audio courses in relation to language learning but the drivers for doing these courses are, it seems, social as well as educational: they want to have an 'experience' so the thought of doing an online course does not appeal
- They also have a traditional notion of education in that they think it should be led by a teacher (rather than self-directed) – they believe in the power of the teacher
- As a consequence, there seemed very little interest in the idea of pursuing education using the internet or other types of technology
- A small number of participants were aware of and used translation software (online) to access English language content in Spanish
- One participant explained how he was currently taking a course in how to use technology to reduce isolation; the course itself was not run online (was in a classroom) but was focussed on how your computer can connect you to the world around you

1.4. Questions for Secondary User Group Sessions

Following on from the primary user group sessions, a single session was held with a small group of secondary users. This group was made up of individuals who work with seniors in a variety of capacities. The aim of this session was to check on the understood relationship developed from the primary user sessions between seniors and technology and, moreover, to explore the specific types of activities that the senior centres run and that the secondary users find the seniors engage most with. The guidance questions used for this session were as follows:

- *What sort of activities do you run at your centres?*
- *What makes specific activities more or less successful?*
- *What engages seniors and drives them to get involved in activities?*
- *How do you see the typical relationship seniors have with different types of technology?*
- *What drives seniors to interact and engage with technology?*
- *What would the value of something like Senior Channel be to individual seniors and to communities of seniors?*
- *How would seniors use a technology like Senior Channel?*
- *How could Senior Channel be used to help and support the work and activities you currently run in centres and in communities with seniors?*

This discussion provided a range of ideas and recommendations in relation to the potential content and functional elements for integration into the Senior Channel platform. The next section outlines the main comments provided during the session. Then after this, the ideas and recommendations springing from these comments are summarised.

1.5. Summary of Comments from Secondary Users

The comments and thoughts collected during consultation with secondary users were, in many cases supportive of the findings from the interviews with primary users. Also, due to time restraints, only one session was held with secondary users so the results from this session are less complete than that from the sessions with primary users. However, some interesting thoughts emerged from the session. Here is a summary of the comments provided:

- In terms of the activities that the centres run, physical activities are very popular with seniors as they have a great desire to keep themselves physically fit and active and their engagement with a centre is a way of them doing this
- As expressed by the seniors themselves, the motivation to keep fit and healthy, both in terms of mental wellness and physical condition, is very much high on the list of priorities amongst the target user group
- There is a lot of interest in the general subject of health and in how individuals can make themselves healthier; part of the work of the centre is to make health information (about things like physical activity and diet) available and accessible to those who attend
- Many seniors are very enthusiastic about music and enjoy activities that are related in some way to music (including dance)
- The most popular activity within the centre is game playing although all the games played are table games like Scrabble or cards; many of the seniors who come to the centre

come specifically to play games with friends; the centre does not use technology for game playing

- Quizzes are very popular amongst seniors as they are seen as a way of keeping the mind sharp and healthy, and as they are a way of demonstrating knowledge
- Although many seniors have strong views and enjoy a good debate, there is a need to be careful about the topics that get debated: if they talk about religion or politics, it can result in arguments and upset that is not good for the group
- Many of the seniors who come to the centre do not like to feel that they are old and, by extension, they do not like to engage in activities that make them feel old; this could be used positively in terms of generating interest and engagement in Senior Channel
- Coming to the centre gives seniors a focus and a reason to dress up and get out of the house – it is the social aspect of the activities that they are engaged in that is important to them
- Many of the individuals that come to elderly centres live on their own or in some kind of residential accommodation (i.e. they have lost a life partner) so the appeal of the centre is to place them in an environment where they are with peers and friends and are not alone
- Most of the individuals who come to the centres are broadly comfortable with technology; this is possibly due to the fact that there is a high proportion of those attending who used to work in a profession where they used technology before they retired; however, this is not necessarily typical and there are many seniors who still only engage with technology in the traditional ways (telephone; standard TV; radio) and are not using the internet or computers
- Cost is seen as the most common barrier to the adoption of new technology – if seniors see something as expensive then they will not use it
- Many seniors are afraid to look stupid – this can be both a positive and a negative thing in relation to technology as, on the one hand, it can lead to them not wanted to learn something new for fear that they will not be able to do it but, on the other hand, they do not want to be the only person who cannot use something because they haven't learnt
- The introduction of any new product or service (including technology) will work best if the seniors themselves feel like they have been consulted and involved in the process – they are very sensitive about things being done to them
- There are three key aspects to be taken into account when thinking about the introduction of a new service like Senior Channel – the psychological, the physical and the social: all need to be carefully considered
- There is, amongst the over 60s, still some sexual discrimination or, at best, stereotyping that goes on; this may have an impact where technology is concerned
- The dynamic between seniors and children is very interesting – many seniors play a very active role in looking after grandchildren and the relationship between the generations is very important to both the seniors and to the children; this is something that Senior Channel could build on

1.6. Ideas and Recommendations from Interviews and Workshops

Based on the responses outlined in the previous sections alongside broader reflections on what was said during the sessions and the information obtained during the WP2 research, the

following are a set of initial ideas and recommendations for what the Senior Channel technology could or should focus on. These ideas are further developed in Section 3:

- There was an evident love, within each group, for telling stories – many of the exchanges involved them telling stories: this is something that could be built into the functionality of the Senior Channel technology
- There was also a strong sense that seniors were keen to leave some kind of legacy – that their lives and experiences could be captured in some way and left behind for others to benefit from or just for family to experience
- Participants are very aware of their own past and of the content they have amassed over the years: the concept of a personal digital library involving personal photos and films and so on could be very powerful within this context
- Participants have clear connections to specific areas of interest, be that football, history, cooking or travel and many are passionate and knowledgeable about their particular areas of interest; Senior Channel could facilitate the creation of a digital library of content related to the subject about which they are passionate and which they can share with others who have the same passion; they would effectively become the curators of their own digital exhibitions
- There is a clear enthusiasm for debate – many of the participants are keen to engage with the issues of the day and are very switched on to current affairs; the opportunity to broaden their engagement with these issues through debate is clearly evident; there are also, generally, strong opinions in evidence and individuals are keen to have the opportunity to express their opinions: Senior Channel should find ways of providing a platform for this type of engagement
- However, there could be problems here because there is a reticence, particularly amongst staff at the centre, to risk relationships by stimulating debate around issues of contention like religion and politics (there have been cases where discussions within the centre have got out of hand and have resulted in individuals no longer attending the centre). Any discussion opportunities need to be carefully managed within this context
- The idea of being both creative and active is clearly very appealing – the experience of content production would be appealing to many and this is demonstrated by the success of the magazine published by the centre every quarter; it is entirely produced (both written and designed) by seniors and is a popular read; it is also never short of contributions
- The model of magazine production transposed to a digital TV environment could be very powerful for this group and is something that could be effectively built into the Senior Channel solution: this could be in the form of a magazine-style TV show every week or month focussing on their lives, their passions and their interests
- There was a strong sense that interests are stimulated within this group through engagement with peers – when one individual is passionate about something, they can share that passion with another individual: Senior Channel has the opportunity to stimulate others to be active through exposure to new/interesting content; in this way, it's not a passive activity for viewers – the content created or available through Senior Channel needs to be about being active and engaging
- There was very little evidence that technology (particularly the internet) is currently being used for any kind of professional activity; however, it is possible that some individuals may want to utilise the Senior Channel technology to work or to make money: growing

evidence suggests that those at the younger end of retirement are keen to find ways of engaging not only socially but also economically

- Concepts of creating content were not entirely alien – there was brief mention, for example, of the keeping of a diary; the digital equivalent of this would be a blog; however, the function of technology (i.e. what a 'blog' does) is often obscured by the language used: if you call it a digital diary, then you'll get people using it, if you call it a blog, they won't engage: the idea of providing a facility to create a digital diary to record and share thoughts could be compelling

- It was clearly important for participants to get clear credit for what they do, for their achievements – if seniors create something or write something or are involved in something, they want people to know this and they want this acknowledged: they want their achievements celebrated; in some ways this may be seen as a result of no longer being engaged in professional activity which would previously have been a source of self-confidence (particularly for men)

- One of the significant appeals of the internet is the ability to access content and services for free that would otherwise have to be paid for: saving money is not only, in some circumstances, a necessity but is also a cultural characteristic of this age group: it's possible that content or services could receive a greater degree of engagement from end users if the notion of saving money is inherent or clearly communicated

- There is an evident respect for 'professional' content – this is something that may stand in the way of some seniors producing their own content; Senior Chanel may, in part, be about putting end user content alongside professional content

- In general, the big challenge will be to get seniors creating content as they are more culturally attuned to consuming content passively

- The interest in maintaining and improving all aspects of physical and mental health is very clearly articulated and is also a key driver for engagement in any activity; this should be something that is very closely connected to a number of content and functional elements in the final Senior Channel solution

- The interest in health and, more broadly, in active engagement with others and with the wider world could be perceived as a challenge to Senior Channel as, currently, many seniors view the internet and television as being inherently passive and solitary pastimes; they do not associate TV or the internet with active engagement or with socialisation; this is a perception that needs to be tackled both in how Senior Channel is designed and also in how it is marketed

- The use of various methods of digital communication – from e-mail to Skype to texting – is wide and highly encouraging; there is clearly a degree of familiarity and comfort around these technologies and this has developed largely as a result of the lower cost attached to digital forms of communication; the question for Senior Channel is whether the platform needs to provide these tools if other tools are already being used. If the answer is yes, then Senior Channel needs to find ways of improving what is currently being offered elsewhere or integrating functionality with other Senior Channel elements (like connecting communication tools to particular types of content)

- The desire for seniors to stay informed about the world around them, to explore and discover new things, to find out facts and statistics and to nurture their particular topics of interest is both very evident from the interviews and is very much supported by the use of technology and, in particular, the internet; again, it should not be the role of Senior Channel to replicate this function but Senior Channel should certainly explore ways in which

- In thinking about the explosion of the internet as a medium for socialisation and communication, one particular aspect has, it seems, passed seniors by: the propensity to contribute; whilst millions post thoughts on Twitter, FaceBook and YouTube every day, seniors are largely uninterested in this particular form of interaction; there may be many reasons for this, not least the fact that the technology itself has largely be designed for and by young people; but when thinking about possible applications for the Senior Channel technology, bringing these kinds of regular opinion-sharing dynamics to seniors could be an interesting and, ultimately, valuable exercise and could provide a powerful mechanism to increase the impact the technology has on socialisation

- There is clearly a strong drive in many seniors to continue to better themselves as they move into later life, with many engaged in various courses and activities from which they can learn new skills; however, there is a reluctance on a number of levels to think of technology as a mechanism through which they can experience this kind of education and training; the internet can be both lonely and, in effect, 2 dimensional; an interesting challenge for Senior Channel may be to find new ways of using technology to engage seniors in educative activities in a way that meets their expectations and addresses the reasons they don't currently use the internet for the same purpose

- The notion of technology as a bridge between generations has emerged from all sessions and could provide a strong concept onto which content and functionality could be built; the importance of connections between seniors and their families and, particularly, between seniors and the children in their families cannot be overstated and, in fact, this acts as a mechanism to encourage many seniors to actively engage in technology anyway; Senior Channel should not think only of content and services that involve seniors and no one else; ideas could be developed that involve various aspects of intergenerational activities; in short, the socialising power of Senior Channel will not reside only in getting seniors to engage with other seniors: it's more about getting seniors to engage with the world around them and with everyone in it

2. What are the main functions/services that could/should be integrated into the Senior Channel technology?

What follows is an initial set of functional concepts that could be included in the final Senior Channel solution, based on the information gathered during the user requirements phase and outlined in the previous section of this deliverable. This set of concepts is augmented, in Section 4, by a set of content recommendations. We have separated these two elements as they represent different aspects of the Senior Channel offering and will require a different approach in terms of development. In some cases, it may be that a functional concept described here is also referenced in Section 4 as it may require specific content to be developed or sourced. The concepts described here and in Section 4 are then integrated into the framework for content and functionality described in Section 5.

In each case, the function is briefly described in terms of how it would work and what it would offer end users. Then, we explain how the function would integrate within the SC technology. And finally, we outline the main benefits the function would bring to end users.

In terms of functional areas, the diagram below outlines the key functional areas we are thinking about. The underpinning aim of each of these areas will be to engage seniors in the Senior Channel experience and to promote socialisation and interaction. In each case, the functions described afterwards are conceived with these key functional areas in mind:

Fig 1: Senior Channel functional
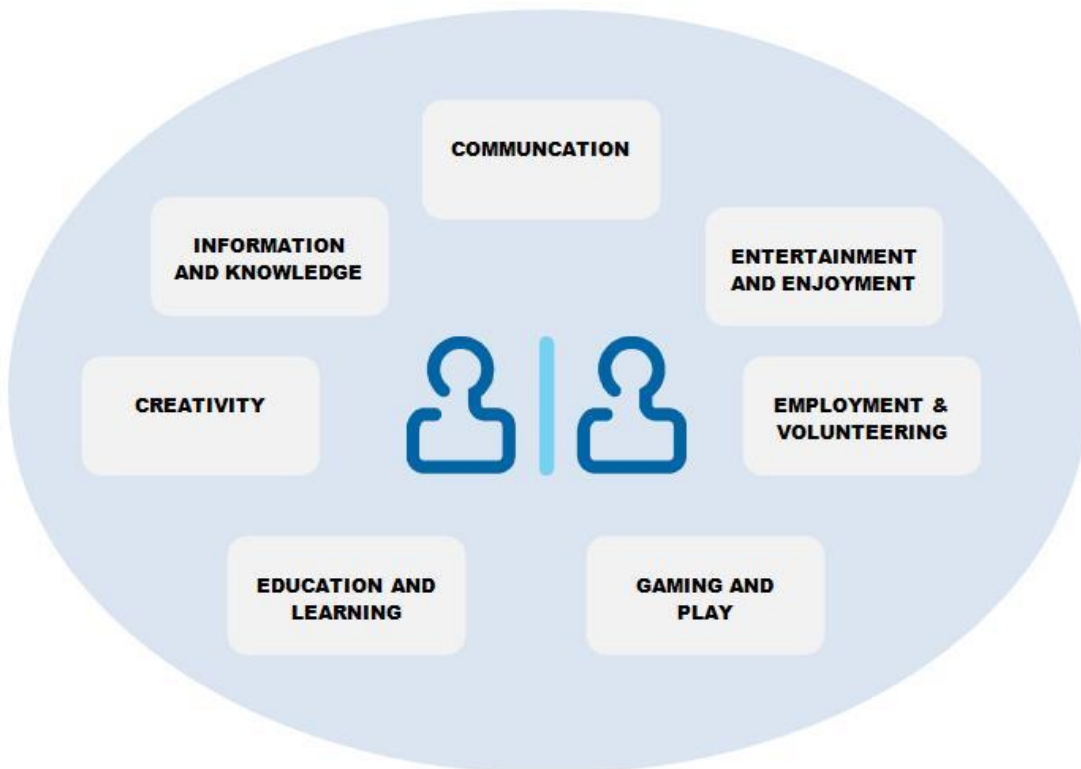
2.1. The Senior Channel Weekly News Programme

What is it?

The Senior Channel technology has, at its heart, a low-cost easy to use IPTV studio. This can be used for the production of TV content to be broadcast across the Senior Channel platform. One of the most prominent areas of interests for seniors is news and current affairs. The Senior Channel Weekly News Programme would be a function that allows groups of seniors, with help, to create a short 'magazine' programme about their town, their region, what's going on in the world and their reflections on it. It would be produced and broadcast on a weekly or bi-weekly basis and provide a cornerstone piece of programming for Senior Channel.

How would it work?

Using the IPTV studio, the programme would be constructed out of a series of standard templates including simple pieces to camera, interviews and simple graphics and images. The programme would be made up of a series of short 'stories' put together by the seniors working on the programme. A script would be generated and, where required, original footage would be shot to support the pieces delivered to camera. The facility to add in pieces from a video library would also enhance the flexibility and options available. Once the programme was recorded, it could be shown at regular intervals across Senior Channel or could be accessed on demand.

What are the benefits?

The function of creating original TV content is central to the Senior Channel proposition. As the majority of seniors are both interested in news and current affairs and keen to generate content in this area, the creation of a function to support a regular 'news' programme would give seniors both the motivation to engage with the world around them, the chance to take editorial decisions and the opportunity to collaborate on a 'flagship' piece of programming. The programme would also be of great interest to all those who access the Senior Channel network, and would be an excellent way for communities across Europe to share their experiences.

2.2. Personal Histories

What is it?

All seniors have stories to tell, and many are very interesting and entertaining when they do so. The idea of Personal Histories is to provide seniors with a means of recording stories about themselves and their lives and share these stories with others. This may relate to past events of historical significance (like the war) or may simply be a chance to recall important personal moments (like the birth of a child).

How would it work?

The Senior Channel studio will be set up with a standard background and each story will be told within a specific timeframe (10 minutes). The stories will be simple pieces to camera augmented, where possible, with relevant images and photos. Once recorded, the stories can go into a library of stories alongside others and can be classified, where relevant, by subject. They can then be accessed on demand or can be scheduled to be played at different times of the day.

What are the benefits?

The recording and broadcasting of personal stories will do two things. First, it will allow seniors to leave a legacy that can be seen by family, friends and others. Second, it will allow seniors to forge new friendships through revealing themselves by telling their own stories in their own words. Stories will often reveal a particular experience (which others may have shared in) or will reveal a specific interest or passion (which, again, may find favour with others). Simply giving

seniors the stage to 'tell their story' will be a powerful motivating force for engagement in the Senior Channel proposition.

2.3. The Short Documentary

What is it?

Alongside news and current affairs, seniors are highly engaged in the world around them and in the issues that matter to them. They are also passionate about a variety of subjects. Providing them with the ability to put together a short documentary on a subject or issue that they care about or are passionate about would be a powerful mechanism to create engagement and would also provide the opportunity for collaboration around a shared theme.

How would it work?

We will create a standard set of formats within the Senior Channel TV studio into which various types of content can be inputted. This will include third party content – images, audio and video – and original audio and video shot or recorded by the seniors themselves. Alongside this we will create an opportunity for recording a voice over and/or for recording pieces direct to camera. Every documentary created would go into an indexed library that could be accessed by viewers on demand.

What are the benefits?

Enabling seniors to explore their interests and passions and the issues that matter to them will very much play to the desire seniors have to engage with the world around them. Moreover, this would be a collaborative experience with the documentary being developed by teams who share the same interests or passions.

2.4. Digital Library Builder

What is it?

The Senior Channel technology offers the opportunity to create, store and access digital content of all types. One of the ways this opportunity could be exploited is in the development of a 'digital library' function that would allow end users, in teams, to build a library of content based on a particular subject. The idea can be thought of as a version of the 'playlist' function in iTunes where individuals are asked to put together a collection of music tracks that represent them or that are representative of a particular theme.

How would it work?

The Senior Channel technology would facilitate the creation and storage of an extensive collection of content – audio, video, images etc – that would then be classified according to their particular area of interest (e.g. sport or cookery or art). Users of the technology could then select specific items of content from this collection to put into their themed digital library. They could then name the library and add an introductory piece of video that would explain what viewers could find in the library. All content within the library could then be explored on demand.

What are the benefits?

By providing seniors with the opportunity to build their own digital library, based on a theme and in collaboration with others, we will be creating small temporary communities of interest around that theme and will encourage socialisation during the design and development of each library. Beyond that, every library will be accessible via on demand by other users of the Senior Channel

system and interactions within the technology and in the real world can ensue based on the shared interests on display.

2.5. Digital Diary

What is it?

Our research indicates that there is significant interest amongst this target group towards creating their own content. Alongside this, there is a strong propensity amongst this group to tell their own stories and to communicate to others how they feel about the world around them. The idea of a digital diary is now very common amongst many internet users (in the form of blogs and associated technologies). The Senior Channel technology provides the opportunity for end users to create their own digital diary in the form of audio/video footage.

How would it work?

The Senior Channel platform will facilitate the creation of a series of backdrops against which individuals can record their own testimony. This will probably be time limited (to 5 minutes for example) and may be augmented by other media from the Senior Channel content library (images or video). Each recording will be stored and then accessed on demand. Alternatively, individual testimony can be scheduled for playing at certain points in the day. Those watching will then be able to comment on the testimony they see.

What are the benefits?

Our research suggests that seniors are particularly keen to leave a legacy and that one of the best ways of doing this is for them to record their thoughts, their recollections and their stories in a form that will be able to be accessed by friends and family. The idea of a digital diary will therefore appeal as a mechanism to leave this legacy and to enable seniors to communicate their thoughts, feelings and experiences to a wider public.

2.6. The Senior Channel Debate

What is it?

Our research demonstrates the deep and ongoing interest that seniors have in news, current affairs and the issues of the day. This extends not only to issues in their immediate environment but also to international issues and global themes. The willingness to engage in debate is also clear, with many seniors holding strong opinions and enjoying the experience of discussing these issues with their friends. There is also evident interest in news and discussion programming on TV. Senior Channel will provide the context for a regular hosted discussion that will enable seniors to play an active role in the debate, give their views and engage in dialogue with others.

How would it work?

We will create, using the Senior Channel virtual studio, a programme format that enables a live studio debate to take place that will involve seniors in their own homes via video conferencing. The debate will be held on a regular basis – probably weekly – and will focus on a particular theme of the day. A host will lead the debate and will engage with seniors interested in taking part both via video conferencing and within the virtual studio environment. The programme would either be broadcast live or be recorded and then scheduled to play or made available on demand. The only issue with the idea – and this must be taken into account when designing the areas for discussion – is that debate can cause conflict, particularly if the debate focuses on politics or religion. The subjects for debate need to be carefully chosen so as to not lead to any such conflict.

What are the benefits?

As stated above, news and current affairs are extremely important to this age group, both because of historical interests and because this is a way of these users staying in touch with the world around them. Most end users keep themselves well informed of events and the Senior Channel debate is a way that their passion for news and the knowledge they have about the world around them can be effectively utilised. The opportunity to play an active role in the debate will be even more compelling.

2.7. Interaction with Content

What is it?

The Senior Channel technology will provide a range of content (as described in this document) within the overall content framework developed. One of the unique benefits of an IPTV solution is that the technology can provide the facility to interact with the content in a way that is not possible through standard digital or analogue television. This facility can enable viewers to rank, rate or comment on particular elements of content which, in turn, can then be viewed by other users of the technology. This kind of facility is very common within web 2.0 technologies like social networks and video sharing platforms.

How would it work?

Essentially, every content element – a piece of video, an image, some text, a piece of audio – can be ranked, rated or commented on by users of the technology using a standard set of icons accessed via the TV remote control. Ranking and rating will then allow different pieces of content to be flagged up as 'most popular' or 'most viewed' thereby helping other viewers access high quality or well-received content. The commenting facility will allow users to leave short comments – again using their TV remotes – about the item viewed, providing opinion, augmenting the content of the item or suggesting further items that could be viewed in relation to that item. All data related to each content item will be stored in the Senior Channel database.

What are the benefits?

By enabling end users to interact with the content broadcast on the Senior Channel platform, we increase the degree of engagement with that content. Over time, the user feedback on specific content items will build and generate a much greater sense of the Senior Channel 'community' where content is not only created by seniors for seniors but, once it's been made available, seniors can continue to interact with it.

2.8. Collaborative Digital Learning

What is it?

Our research indicates strongly that this particular user group are very interested in furthering their knowledge, in exploring new skills and experiences and in training and education. However, there is seemingly very little in the way of technology within this context as many seniors see education and courses as a way of meeting people (rather than simply valuing it for the education itself) so the idea of distance learning using the internet does not appeal as this would turn the activity into something they would end up doing on their own. Furthermore, there is an inherent belief in the value of the teacher so the idea of self-led learning is also something that doesn't appeal. Utilising the Senior Channel platform, we can make engaging in courses and ongoing learning a more interactive and collaborative experience.

How would it work?

The key to this will be to have the course delivered by a real teacher and broadcast live over the Senior Channel network. Participants can then engage through the TV at home and can interact with others who are taking the same course. The facility to interact with the content – as outlined in 3.7 – could also be effectively utilised here. Video conferencing could be used as a mechanism to get instant feedback from participants to what is being taught. It is envisaged that courses would be run over a number of weeks with the broadcast happening at a set time each week. Any broadcasts could also be accessed, anytime, via the on demand facility.

What are the benefits?

By delivering the course via TV into their own homes, seniors will have far greater access to a range courses than they would have if they had to be there in person. By having courses led by a recognised teacher, this will maintain interest and belief in the value of the course. Furthermore, by creating opportunities for seniors to interact during and after the broadcast, the act of learning remains a social one, even if it is happening via the television.

2.9. Live Multi-Player Gaming

What is it?

Playing games is a regular and much loved activity within the elderly centres surveyed. In fact, the primary activity within these centres is board games, card games, pool and other such pursuits. The interest in playing games stems, in part, from the social aspect of playing and also from the perceived health benefits, particularly in relation to games that require thinking (like Scrabble or quizzes). Although our research suggests that uptake of gaming online is low amongst this user group, the Senior Channel technology provides us with an opportunity to create a new environment within which games and quizzes can be played. The vital ingredient here is that the game experience is something that players share with each other. Therefore, any of the games designed will need to be played live and with multiple players.

How would it work?

Essentially, the number of games that could be played using the Senior Channel technology is vast. We will initially look to develop some simple games that will be controlled using the remote handsets and will manage the interaction with these games centrally. A gaming 'zone' will be created where, at any point, players can go and see whether there are other players online who are looking to play. Games will then start at specified times and players can play one on one or within a group. Over time, the gaming zone will grow into one of the most active areas of the Senior Channel platform, with games developed by third party providers being integrated into the platform.

What are the benefits?

The main benefits of a Senior Channel gaming zone are twofold. First, this will enable seniors to engage in an activity that they love (gaming) at any time and from the comfort of their own home. And crucially they will be able to do this with others who also enjoy playing games. In this way they will continue to get the social benefits of game playing that they so value. Second, Senior Channel lends itself very well to quizzes and 'brain training' activities which, we know, are hugely popular with this age group who are very motivated by a desire to keep themselves mentally and physically fit.

2.10.   Video Conference

What is it?

Our research suggests that using technology to communicate is something that has taken hold amongst an older age group, particularly as it often means that the method of communication is cheaper (or in some cases free) than the alternative. Many end users were familiar with e-mail, and a good number has used instant messaging or video conferencing. By building in a simple video conferencing facility into Senior Channel, we can encourage more end users to utilise this technology as a means of connecting with friends, peers and family.

How would it work?

The Senior Channel platform will have integrated into it a simple interface that will allow for video conferencing using a webcam and a pre-existing communication software (probably Skype). This will enable video calls, audio calls and instant messaging to all friends and family who are signed to the service.

What are the benefits?

Once seniors understand the power of technology as a means of communication, they are very clear about the benefits this can bring. First, using video conferencing across Senior Channel will be free. Therefore this will reduce costs associated with talking over the phone. Second, the technology is significantly more engaging and immersive than simply using the telephone as you can see who you are talking to. Finally, our evidence suggests that connecting with younger people (particularly younger members of the family) is often more successful for this age group if they use new technologies.

2.11.   On-Demand Content Library with Recommendation Engine

What is it?

Although the primary focus for Senior Channel is to engage seniors in the creation and broadcast of content for themselves and for others, the Senior Channel technology also lends itself to other purposes. Our research indicates that this age group share a wide range of passions and interests (many of which are reflected in the content streams discussed in the next section). One of the ways we can engage seniors in active life and in sociable activities is to create content that matches their interests. By partnering with content providers, we can create a content library – mainly made up of video and audio content – built around specific themes. So that if an end user wants to watch content on food, they can go to the on-demand library and look for the available content to watch. Further to this, a recommendation engine will enable them (and others who share their passions and interests) to rate and recommend specific content based on their reaction to it.

How would it work?

The Senior Channel platform will create a repository of content based around a set of key interest areas. These will be defined during the project and could be added to at a later date. These key interest areas are likely to reflect the content streams discussed in the next section of this document. We will then source content to populate this repository, and include the main content object (most likely a piece of video or audio), a summary of the content, information about who produced the content and details of length and so on. This can then be watched, on demand, by users of the Senior Channel system. They can then rate the content and provide a review for others to access within the repository.

What are the benefits?

By offering content in this way – organised into interest areas and easily accessible – we will be encouraging engagement with the Senior Channel technology. Furthermore, we will be providing greater motivation to end users to utilise on-demand content (which, currently, they generally don't do either online or using digital TV services). The recommendation function will create a further driver for engagement and provide the opportunity for users to share comments and communicate with people who have similar interests to them.
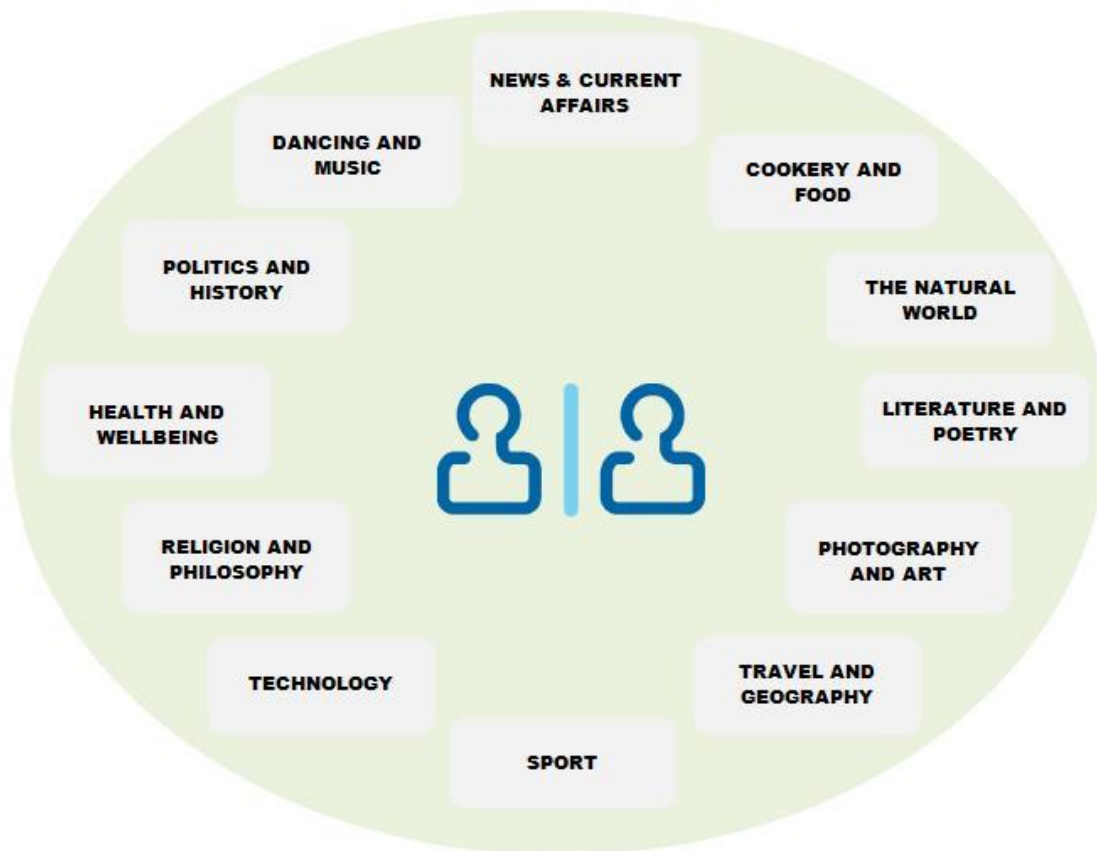
3. What are the main content types/streams that could/should be integrated into the Senior Channel technology?

Alongside the functional areas described in the previous section, there are a number of content streams or content areas that are of particular interest to seniors and should be considered for inclusion in the Senior Channel offering. The diagram below shows the main areas of content that seniors are interested in, according to our user requirements research. Although this list is not definitive and can be added to over time, it does suggest some of the things that are of significant interest to this target group and, as a result, suggest the type of content we need to include in order to motivate seniors to engage with the Senior Channel solution:

Fig 2: Senior Channel content

NEWS & CURRENT AFFAIRS

DANCING AND MUSIC

COOKERY AND FOOD

POLITICS AND HISTORY

THE NATURAL WORLD

LITERATURE AND POETRY

HEALTH AND WELLBEING

RELIGION AND PHILOSOPHY

PHOTOGRAPHY AND ART

TECHNOLOGY

TRAVEL AND GEOGRAPHY

SPORT

In each case below, we identify how each of these content areas could be integrated within the Senior Channel technology and the benefit each would bring to end users. We also identify, where relevant, how this content could be integrated with the functional elements described in the previous section.

3.1. News and Current Affairs

News and current affairs represent significant interest areas for many seniors, as they generally have a desire to remain engaged and up to date with the world around them. This type of content could be integrated into the Senior Channel environment in the following ways:

- A number of the functional elements presented in Section 3 relate to news and current affairs. First, the Senior Channel Weekly News Programme would be an opportunity for seniors to utilise their knowledge and experience of the world around them as a basis for the creation of original topical programming.
- Second, the Senior Channel Debate would provide a forum for a discussion which, inevitably, would be based around local, national and global events
- On-demand programming could also be provided within this content area, with syndicated news and local current affairs programming made available via the Senior Channel on-demand function

3.2. Dancing and music

Dancing and music are hugely popular interests amongst this age group, with dance particularly popular amongst women. This type of content could be integrated into the Senior Channel environment in the following ways:

- The Digital Library Builder function described in Section 3 could be used to create a library of content around this particular subject, with third party content (video/audio/images) used to reflect the particular passions of the individual end user
- The Online Collaborative Learning function could also be utilised here as dance is one particular area of interest that is often pursued as a course or subject for further learning. Content could be created to support individuals to take dance classes at home.
- On-demand programming could also be provided within this content area, with dance documentaries and streamed music programming made available via the Senior Channel on-demand function

3.3. Politics and History

Although connected in some ways to news and current affairs, politics and history stand alone as interest areas that seniors are very passionate about. Recollections of times past are very important to this group, particularly in relation to historical and political events that they lived through and that shaped their lives and the lives of other around them. This type of content could be integrated into the Senior Channel environment in the following ways:

- The Short Documentary function described in Section 3 would provide a great opportunity for seniors to engage with political and historical content and to develop some original programming based around past political or historical events
- The Personal Histories function could also be utilised here as many seniors have stories to tell about their past that relate to political or historical events. This could be a useful mechanism for them to engage in this way

- On-demand programming could also be provided within this content area, with historical documentaries made available via the Senior Channel on-demand function

3.4. Health and Wellbeing

Health and Wellbeing are interests for seniors both in terms of the desire to actively pursue activities that promote physical and mental health and in a general interest in the subject of health and wellbeing. This type of content could be integrated into the Senior Channel environment in the following ways:

- The Digital Diary function would provide an interesting mechanism to link into the health issues of seniors as it could be a way for them to record their own day-to-day health experiences. The notion of storytelling within medicine is gaining traction and recording a digital 'health' diary could be a way for this practice to become embedded into the lives of participating seniors
- The Personal Histories function could also be utilised here again with the idea of telling a story about an illness suffered and then how they managed to overcome the illness; or this could be used to share stories about positive wellbeing activities they have been involved in
- On-demand programming could also be provided within this content area, with health and wellbeing content made available via the Senior Channel on-demand function

3.5. Religion and Philosophy

Religion and Philosophy are, perhaps, less common areas of interest for seniors although this age group tend to be more engaged with religion in an active way than younger audiences. There remains a direct interest in religion (amongst those who practice a particular faith) as well as a more general interest in the history of religion and in broader philosophical ideas. This type of content could be integrated into the Senior Channel environment in the following ways:

- The Short Documentary function described in Section 3 would offer an opportunity for seniors to engage with religious and philosophical content perhaps with a specific focus on local religious activities within their community
- The Senior Channel Debate provides a forum for a discussion which, inevitably, would facilitate the exploration of religious and philosophical arguments (with the caveat being that religious debate can lead to arguments and problems within the group)
- The Digital Library Builder function described in Section 3 could be used to create a library of content around this particular subject, with third party content (video/audio/images) used to reflect the particular interests of the individual end user

3.6. Technology

The particular interest in technology, and the drivers for seniors to engage with different technologies, are discussed extensively in Section 2. What is clear from our research is that where the value of a technology is evident, the motivation will be there for a senior to learn and use that technology. Seniors are clearly aware of the increasing role that technology plays in

society and in modern life and they are keen to remain engaged. This type of content could be integrated into the Senior Channel environment in the following ways:

- The Collaborative Learning function could be utilised here as technology is often followed as an option for a course or subject for further learning. Content could be created to support individuals to engage with technologies they find difficult (like smart phones).
- On-demand programming could also be provided within this content area, with a selection of instructional documentaries demonstrating how different technologies can be used made available via the Senior Channel on-demand function; this content could also reflect the particular topics covered in the Collaborative Learning stream

3.7. Sport

Sport represents one if the most significant drivers for engagement amongst male seniors, with pay-per-view football matches being cited as the principle reason why many have purchased digital television. Whilst Senior Channel will not carry 'premium' sports content, there are a number of ways we can build on this enthusiasm. This type of content could be integrated into the Senior Channel environment in the following ways:

- The Digital Library Builder function could be used to create a library of content around different sports, with third party content (video/audio/images) used to reflect the particular interests of the individual end user
- Sport could quite easily form a regular part of the Senior Channel Weekly News Programme with reflections on local, regional and national sports results as part of the editorial mix
- Sport is both passionate and safe ground for debate – many enthusiasts will argue long into the night about who the best goal-scorer is and so on – so sport would provide ideal subject matter for the Senior Channel Debate

3.8. Travel and Geography

The evidence from our group sessions suggests that travel is a pastime that many seniors actively engage in, bearing in mind they have the time that wasn't available to them when they were working or looking after children. Also, geography (or 'the world') is of great interest, even if the individual has no plans to actually visit. This type of content could be integrated into the Senior Channel environment in the following ways:

- The Digital Library Builder function could be used to create a library of content based on a part of the world, with third party content (video/audio/images) used to reflect the particular interests of the individual end user
- The Personal Histories function could also be utilised here with individuals recording a personal testimony – supported by photos – of a travel experience they had
- On-demand programming could also be provided within this content area, with travel content made available via the Senior Channel on-demand function

3.9. Photography and Art

Photography and Art represent both active and passive pastimes – some seniors will actively engage in either themselves whilst others like to experience the product of someone else's creativity. Either way, visual arts lend themselves very well to the Senior Channel environment. This type of content could be integrated into the Senior Channel environment in the following ways:

- For those who want to learn more about how to be visually, creative, the Collaborative Learning function could be utilised here to support individuals who want to engage in a practical sense with photography and art
- The Digital Library Builder function could be used to create a library of content based on an artist, photographer or historical period, with third party content (video/audio/images) used to reflect the particular interests of the individual end use**r**
- On-demand programming could also be provided within this content area, with content made available via the Senior Channel on-demand function

3.10.   Literature and Poetry

Literature and poetry have a similar role in the lives of seniors to that of art and photography. They can be passive subjects that are of general interest or they can be active and creative pursuits. Consequently, their value and use to the Senior Channel proposition is similar:

- The Collaborative Learning function could be utilised here to support individuals who want to engage in a practical sense with literature and poetry with classes and the opportunity for participants to share their work with others
- The Digital Diary function would provide an interesting mechanism to enable seniors to record their own creations and share them with others
- For those who have a passion about a particular writer, the Digital Library Builder function could be used to create a library of content, with third party content (video/audio/images) used to reflect the particular interests of the individual end user
- On-demand programming could also be provided within this content area, with content made available via the Senior Channel on-demand function

3.11.   The Natural World

The natural world remains a common interest amongst this age group. In this context, that could include interacting with the natural world – through gardening or keeping pets for example – or having a broader, more global interest in nature. This type of content could be integrated into the Senior Channel environment in the following ways:

- The Digital Library Builder function could be used to create a library of content based on specific elements of the natural world – plants; animals etc - with third party content (video/audio/images) used to reflect the particular interests of the individual end use**r**

- On-demand programming could also be provided within this content area, with content made available via the Senior Channel on-demand function

3.12. Cookery and Food

Amongst female participants, cookery occupied a similar space to sport for the male participants in that for many an engagement with food was a significant driver for an engagement with technology: many of the female participants had watched recipes being completed online, even if they hadn't watched anything else. Cooking is very much an active pursuit for many female seniors and one that could be supported via the Senior Channel platform in the following ways:

- The Digital Diary function would provide an mechanism for seniors to record specific cooking experiences and then share them with others on the Senior Channel network. There could be a week where a number of participants engage with the same recipes at the same time and then each records a digital diary of the experience.
- One part of the Digital Library could be used to house a library of content based on recipes and, more broadly, on other aspects of food with third party content (video/audio/images) used to reflect the particular interests of the individual end user
- On-demand programming could also be provided within this content area, with content made available via the Senior Channel on-demand function

4. The Framework for Content and Functionality

4.1. Introduction to the Framework

Having presented the detailed analysis of user requirements and then created a broad range of ideas around both content and functionality, this final section of the deliverable presents the framework for content and functionality by bringing together all of the inputs from previous sections.

The Framework is presented as a series of tables containing core information for each 'element' of the framework, outlining what the element is, the content 'type' it will utilise (of the type of function it provides), the specific content areas that it could cover, the estimated length of the content element once completed (where appropriate), the frequency at which the element would be broadcast, the risks and barriers associated with implementing and broadcasting the element, the requirements for making the element happen (in terms of supporting content, human resources, partners etc) and the possible partners that could be engaged with to help make the element a reality.

It is important to bear in mind that the elements presented in this Framework are, at this stage, ideas for how Senior Channel might be used in future. The next step of the process will be to test some of these ideas specifically with primary and secondary end users, refine the ideas and then decide which elements will be developed within the lifecycle of the project. It is envisaged that, over time, ideas for new elements will emerge and be added to this document.

4.2. Framework Elements

Each of the following elements represents an amalgamation of the functional concepts presented in Section 3 and the content ideas presented in Section 4. In some cases, the element will be available via on-demand and so the particular issue of scheduling is not relevant.

In some cases, all content areas will be relevant, in other only certain content areas will be appropriate for that particular function.

Element 1	The Senior Channel Weekly News Programme
Content Type	Magazine-style hosted show; interviews; pieces to camera; not live
Content Subject Areas	Mainly local, regional and national news and current affairs; sport
Estimated Length	30 minutes
Frequency	Weekly recordings; repeated regularly; available on-demand
Risks & Barriers	Challenging to find good stories; avoid repeating local TV news

Requirements	Sourcing of stories with supporting content; one or a number of presenters; original footage shot in the local area
Possible Partners	Local news agencies; freelance journalists; local/regional government

Element 2	Personal Histories
Content Type	Single piece to camera or one-to-one interview
Content Subject Areas	Personal recollections of the individual about past events; notable stories from history as seen through the eyes of the individual
Estimated Length	30-60 minutes
Frequency	Regular recordings; screened daily; available on-demand
Risks & Barriers	Finding good stories; getting the timing of the stories right for scheduling purposes
Requirements	Sourcing of stories with supporting content; interviewer with relevant questions; single camera set-up
Possible Partners	Local historians; local museums; historical societies; local news organisations

Element 3	Short Documentary
Content Type	Factual pre-recorded film with single presenter on specific topic of interest
Content Subject Areas	Any subject area would be relevant although specific interest may lie in things like local history, the arts, technology, current affairs or issues affecting seniors
Estimated Length	30-60 minutes
Frequency	Regular recordings; screened bi-weekly; available on-demand
Risks & Barriers	Quality of editorial approach; investment of time in generating the films; sourcing of material for each film
Requirements	Would depend on particular subject matter; identifying good subject matter; presenter with a passion; original pieces to camera with supporting content
Possible Partners	Local historians; local museums; historical societies; local news organisations

Element 4	Senior Channel Debate
Content Type	Live hosted debate; supported by webcams; on-demand following transmission
Content Subject Areas	News and current affairs; Sport; Religion and philosophy
Estimated Length	30-60 minutes
Frequency	Weekly recordings; repeated regularly; available on-demand
Risks & Barriers	Lack of engagement in live participation; complexities over use of webcams
Requirements	Weekly theme supported by relevant content; a host for each debate
Possible Partners	Local news agencies; freelance journalists

Element 5	Digital Library Showcase
Content Type	Brief introduction to a particular area of the Digital Library; focus on the content and the subject matter; what viewers can find there etc.
Content Subject Areas	All content subject areas could be catered for in the Digital Library
Estimated Length	5 minute introductory piece; on-demand thereafter
Frequency	Regular recordings; repeated regularly; available on-demand
Risks & Barriers	Lack of Digital Libraries created
Requirements	Creation of a number of Digital Libraries; short piece to camera; single presenter
Possible Partners	Local libraries and archives; local TV networks

Element 6	Digital Diary
Content Type	Series of short pieces to camera recording the thoughts and experiences of individual seniors
Content Subject Areas	Content will be driven by personal reflections/ideas; could be based around a topic like food/sport/politics or could be more generic
Estimated Length	5 minutes per diary entry

Frequency	Regular recordings; repeated regularly; available on-demand
Risks & Barriers	Unwillingness of seniors to share their thoughts on a regular basis; therefore a lack of appropriate content
Requirements	Creation of a number of Digital Diaries; series of short pieces to camera; number of individual participants engaged over a period
Possible Partners	None required

Element 7	Collaborative Digital Learning
Content Type	A series of teacher-led classes based on a particular topic; end-users interact live via web-cams and text
Content Subject Areas	Learning would focus on current educational pastimes: languages; technology; dancing; cooking etc.
Estimated Length	60 minutes per lesson
Frequency	Each session broadcast live each week; repeated regularly; available on-demand
Risks & Barriers	Lack of participation by end users; cost of employing tutors over a set time period; cultural shift from what seniors are used to in terms of education
Requirements	Decide on subjects to be taught; source qualified and engaging tutors; set-up appropriate studio environment; broadcast weekly
Possible Partners	Local colleges of higher and further education; local interest groups (dancing groups; conversation classes etc.)

Element 8	Live Multi-player Gaming
Content Type	A series of digital games, probably based around the idea of a quiz show, that allows users to play and participate with others from home using the remote control to select answers
Content Subject Areas	Typically, the quiz would be general knowledge with specific rounds focussed on individual subjects (like food/travel/history/geography etc)
Estimated Length	30 minutes per quiz
Frequency	The quiz could be played, collaboratively, live twice a week; it could also be available on-demand (although could not be played collaboratively on demand)
Risks & Barriers	Lack of requisite number of users to create the collaborative live experience; visual experience is not engaging enough in comparison with other quiz shows they are used to
Requirements	Source/create the questions and answers; create audio files to ask the questions and give the answers; design the question graphics
Possible	Possibly an extension of existing quiz shows that are already broadcast so

Partners	partnership could be with the production companies who produce quiz shows

Element 9	**Video Conferencing**
Content Type	Functional element that allows users to talk to each other over a video link (like Skype)
Content Subject Areas	n/a
Estimated Length	n/a
Frequency	Function would be available at all times although specific time 'windows' could be created to ensure a number of people are online
Risks & Barriers	Unwillingness to use the technology in this way; already using Skype on a pc so not willing to change; lack of people online
Requirements	Users will all need webcams installed and connected to the STB; develop or source software to facilitate calls (e.g. Skype); users need to register and select who they wish to connect with
Possible Partners	Skype; other technology companies with peer to peer VOIP capabilities

Element 10	**On-demand content library with Recommendation Engine**
Content Type	Functional element allowing users access to library of content and providing facility to rate/rank content for others to see
Content Subject Areas	On-demand content would be drawn from across all content areas identified in Section 4
Estimated Length	On-demand content will be of varying lengths, reflective of the type of programming currently available on standard network TV
Frequency	On-demand (i.e. always on)
Risks & Barriers	End users prefer scheduled or live content; end users do not see the relevance or value of providing ranking/rating information
Requirements	Library function with recommendation engine needs to be built into the core software; all end users need to be adequately trained
Possible Partners	Content partners will be drawn from across the broadcasting and media spectrum; particular focus on providers with significant factual content in subject areas outlined in Section 4