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SeniorChannel

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

D4.3 Programme Pilot Formats

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1. Executive Summary

The main purpose of this deliverable is to describe the development and implementation of the main programs elements. Each type of program will have some elements necessary to produce and broadcast the program to the user. The main elements are:

- Virtual Set for each program recorded or "in live" in the virtual studio. These programs are:
  - Personal Stories
  - The News Review
  - The SeniorChannel Quiz
  - The SeniorChannel Debate
- The interface for operators is including new functionalities according the information to be displayed in the program during the recording or live broadcasting process. In this report, the evolution of the interface will be presented according the needs of the programs that are being produced by the senior people.
- The images, music and multimedia material prepared for the team of senior people that will support the development of each program.
- The script written for each program that includes the contents of the program, questions, etc... and how the graphical resources are integrated during the program.

In this document all information and graphical resources are presented and it offers a clear idea how the programs have been prepared for the development of each type of them.

2. Virtual Sets

2.1. Personal Stories

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).

The main requirements for this program established in D.4.2 are:

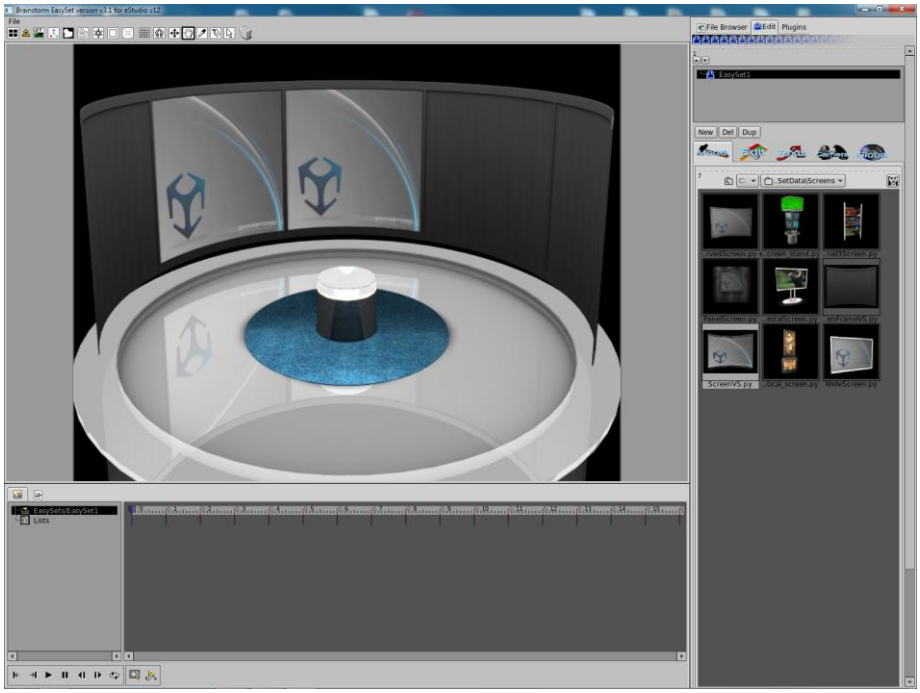
- The process will begin with the selecting people from the centre that have interesting personal histories and experiences that will be attractive and useful for the audience. An editorial committee will select the best stories to be recorded.
- As soon as the stories have been selected, one editor will be assigned to each story to write the narrative (in partnership with the speaker) and to plan how the story will be told during the programme.
- A group of operators will gather images (photos) from the people telling their story and relevant videos and images from Internet selecting the graphical material that will support the narrative.
- The images and videos will be introduced using the virtual studio application and prepared for use during the recording.
- The programmes will begin with an introduction from the presenter and the story will follow the script written and the operators will introduce the images and videos prepared at the correct time.
- The full story will be recorded and then edited
- The final broadcast will be uploaded to the play server of SeniorChannel system to be available on demand for the audience.

The technical requirements were summarised in the following table:

Element 1	**Personal Stories**
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; stories about health matters and experiences; notable moments in time that changed your life
Estimated Length	15-20 minutes
Frequency	Regular recordings (5-10); screened daily
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; supporting content from interviewee including pictures and video where relevant
Possible	Local historians; local museums; historical societies; local news

Partners	organisations; local medical experts
Resource/expertise requirements	Editorial team; interviewees; interviewer; camera/studio operator; editor
Broadcast Type	Pre-recorded; scheduled programme; on demand
Graphical Requirements	Graphics generated in virtual studio engine to create backdrops to stories and integrate other content; no specific graphical interface requirements via STB
Level/Type of Interaction	Ranking and rating programme following transmission
Captioning and On-screen Graphics	Simple studio backdrop with images and video integrated at relevant points in the narrative; titles; credits

For Personal Stories program a simple virtual set has been designed and set up using the tool developed in the program to help user to easy create any virtual set from a library of 3D objects like floors, roofs, screens, walls and some furniture. The following image is a screen shot of the simple tool that the elderly people use to create each virtual studio.



With this tool, the user can design the virtual set using pre-defined elements that are classified in different categories in the right side of the application. With a simple click and drag the user can design the virtual set to be used as a background of the program.

This virtual studio is designed for a conversation of two people, the presenter and the guest and the display of images related to the personal story in three screens that are the background of the studio. The result of the virtual studio is in the screen shoot below:

The production of the program with this virtual studio was a success. In the picture below a capture of the first program of Personal Stories (called Vivencias in Spanish) using the virtual studio designed and composed by the team of users in Centre Parque Galicia in Spain:

2.2. News Review

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.

The main requirements for this program established in D.4.2 are:

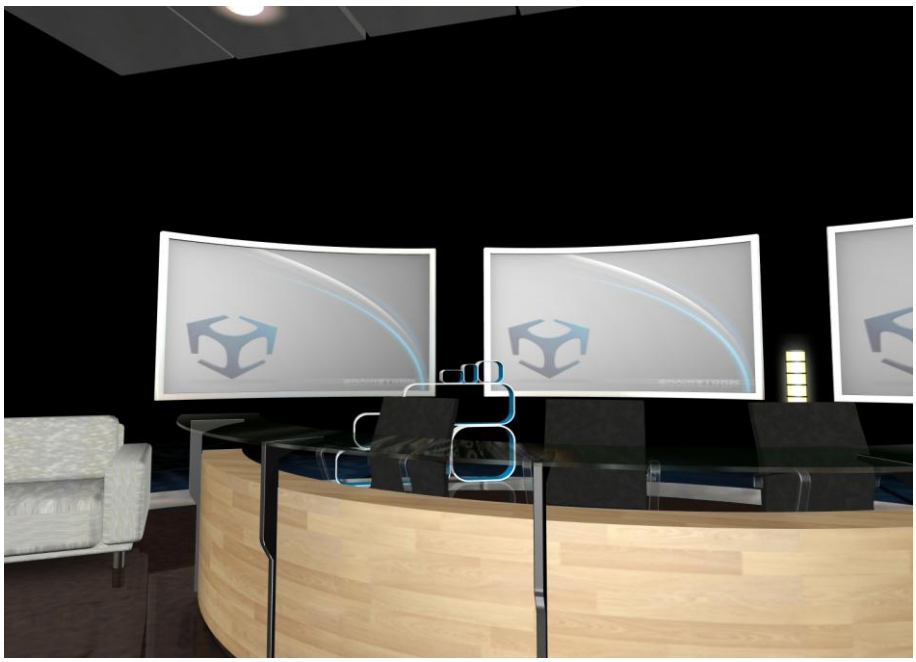
- The process will begin with the selection of individuals to take part in the weekly show: this will include members of the 'panel' who will be asked to comment and discuss news stories from that week and also a presenter who will keep the programme moving
- An editorial committee will then be appointed. Their job – working in tandem with the participants – will be to identify interesting and relevant stories from the news week and to generate some ideas around how these stories might be discussed.
- As soon as the relevant news stories have been selected, the editorial team will work with the presenter and the participants to prepare them for the broadcast, ensuring that all participants understand each story and have something interesting to say
- A group of operators will gather relevant supporting images (photos) and relevant videos and images from the Internet selecting the graphical material that will support the narrative.
- The images and videos will be introduced using the virtual studio application and prepared for use during the recording.
- The virtual studio environment for the discussion will be prepared and the participants will take their positions within the virtual studio.
- The programmes will begin with an introduction from the presenter and then each participant will be asked to explore the stories they have found that week. Operators will introduce the images and videos prepared at the correct time relevant to the story being discussed.
- The programme will be recorded and then, if required, edited

- The final broadcast will be uploaded to the play server of SeniorChannel system to be available on demand for the audience.

The technical requirements were summarised in the following table:

Element 3	The News Review
Content Type	Magazine-style hosted panel show; 3-4 participants discussing the week's news; pieces to camera; not live
Content Subject Areas	Mainly local, regional and national news and current affairs of relevance to seniors
Estimated Length	30 minutes
Frequency	Weekly recordings; regularly repeated
Risks & Barriers	Challenging to find good stories; avoid repeating local TV news; ensuring participants are engaging and interesting when talking and discussing the news; avoid difficult subjects like politics/religion
Requirements	Sourcing of appropriate stories and content for discussion; well prepared participants who are able to talk clearly about the stories they have found; visual content to support the stories being discussed
Possible Partners	Local news agencies; freelance journalists; local/regional government
Resource/expertise required	Editorial team to identify and source content for discussion; presenter; discussion panel participants; camera operator; studio operator; editor
Broadcast Type	Pre-recorded; scheduled programme; on demand
Graphical Interface Requirements	Graphics generated in virtual studio engine to create an appropriate backdrop for the discussion and integrate other supporting content (images/video) where relevant; no specific graphical interface requirements via STB
Level/Type of Interaction	Ranking and rating programme following transmission
Captioning and On-screen Graphics	Titles; credits; narrative captions where appropriate

The virtual set designed and developed for this program was proposed by the users taking into account the requirements of the program above mentioned and taking into account that it was necessary to have three people seated around a table, analysing some news pre-selected by the elderly people in charge of the production of the project and commenting in a free way each new selected from the point of view of the different people. In this case, it is not envisage to have any debate among the people and just gathering common or particular opinions of the new and the repercussion of the news in the daily life of the elderly people.



Since the program has not been recorded yet, some changes might be included in order to adjust the virtual studio to the camera positioning constrains and to the distribution of the people to appear in the scene in the small studio. As soon as the program will be recorded, the final design and configuration will be presented in an updated deliverable 4.3.

2.3. The SeniorChannel Quiz

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.

The main requirements for this program established in D.4.2 are:

- The process will begin with the design of the quiz and the questions. This may borrow from an existing quiz or offline game (live Trivial Pursuits). It's important that there are a series of questions with multiple answers (4).
- We will then select a group of individuals to take part in the quiz: this will include individuals who will take part in the virtual studio and those who will play at home using their remote controls. We will also need to select a presenter (who will provide voice over for the show and ask all the questions)
- We then need to design the quiz environment using the virtual studio technology; we also need to design the way in which the graphics will render on screen in terms of offering the question and then 4 possible answers.
- The show will be broadcast live so we need to ensure that there are a requisite number of players at home who will play along with the participants in the studio

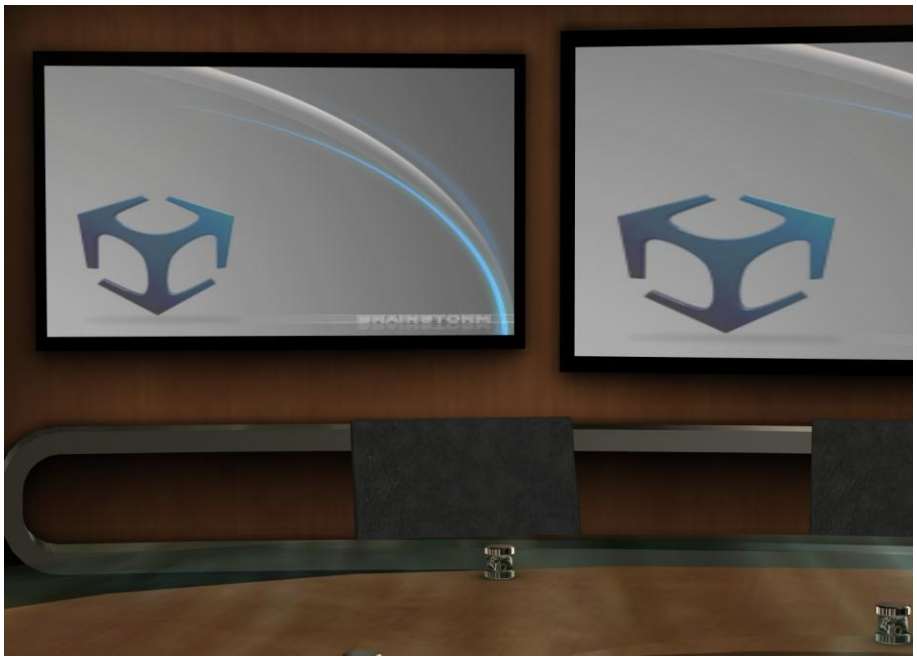
- Prior to broadcast, all the questions and answers need to be agreed and a voiceover recorded to introduce the show, present questions and answers and say goodbye at the end.
- The graphics need to be prepared at this time that mirror the order of the questions being asked so that individuals can play along at home
- At the time of broadcast, all participants in the virtual studio need to be fully prepared and studio and camera operators trained and in place
- The programmes will begin with a pre-recorded introduction from the presenter and then the questions will begin. Each participant will need to have a mechanism to answer the questions in the studio and then the visuals on screen will record their scores and show a leader board as the programme develops
- The programme will be broadcast live but also recorded for uploading to the play server of SeniorChannel system and made available on demand for the audience.

The technical requirements were summarised in the following table:

Element 5	The Senior Channel Quiz
Content Type	General knowledge quiz that allows users to play and participate with others from home whilst individual players play within the studio environment
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 live once a week; recordings of previous quizzes could also be available on-demand (although could not be played by home users 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; technical complexity of delivering live interactive TV
Requirements	Source/create the questions and answers; create question graphics; identify a presenter (which could be just audio); find relevant players who are able to play the game
Possible Partners	Possibly an extension of existing quiz shows that are already broadcast so partnership could be with the production companies who produce quiz shows
Resource/expertise required	Game design/question creation; studio operator; camera operator; management of home user interface; live editor
Broadcast Type	Live broadcast; recording of live broadcast available on-demand
Graphical Interface Requirements	Graphics generated in virtual studio engine to create game studio; graphics generated by the STB for individuals to play along at home
Level/Type of Interaction	Live interaction for home users whereby a question can be answered by selecting one of four possible answers using the colour keys on the remote handset
Captioning and On-screen Graphics	Titles; credits; questions/answers appearing on screen in real time; user selection appearing on screen; correct answer

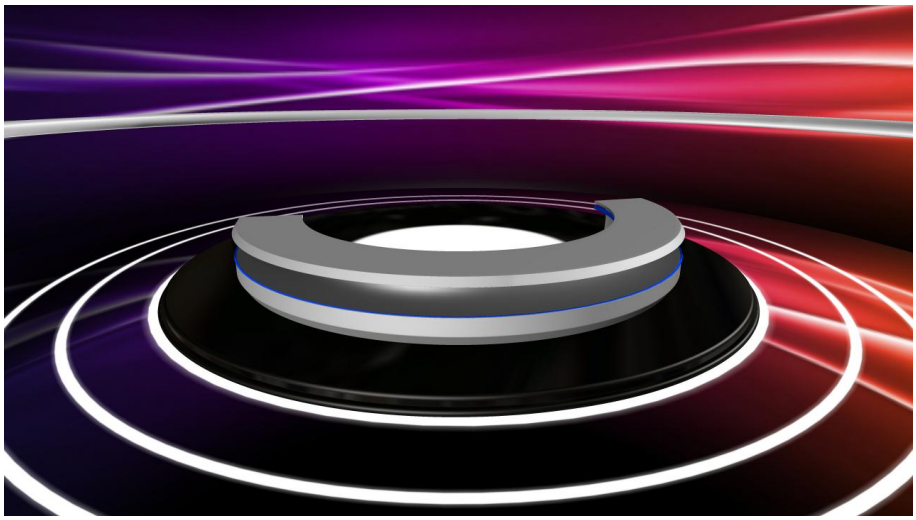
	appearing on screen; running total of in-studio and home users scores; graphics of final scores and winning score

The virtual set designed and developed for this program was proposed by the users taking into account the requirements of the program above mentioned and taking into account that it was necessary to have three people in the studio playing among them and among other people participating from their home. Since there will be an interaction with people at home, the information (questions, ranking, etc... will be presented in some screens that the audience will be able to see but not the people playing in the virtual studio.



Since it is not clear yet if the people of quiz show in the virtual studio will be stand or seated, a preliminary design has been proposed in case of we decide to have the people playing stand stead of seated. As soon as the team finish with the previous on-demand programs and start with this on live programs with interaction from elderlies at home, we'll decide which is the best virtual studio to use in this quiz show.

The first proposal is presented below:



2.4. The SeniorChannel Debate

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.

The main requirements for this program established in D.4.2 are:

- The process will begin with the selection of individuals to take part in the weekly show: this will include members of the 'panel' who will be asked to comment and discuss the issue that has been chosen for debate and also a presenter who will keep the programme moving
- An editorial committee will then be appointed. Their job – working in tandem with the participants – will be to prepare the content for discussion and ensure that the participants have something interesting and relevant to say during the discussion.
- A group of operators will gather relevant supporting images (photos) and relevant videos and images from the Internet selecting the graphical material that will support the narrative.
- The images and videos will be introduced using the virtual studio application and prepared for use during the recording.
- The virtual studio environment for the debate will be prepared and the participants will take their positions within the virtual studio.
- The programme will enable individuals to participate from their homes using a webcam therefore this technology needs to be installed and tested in a selection of home (10) and all home participants prepared in terms of the technical side as well as what will be expected of them
- The programme will begin with an introduction from the presenter and then the discussion topic will be introduced. As a live programme, studio and camera operators need to be trained and in place and an director needs to be appointed to

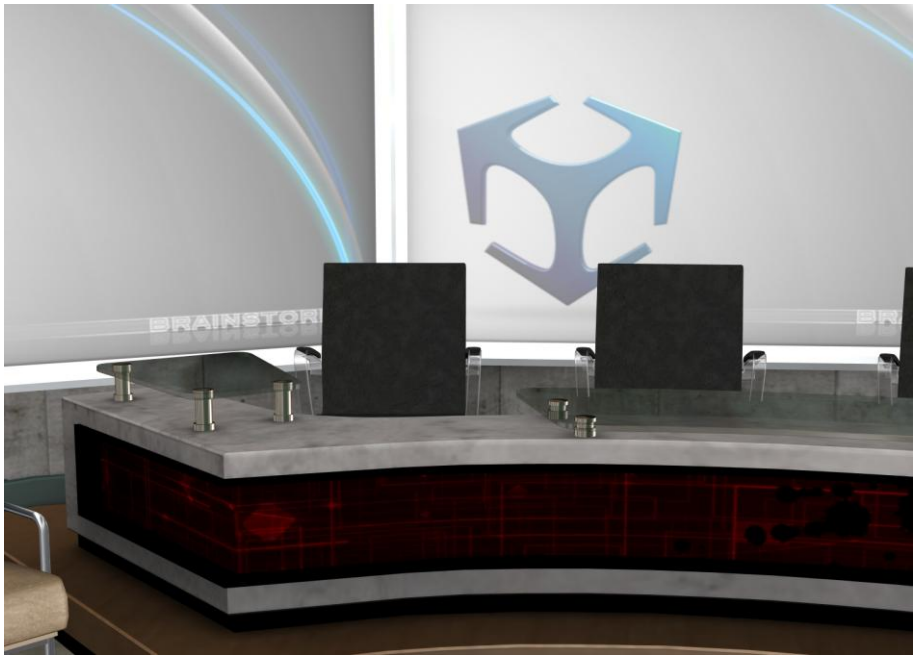
switch between participants in the virtual studio and contributions from home participants.

- Operators will introduce the images and videos prepared at the correct time relevant to the issue being discussed.
- The programme will be broadcast live and then uploaded to the play server of SeniorChannel system to be available on demand for the audience.

The technical requirements were summarised in the following table:

Element 6	The Senior Channel Debate
Content Type	Live hosted debate with in-studio guests and interaction with home users via webcams
Content Subject Areas	News and current affairs; sport; issues affecting seniors; local/regional issues
Estimated Length	30 minutes
Frequency	Weekly live broadcast; repeated regularly; available on-demand
Risks & Barriers	Lack of engagement in live participation; complexities over use of webcams; securing engaging guests for the debates; an effective presenter who can guide the debate
Requirements	Weekly theme supported by relevant content; a host for each debate; a set of participants (seniors; politicians; experts etc.) to stimulate and generate the debate
Possible Partners	Local news agencies; freelance journalists
Resource/expertise required	Significant editorial expertise to design each show; ; studio operator; camera operator; management of home user interface; live editor
Broadcast Type	Live broadcast with interaction from home viewers; recording of live broadcast available in broadcast schedule and on-demand
Graphical Interface Requirements	Graphics generated in virtual studio engine to create debate studio and integrate any supporting content (graphics/images/text)
Level/Type of Interaction	Live interaction for home users whereby a question can be asked via video link or a home user can respond themselves to a point being made by a debate participant in real time
Captioning and On-screen Graphics	Titles; credits; images/video/text relevant to the debate topic; integration of web-cam feeds into live broadcast

The virtual set designed and developed for this program was proposed by the users taking into account the requirements above mentioned. It their opinion the format will be a debate into two parts including a moderator, so again 3 people will be in the virtual studio debating about any matter proposed by the moderator of the debate or presenter. People from home will be able to interact giving the opinion and debating with the people in the virtual studio. The designed proposed is presented below:



2.5. Conclusions

At this stage of the project we have worked with the elderly people in the design of the virtual sets for each TV program. During the validation process and recording of programs, elderly people will be able to be more familiar with the system and we'll train them to use the virtual set configuration tools. At this stage, the elderly people has a battery of virtual sets that can be used not only for each type of programs developed in this project, but also for other future programs, so there's a good repository for other programs that will be generated after the project. Furthermore, the elderly people have the technology and the know-how for developing new virtual sets using the tool developed for this purpose.

The virtual sets will be refined as soon as the programs will be recorded, adjusting the elements for the better view with persons and real elements included in the scene.

We must say that the quality of the scenarios is high for the low cost virtual studio, competing with virtual sets used in professional studios for regional or even national televisions. This is a perfect complement for the low cost technology included in the integrated solution proposed in SeniorChannel.

3. Interface for Operators

3.1. Overview

SeniorChannel is a TV channel made for elderly people by elderly people. There's a lot of very active elderly people in the centres that are able to participate in the development of the program not only preparing contents, writing scripts or participating as presenters, guests, contestants, participants in debates, etc.. but also technical people in charge of operating the programs and editing videos for pre-recorded programs.

eStudio is a quite complex program for elderly people, so we have developed simple user interfaces to operate with the programs. This interfaces has been adapted during the project, introducing functionalities required for each type of program. This evolution is described in the next part of the report.

3.2. Simple Interface

To produce the program the user needs to operate with the following elements:

- Presentation/Animation of the program
- Display of images in each screen of the virtual studio background
- Display of music
- Display of credits, headers and footers.
- Control of cameras (travelling, views, etc...)
- Record of the program in other computer

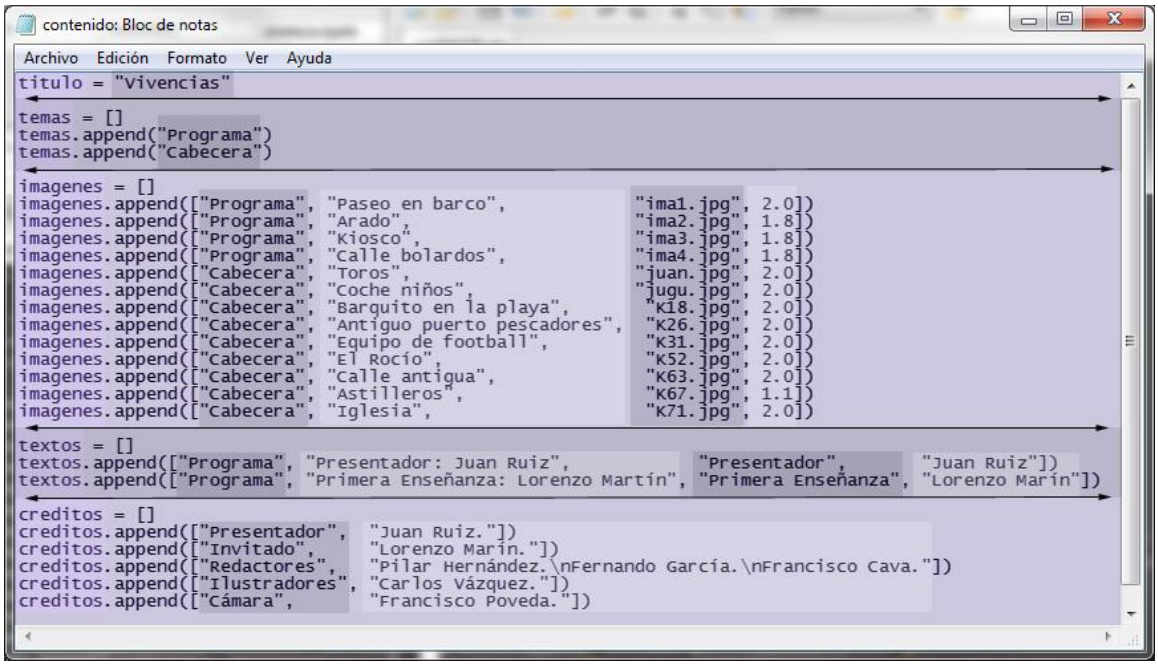
In the following screen shot, the interface is presented with all the functionalities described above:

Control
Programa
Cabecera
Cabecera
Fondo
Final
Presentador: Juan Ruiz
Display
Maestro de Primera Enseñanza: Lorenzo Marín
Display
Paseo en barco
(*) Arado
Kiosco
Calle bolardos
Maquetas trenes
Juegos reunidos
(*) Juguetes hojalata
Juguetes hojalata color
Gominolas
Piruletas
Caramelos
(*) Lágrimas
Belén
Bebé
(*) Limpiabotas
(*) Cepillo Limpiabotas
Niño Durmiendo
(*) Bebé Durmiendo
(*) Caballo de cartón
(*) Abuelo y bebe
Parchís
Regalos
Árbol de Navidad
(*) Reyes magos
Promoción colegio
(*) Gimnasia
(*) Caballo de plástico
(*) Señora
P1
P2
P3
Ocultar panel de imagen
Ocultar texto
Ocultar
Cabecera
Creditos
Escena
Travel
Panorámica

In the first folder of the interface to operate the program, the user (operator) can display the presentation of the program, the background and the end of the program. He is also able to display the name of the presenter and the name of the guest during the production and to hide the images or the text displayed. Besides, for each image selected, the operator is able to select in which panel of the virtual studio each image selected will be displayed (P1 - Panel 1, P2 - Panel 2, P3 -Panel 3).

Other important part of the operating interface is the camera viewpoints and the way of how to pass from one viewpoint from the other. The Travel scroll allows to pass in a discrete way or to use a travelling to change the viewpoint of the camera in the virtual environment.

In order to change contents of the interface, a simple application has been created to provide user with the possibilities to adapt the operator interfaces for each "Personal Stories" program changing images, texts, and music:



The operator has in a computer the interface and in the other computer the capture of the camera mixed with the real time 3D graphics. From the operating computer, and using this interface, the operator is controlling all the graphical information that the is displayed in the virtual scenario and broadcasted in live or recorded for an on-demand programs. In the following image the operating system is presented:

4. General Conclusions

This document gives a clear vision of the main graphical elements necessary for each program to be developed in the Studio with the virtual elements both for recorded programs to be offered in the on-demand modality and for live programs to be broadcasted in real time with interaction from elderly people watching the television at home.

The main elements presented in this document are the 3D virtual sets designed for each type of program selected and the interface developed to interact with the graphic elements during the program recording or broadcast. The virtual sets are created in a easy to use application that allow to create a wide range of sets using a library of elements and dragging and dropping these elements in a 3D space. With this application, elderly people can modify and create new sets in a very easy and quick way. The interface is a very intuitive system that allows elderly people to operate during the program with the graphical elements that are going to appear during the recording like images, videos, headers, footers, texts, etc... as well as different virtual cameras that offer different points of view in the scene and the transition from one camera to other.

The graphical elements described in this report complete the overall elements that a program need to be produced and operated.