



SALERO

Report on Professional Training Programmes

SALERO Deliverable 11.3.1



Report on Professional Training Programmes

SALERO Deliverable D11.3.1

SALERO identifier: D11.3.1_Report_on_Professional_Training_Programmes
-v03.doc

Deliverable number: D11.3.1

Author(s) and company: K. Åberg, M. Nieminen (TAIK), J. Agenjo (FBM-UPF)

Work package / task: WP11

Document status: Final

Confidentiality: Public

Version	Date	Reason of change
1	2008-05-15	document created
2	2008-05-28	Version for internal review
3	2008-06-04	Final version

The work presented in this document was partially supported by the European Community under the Information Society Technologies (IST) priority of the 6th framework programme for R&D.

This document does not represent the opinion of the European Community, and the European Community is not responsible for any use that might be made of its content.

This document contains material, which is the copyright of certain SALERO consortium parties, and may not be reproduced or copied without permission. All SALERO consortium parties have agreed to full publication of this document. The commercial use of any information contained in this document may require a license from the proprietor of that information.

Neither the SALERO consortium as a whole, nor a certain party of the SALERO consortium warrant that the information contained in this document is capable of use, nor that use of the information is free from risk, and does not accept any liability for loss or damage suffered by any person using this information.

Table of Contents

1	Executive Summary	1
2	Introduction	2
2.1	Purpose of this Document	2
2.2	Scope of this Document	2
2.3	Status of this Document	2
2.4	Related Documents	2
3	Training for Professionals	3
3.1	The Structure of the Course	3
3.2	The Presented Tools	3
3.3	Technical Preparation for the Course	5
3.4	Created Training Material	5
3.5	Participants of the Training Course	7
4	Feedback	8
4.1	Feedback form	8
4.2	Feedback Received	8
5	Conclusion	10
6	References	11
7	Glossary	12
8	Annex I: Participants of the Training for Professionals Event	13
8.1	Workshop day 1:	13
8.2	Workshop day 2:	13
9	Annex II: Program Editor Guide for Starter Users	14
9.1	The Timeline and the Clips	14
9.2	Tutorial 1. Basic	15
9.3	Tutorial 2. Animation (the Gesture Track)	17
9.4	Tutorial 3. Camera Sequence (Camera Track)	17
9.5	Tutorial 4. Camera Animation (Camera Track)	18
9.6	Tutorial 5. Lookat (the Look-at Track)	19
9.7	Tutorial 6. Morph (Using the Morphing Track)	20
9.8	Tutorial 7. The Activation-Evaluation Track	21
9.9	Tutorial 8. Speech (the Sound Track)	22

1 Executive Summary

The first *Training for Professionals* workshop for tools created within SALERO took place at the University of Art and Design Helsinki (TAIK) 13.-15.5.2008. The event was intended for professionals in the 3D area; practitioners from the commercial world, academics and future designers in graduate schools, who were interested in learning about SALERO experimental software and also to try out the software for themselves. The object of the training session was to teach working tools to the participants - and gain experiences from the process for future training events and gather feedback from the participants for the developers.

The tools being presented had to have reached a stage in their development, where they could viably be taught to the outside community. For this reason, Fundació Universitat Pompeu Fabra's (FBM-UPF) Program Editor was the tool presented. The other experimental software under development had not yet at the time reached the level of functionality, where it was considered relevant to teach them to the outside professional community.

The training course included a one day introduction session, and two days of hands-on training. The purpose of the first day was also to allow busy professional practitioners to get some idea of the tools, even if they could not attend the whole 3-day event. The course was held by Javi Agenjo of FBM-UPF.

One of the objectives of this course was to compile training information for the course and for future use. For this first training session, FBM-UPF as the tool developer had created an information website: <http://ninoscompetence.wordpress.com/>

The website includes a video that explains the main features of the Program Editor, showing some results obtained with the system. There is also a link to download Program Editor, should the viewers want to test it.

A total of 17 professionals participated in the event, 10 of whom participated only in the first day presentation and 7 also in the hands-on testing. Lecturers from all Universities of Applied Science with 3D education in the greater Helsinki area attended, as well as 3D lecturers, designers and researchers from the University of Art and Design Helsinki and representatives of 3D industry.

The tutorial for the training course is in Annex II.

2 Introduction

2.1 Purpose of this Document

Practitioners from the commercial world, academics and future designers in graduate schools are targeted in the Training for Professionals workshop organized by TAIK during 2008. The workshop introduces tools developed within SALERO. The training course will include a one day introduction session, which is open to a wider field of commercial practitioners and other interested parties. The rest of the course will be hands-on.

One objective of this course is to compile a standalone training package for the course and for future use. This training package will cover practical aspects regarding SALERO tools, and user manuals. SALERO experimental productions may be used as an example on the use of the tools.

The training package will be developed further according to the professional feedback gained from the participants of the Training for Professionals course.

2.2 Scope of this Document

This report presents the SALERO Training for Professionals event, which was organized at the University of Art and Design Helsinki, 13th to 15th May 2008.

2.3 Status of this Document

This is the final version of D11.3.1.

2.4 Related Documents

As the Training for Professionals event featured the Program Editor software of FBM-UPF, it is recommended to be familiar with the deliverable D7.6.1 which describes the software in full.

- D7.6.1 standalone Program Generator; Testing; First release.
- Description of Work

3 Training for Professionals

The first *Training for Professionals* workshop took place at the University of Art and Design Helsinki (TAIK) 13-15 May 2008.

The event was intended for professionals in the 3D area; practitioners from the commercial world, academics and future designers in graduate schools, who were interested in learning about SALERO experimental software and also to try out the software for themselves. The object of the training session was to teach working tools to the participants - and gain experiences from the process for future training events and gather feedback from the participants for the developers.

3.1 The Structure of the Course

The training course included a one day introduction session, and two days of hands-on training. The purpose of the first day was to allow busy professional practitioners to get some idea of the tools, even if they could not attend the whole 3-day event.

The course was held by Javi Agenjo of FBM-UPF.

The first day's presentation was held in the Kino Bunuel auditorium of TAIK's Lume Centre. During the first day Javi Agenjo presented the tools on a general level, showed demos of different projects such as *Sam the Weather Man* from AM, which had used the tool. At the end the audience had the possibility to discuss and ask questions.

The second and third days of the course consisted of hands-on practice with the Program Editor using both assets provided by FBM-UPF and the participants' own materials. Participants used SoftImage XSI and 3Ds Max 9 to create assets, which were then exported as .FBX files and then imported into Program Editor. These hands-on exercises took place in the Media Lab of TAIK.

3.2 The Presented Tools

The tools being presented had to have reached a stage in their development, where they could viably be taught to the outside community. For this reason, FBM-UPF's Program Editor was the tool presented. The other experimental software under development had not yet at the time reached the level of functionality, where it was considered relevant to teach them to the outside professional community.

Ninos platform incorporates all the tools under development at FBM-UPF. These include the Program Editor tool which was the main tool presented in the training.

ProgramEditor, is a real-time, timeline-based animated production editing software. The production is described through a sequence of animation clips on different tracks. Those clips could represent cameras, characters, sets and props (amongst other things) and their changes along the time.

It also allows managing the data for lipsynch, procedural animation (eye blinking and eye to object aiming) and Activation/Evaluation values for facial emotional expression.

During the training, the participants have been introduced to the Activation/Evaluation feature, which is a part of the Program Editor. It uses the output generated by the Maskle, a software that makes it possible to automatically rig and weight a character's face. It also generates the shapes that must be interpolated to obtain several facial expressions that can be then re-used on different characters (accordingly to the Synthetic Model for Facial Expression Animation).

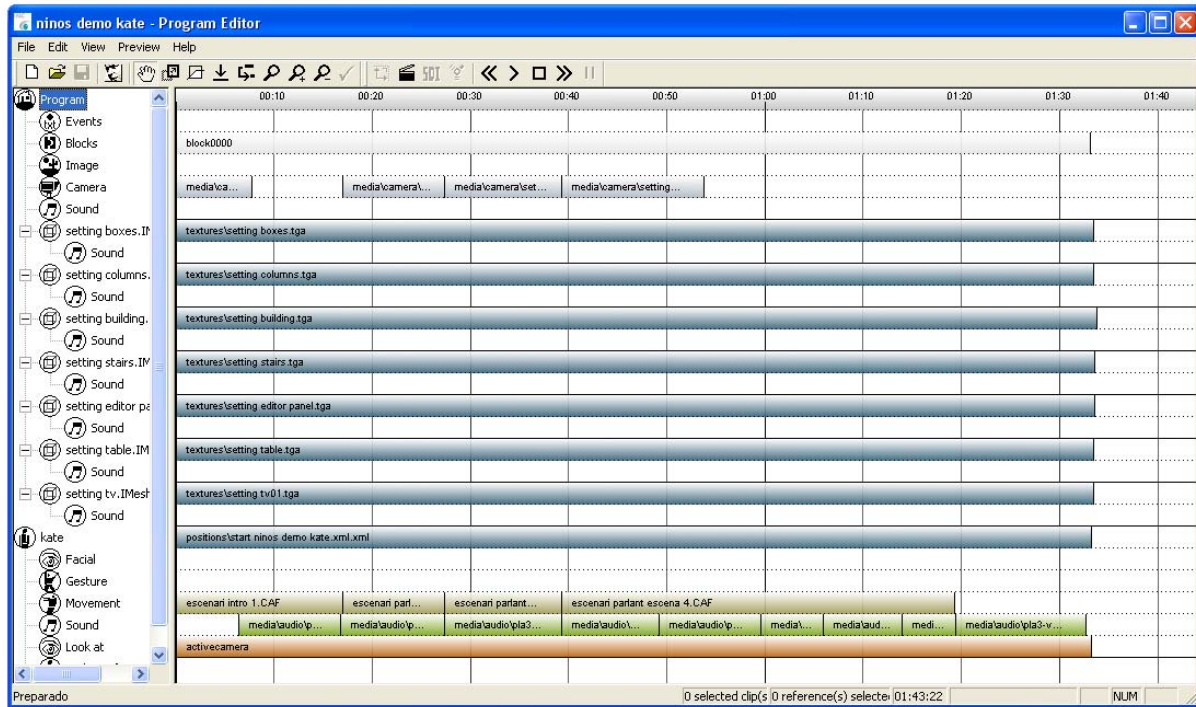


Figure 1: The Program Editor Timeline



Figure 2: The Program Editor preview window

3.3 Technical Preparation for the Course

The course highlighted the need to take into consideration the various platforms people use and the facilities available for arranging courses. For example, the TAIK Media Lab is a Mac environment, whereas Program Editor has been created as a Windows application. It was possible to run Program Editor, since the new Macs include Windows operating system. However, tweaking was needed to get the programme to run on these.

A larger problem was that the Program Editor is created for NVIDIA -graphics cards, whereas all computers in the Media Lab use ATI graphics cards. This was a problem, which was finally bypassed by using CPU instead of graphics cards to run the course.

Also in future training sessions, it is important to take these issues into consideration during the planning of the event. However, meeting such real-life problems in installing the tools into new environments can act as a good reminder to tool developers of the benefits of creating tools that would function in diverse computer environments.

3.4 Created Training Material

One of the objectives of this course was to compile training information for the course and for future use. For this first training session, FBM-UPF as the tool developer had created an information website: <http://ninoscompetence.wordpress.com/>

The website includes a video that explains the main features of the Program Editor, showing some results obtained with the system. There is also a link to download Program Editor, should the viewers want to test it.



The screenshot shows a web browser window displaying the website 'Ninos, Automatic Audiovisual Production'. The browser's address bar shows the URL 'http://ninoscompetence.wordpress.com/'. The website header features the SALERO logo and the text 'NINOS automatic audiovisual production' and 'Competence development for media professionals'. Below the header is a navigation menu with 'Home' and 'About' links. The main content area displays a video player titled 'NINOS - programEditor - Video' dated 'May 13, 2008'. The video player shows a 'replay' button and a 'YouTube' logo. Below the video player is a 'download video' link. To the right of the video player is a 'NINOS CALENDAR' for 'May 2008'. The calendar shows the days of the week (M, T, W, T, F, S, S) and the dates (1-31). Below the calendar is a search bar with a 'Search' button. Below the search bar is a section titled '1356' with two links: 'o Grup de Tecnologies Interactives (GTI)' and 'o salero youtube channel'. Below this is a 'RELATED SITES' section with two links: 'o Salero' and 'o TENCompetence'. At the bottom of the page, there is a footer with 'No Comments » | ninos | Permalink' and 'Posted by ninoscompetence'.

Figure 3: Ninoscompetence – website created as further information for the Training for Professionals event (part 1)

Test version of Program Editor

May 13, 2008

If you want to try our editor to test how powerful our system is you can download Program Editor, the tool we use to create the XML Timelines.


This tool allows to edit and arrange different items to create the video such as the set, the actors, the audio, cameras and so.

You can download [NINOS Program Editor](#) from this link.

The steps to install it are:

- Uncompress the file to your C: root.
- Execute the change_language.reg
- Execute the register_components
- Execute the application Program Editor.

If you experience any problem with the way the actors look then try executing the skinning_software.bat

 [No Comments »](#) |  [Uncategorized](#) |  [Permalink](#)
 Posted by ninoscompetence

Training in Finland

May 9, 2008

The NINOS' team will be showing a experimental version of the NINOS platform and its tools on TAIK (University of Art and Design of Helsinki) during May 13th,14th and 15th.

Part of the talk will be focused on getting some feedback from the people. I hope I see you there.

 [No Comments »](#) |  [ninos, training event](#) |  [Permalink](#)
 Posted by ninoscompetence

Figure 4: Ninoscompetence – website created as further information for the Training for Professionals event (part 2)

3.5 Participants of the Training Course

A total of 17 professionals participated in the event, 10 of whom participated only in the first day presentation and 7 also in the hands-on testing. Lecturers from all Universities of Applied Science with 3D education in the greater Helsinki area attended, as well as 3D lecturers, designers and researchers from the University of Art and Design Helsinki and representatives of 3D industry.

There is a list of the attending people attached in the Appendix of this document.

4 Feedback

4.1 Feedback form

The following feedback form was given to participants, who participated in the actual hands-on work during the 3rd day of the training:

NINOS Platform poll for TAIK users	
May 15 th 2008	
Evaluate from 1 to 5 (1 Poor and 5 Very Good)	
The usefulness of the Ninios Platform	1 2 3 4 5
The Interface of Program Editor	1 2 3 4 5
The quality of the rendering system	1 2 3 4 5
How easy it is to learn the system	1 2 3 4 5
How easy it is to adapt your assets	1 2 3 4 5
Suggest possible uses for our system, no matter in which context.	
Suggest how you would improve the interface of Program Editor.	
In which direction do you think the project should develop? Features that should be added, fields that should explored.	
What things did you miss in Program Editor?	
Additional opinions...	

4.2 Feedback Received

The questionnaire was given out at the end of the training. From the questionnaires we gathered good suggestions, which were mainly focused on the usability of the Program Editor and its interface. These included the following suggestions:

- For Program Editor to allow the user to export the whole animation back to FBX to render it using a 3D application like 3DS Max.
- Some wizards to create actors or configure the assets would be really helpful.
- More features related to real time applications like VJing or interactive actors.
- To have a 3D canvas where you can see and edit the content of the animation using a low-quality render to make it easy to align the props and actors.

Some of these ideas went far from the current point of interest of the Program Editor, but it would be interesting to consider them as possible future work for the project.

However, much of the feedback was received as informal feedback during the actual training session. This feedback included suggestions on features that people would want to have in Program Editor and comments on the interface.

Questions from the audience the first day of the training course included:

- Do you have any estimation of production times?
- Would it be possible to include some AI into the characters? Could they for example understand the dimensions of the spaces they are in and behave accordingly?
- Does this program enable a semi-procedural way of animating, where you make rules first, and then you execute them?
- What special skills do you need to use the software? Do you have to be e.g. a 3D animator or a programmer?
- Was there a correlation between the hand movements / gestures of Sam the weather man and the text he was speaking?
- Is it too big a step to make it into a tool for people to create for instance a music video with in real time on the internet?
- Do you have your API online? or any documentation?
- You have keys that are events that the characters react to. Can they be dynamic or do they have to be pre-scripted?

5 Conclusion

The first SALERO Training for Professionals event was intended for professionals in the 3D area; practitioners from the commercial world, academics and future designers in graduate schools, who were interested in learning about SALERO experimental software and also to try out the software for themselves.

Since the training was aimed specifically at people already proficient in 3D, it could be held using professional 3D terminology. This enabled a deeper level of discussion and communication than would otherwise have been achieved. The aim of the training was to give a deeper understanding of the presented tool than could be gained by merely attending a general dissemination event.

In conclusion, the training has been an interesting first approach to know the reactions about the NINOS Platform from an audience familiarized with 3D production software.

Showing the tools to professionals was useful in gathering good feedback for future work. Though some of the suggestions for developing Program Editor went beyond the current scope of the project, they still presented interesting ideas that could be considered in the future.

The Training for professionals event also presented a good opportunity for the tool developer to gain experience in how to present SALERO tools to outside audiences.

We can also be pleased with the amount, and the knowledge level of the participants during the seminar (Day 1), where we introduced the concepts behind the technology. These participants included staff from nearly every educational facility in the greater Helsinki region, which offer 3D education. The following workshop sessions (Day 2 and Day 3) were joined by some professionals and students. Despite the reduced number of participants, the feedback gathered will be really useful for the future development of the technology.

6 References

Ninos webpage: <http://ninoscompetence.wordpress.com>

7 Glossary

Partner Acronyms

AM	Activa Multimedia, ES
BLITZ	Blitz Games, UK
DIT	Dublin Institute of Technology, IE
DTS	Digital Theatre Systems, UK
FBM-UPF	Fundació Universitat Pompeu Fabra, ES
GVG	Grass Valley Germany, DE
JRS	JOANNEUM RESEARCH Forschungsgesellschaft mbH, AT
LFUI	Leopold-Franzens Universität Innsbruck, AT
PGP	Pepper's Ghost Productions Ltd., UK
TAIK	Taideteollinen Korkeakoulu, FI
UG	University of Glasgow, UK
UPF	Universitat Pompeu Fabra, ES
URL	Universitat Ramon Llull, ES

8 Annex I: Participants of the Training for Professionals Event

Ricardo Velez	Visual Components, 3D company
Laura Delgado	Film & TV dept. University of Art and Design Helsinki (TAIK)
Lily Diaz	Professor, researcher, Media Lab, TAIK
Jaro Lehtonen	Eved Design Institute 3D
Juhani Tenhunen	Project Manager, Media Lab, TAIK
Kristian Simolin	3D artist, 3D studies director, Laurea University of Applied Science
Kai Lappalainen	3D artist, lecturer in 3D, Media Lab, TAIK
Matti Lehti	3D, Laurea University of Applied Science
Juha Ylimäki	3D, Laurea University of Applied Science
Vennu Nivalainen	Technical staff, Media Lab, TAIK
Merja Nieminen	Media artist, researcher, Media Lab, TAIK
Markus Norrena	Lecturer in New Media, Stadia University of Applied Science, & researcher Media Lab, TAIK
Kati Åberg	Producer, Media Lab, TAIK
Anna Salmi	Researcher, Media Lab, TAIK
Valtteri Mäki	3D designer, Digital Arts, Turku art academy
Mika Tuomola	Researcher, Media Lab, University of Art and Design Helsinki
Anne Parkkali	3D artist, BSc, doing MA on facial animation

8.1 Workshop day 1:

Anne Parkkali	3D artist, BSc, doing MA on facial animation
Matti Lehti	3D, Laurea University of Applied Science
Juha Ylimäki	3D, Laurea University of Applied Science
Merja Nieminen	Media artist, researcher, Media Lab, TAIK

8.2 Workshop day 2:

Valtteri Mäki	3D designer, Digital Arts, Turku art academy
Merja Nieminen	Media artist, researcher, Media Lab, TAIK
Anna Salmi	Researcher, Media Lab, TAIK
Lily Diaz	Professor, researcher, Media Lab, TAIK

9 Annex II: Program Editor Guide for Starter Users

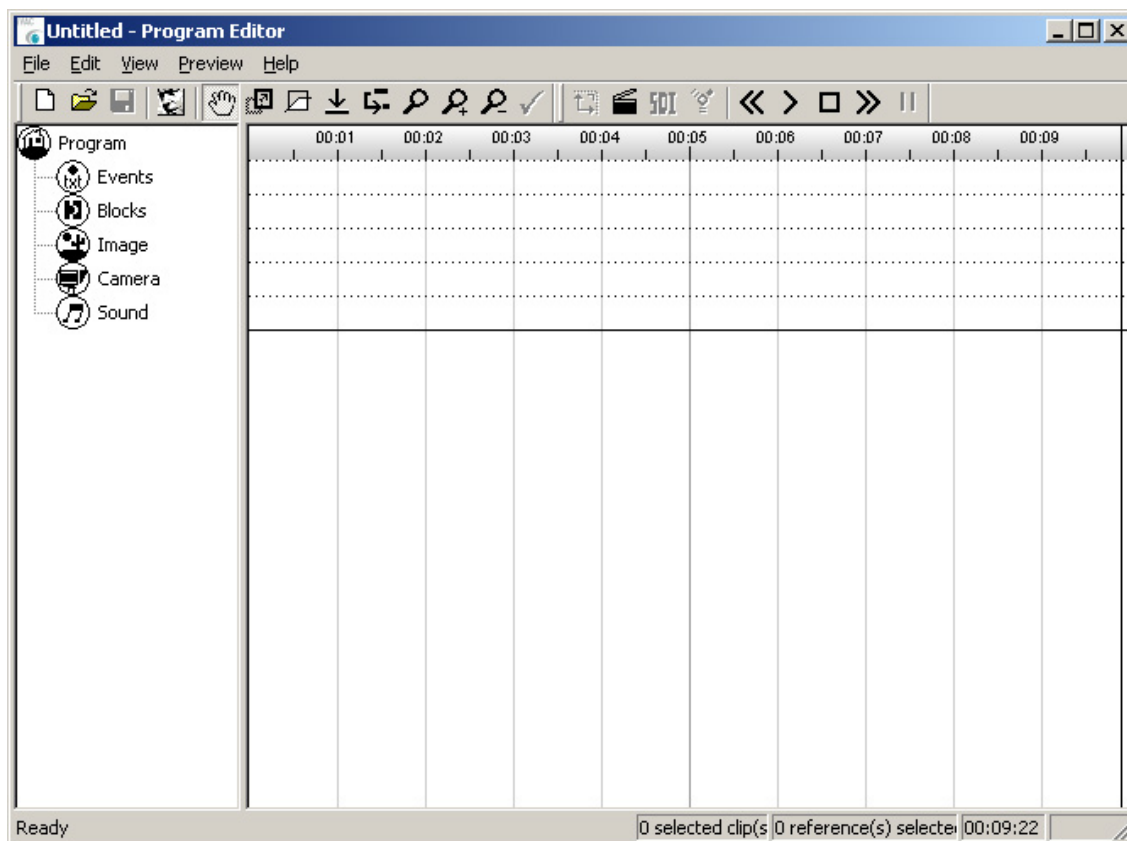
In this document we will guide you across the basic steps to use the Program Editor and understand its features. For a deep understanding of how all the platform works we encourage to read the application's manual.

9.1 The Timeline and the Clips

All the information regarding to the events on our video are represented by clips allocated in different tracks of a timeline.

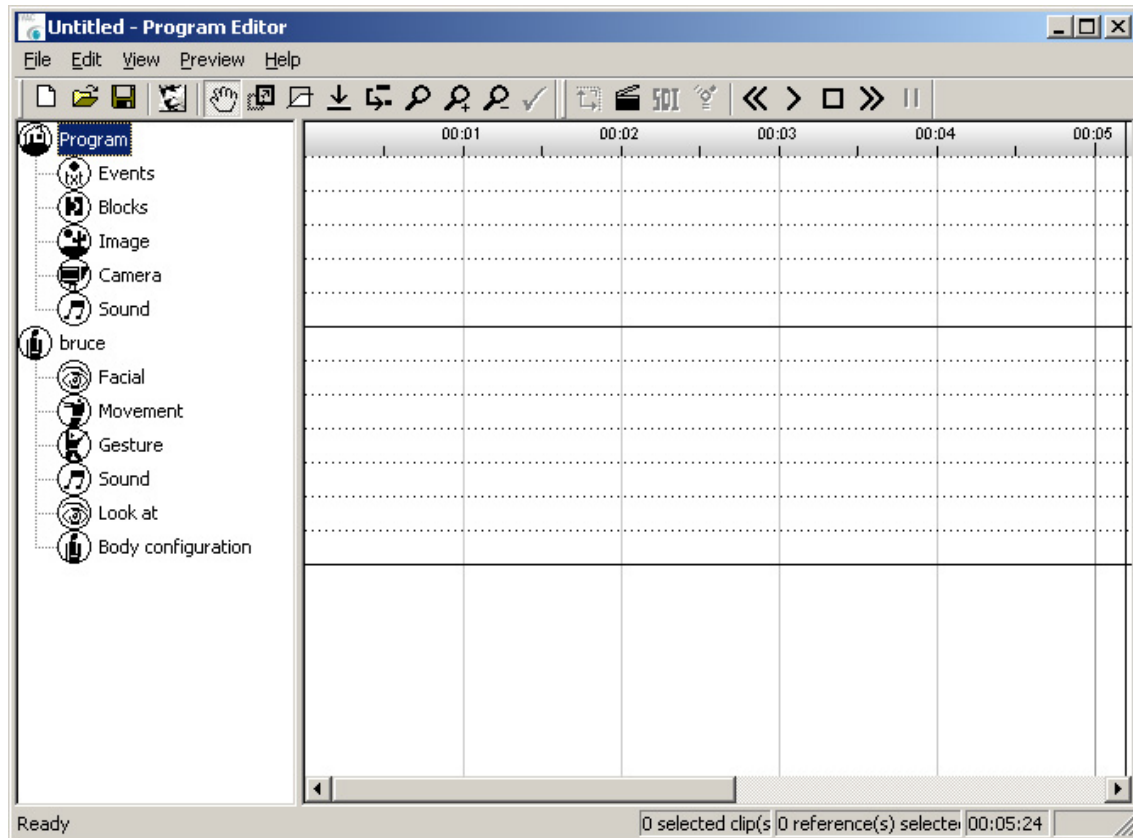
Every track represents a different type of information and the clips indicates when an actions must start and for how long.

There are some common tracks in every project regarding to the video duration, the active camera, the sound file to play, and other tracks that we can add according to our needs.



In this screenshot we can see an empty scene where nothing has been added. If we want to add new clips we just double-click where we want them. We can also stretch them by dragging their edges to make them as long as we need.

We can add an actor by right-clicking in the left canvas and selecting the option "add actor" or by clicking the actor icon. When the actor is created, some new tracks will appear as we can see in the next screenshot.



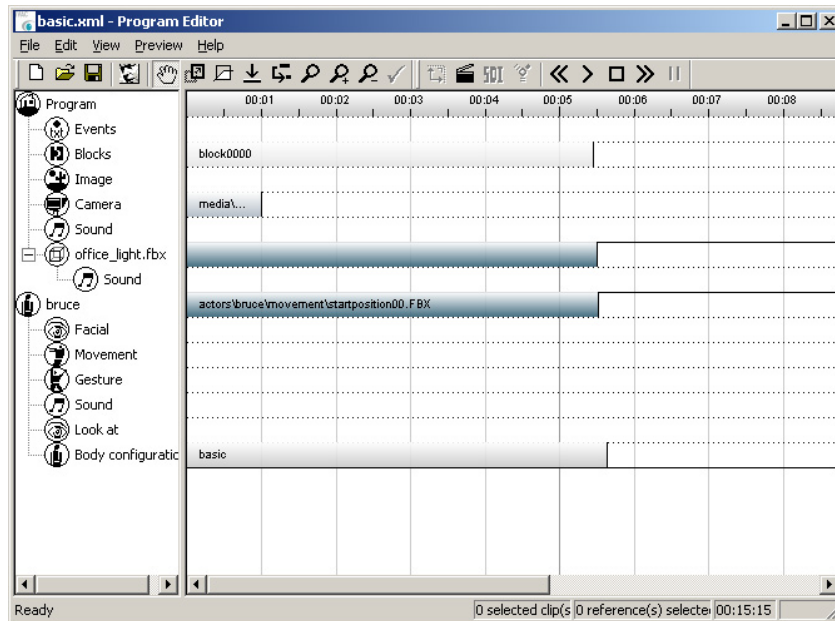
The different tracks will be explained in the tutorials.

We can add also generic assets that will render with our scene, this assets are useful to have a background for our set. This is done by right-clicking in the left canvas and selecting the option "Add object 3D".

9.2 Tutorial 1. Basic

In this tutorial we can see a simple video created using Program Editor.

It features an actor and a background, you can see this by watching the different tracks active in the canvas, the one called "office_light.fbx" and the one called "bruce" with their own specific tracks.



If we preview this timeline it will look something like this



Analyzing the timeline we can see five different clips, everyone in a different track:

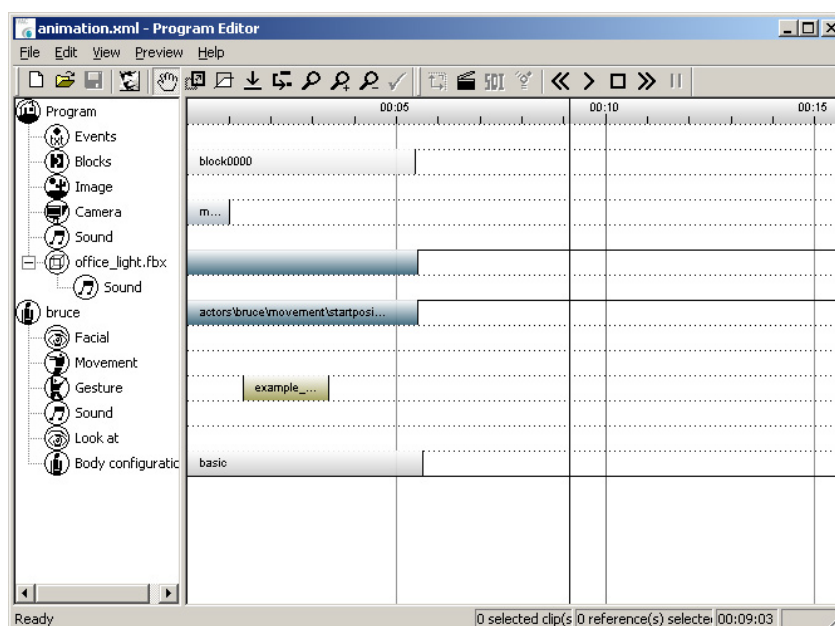
- **Blocks:** this clip tells the duration of the video. The longer it is the longer the video will be.
- **Camera:** this clip tells which camera should be used. We can activate different cameras using one single camera track, putting different clips among it.
- **“office_light.fbx”:** this clips tells how long this asset has to appear on the screen, in this case the asset contains the background so it should last as long as the video.
- **“bruce”:** this clip tells how long this actor has to be on the screen. We want it to be all the time so the clip last the same as the video.
- **Body configuration:** the body configuration represent a different look for an actor, in this case we only have one body configuration so we just enable it.

This is all the information we need to create a simple video with an actor in it. If we want to make the video more complex then we need to use more clips representing the information we want to add to the timeline, information such as animations, audio samples, facial expressions, and so.

9.3 Tutorial 2. Animation (the Gesture Track)

In the previous tutorial we could see that our actor was moving slightly despite we hadn't any clip about it, this was because the actor has an idle animation in its configuration, this animation will play automatically if there is no other animation overriding it.

To add a new animation we can use the Gesture track. Creating a clip in this track will pop-up a window asking us which animation we want to add. The animations available are the ones inside the folders of the actor.



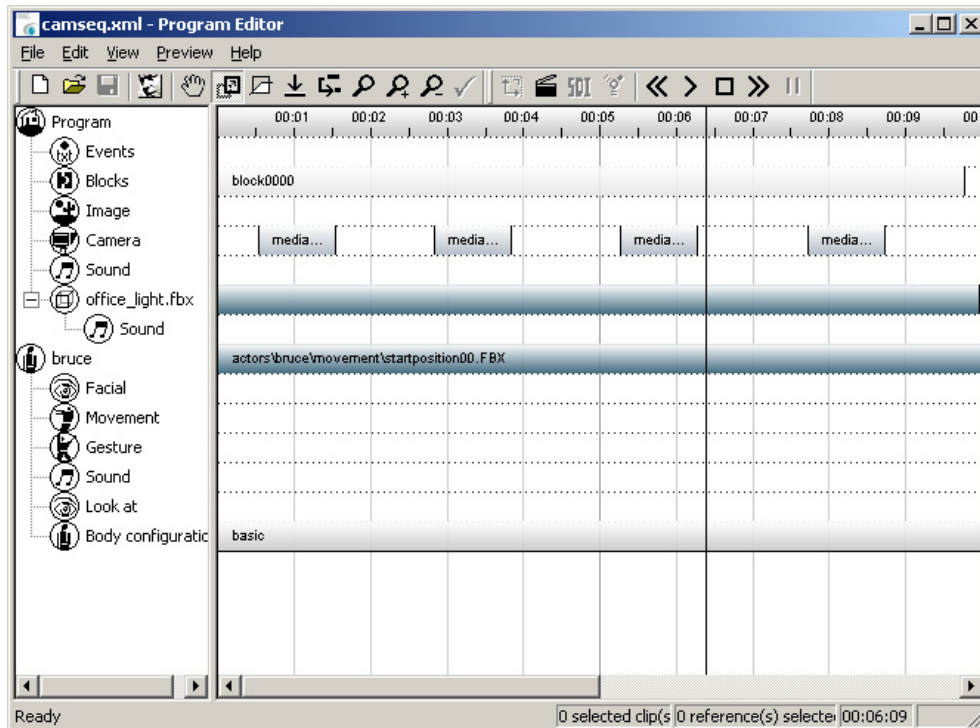
In this screenshot we can see that around second 00:01 we have a clip activating the animation called "example_anim".

It is important to remember that an animation only will work if the skeleton is the same than the actor's skeleton, otherwise it could cause unexpected results.

9.4 Tutorial 3. Camera Sequence (Camera Track)

In this tutorial we will use the track Camera to change the point of view of our camera during the video. To do this we only need to add a clip inside that track, in this moment a popup window will ask us which camera we want to us.

In the example we can see different cameras activated through time.



The cameras available to choose will be the ones stored in FBXs files inside the “media/camera” folder.

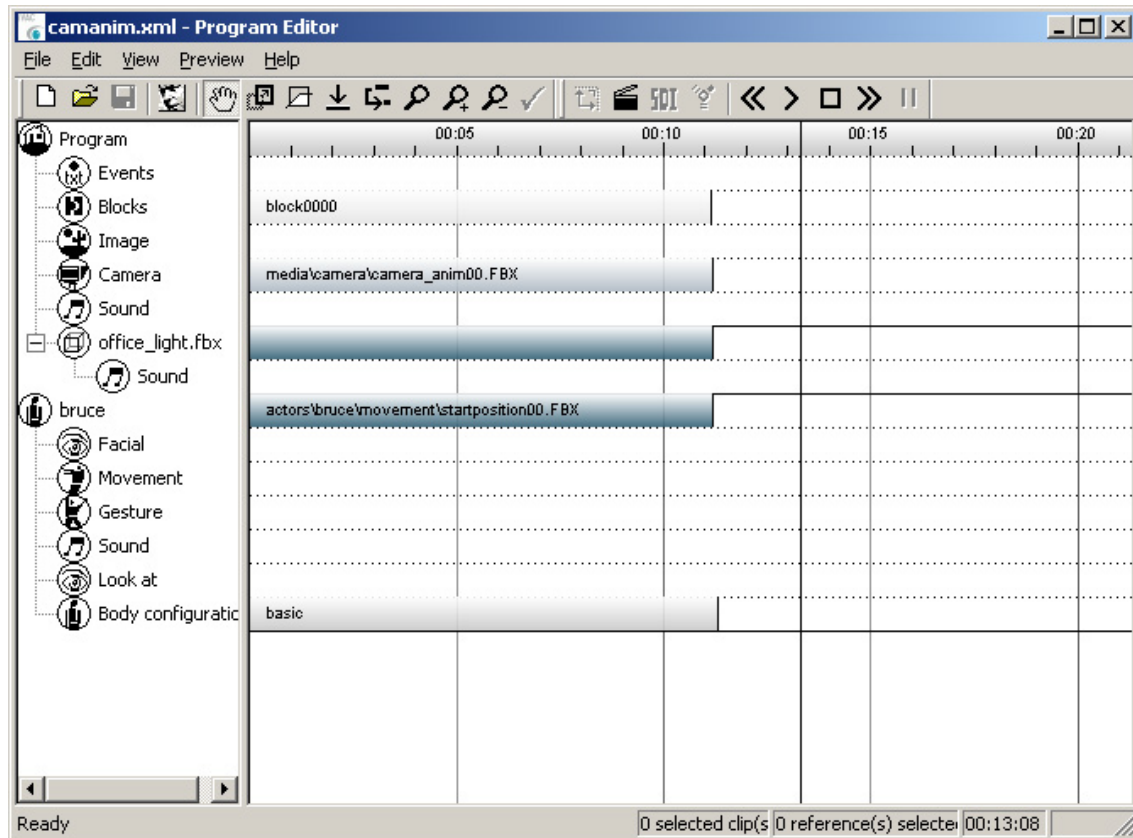
We only can choose cameras stored in that folder, if our background (or any other asset active in the video) has a camera as a part of the scene it won't be accessible unless the FBX is in the proper folder.

Notice that the clips don't need to be as large as the time the camera is active, that is because the camera remains active unless other camera is activated.

9.5 Tutorial 4. Camera Animation (Camera Track)

We can have animated cameras. To do this we just need to animate the camera inside our FBX where all the camera information is stored, as we would do to animate any other object.

The animation will last as long as the clip last inside our timeline. To ensure that the animation is played completely the clip has the proper size when it is created, shortening it will make the animation end sooner (but the animation will be played at the same rate, there is no time stretching).

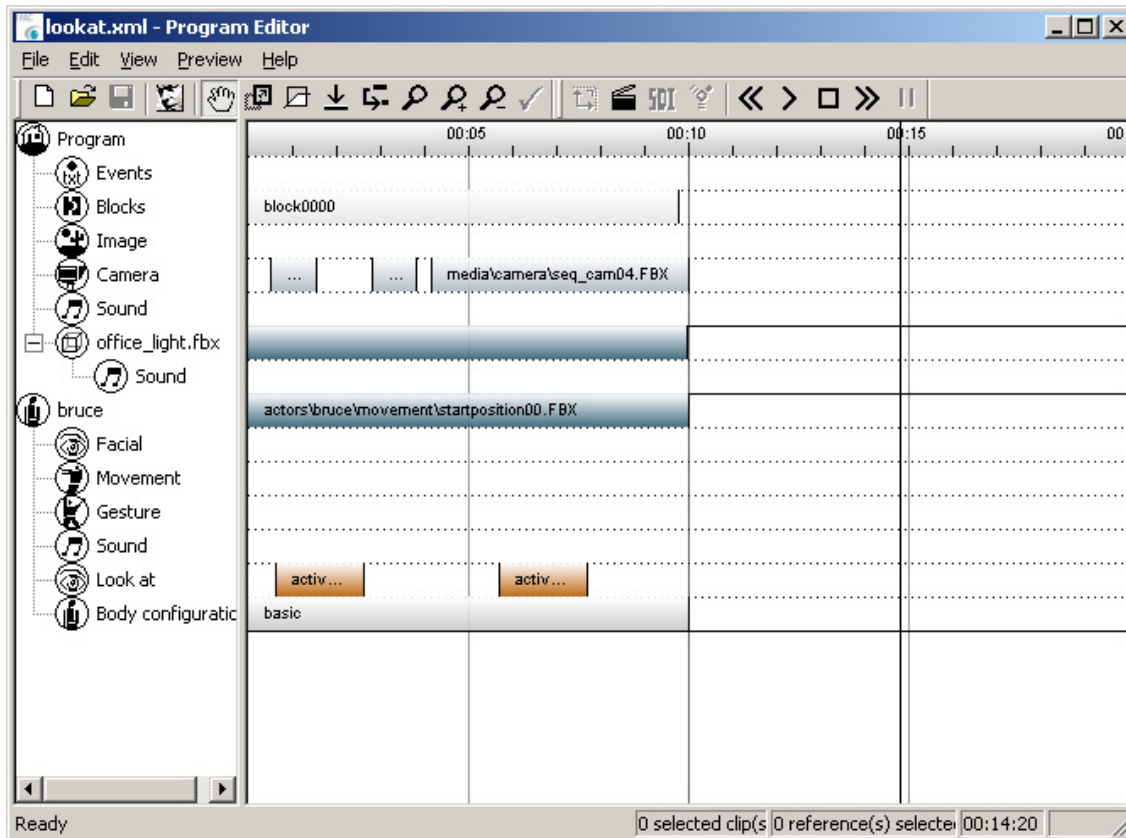


In this example the animation of the camera is stored in camera_anim00.FBX and it will last as long as all the video.

9.6 Tutorial 5. Lookat (the Look-at Track).

The problem of using several cameras is that our actor won't look at the camera unless we have created the right animation to do so, something not acceptable in our production process.

To solve this problem the system allows changing the skeleton of the actor using Inverse Kinematics. Thanks to this not only the actor eyes will point at the camera, it also can move slightly his neck in a natural position.



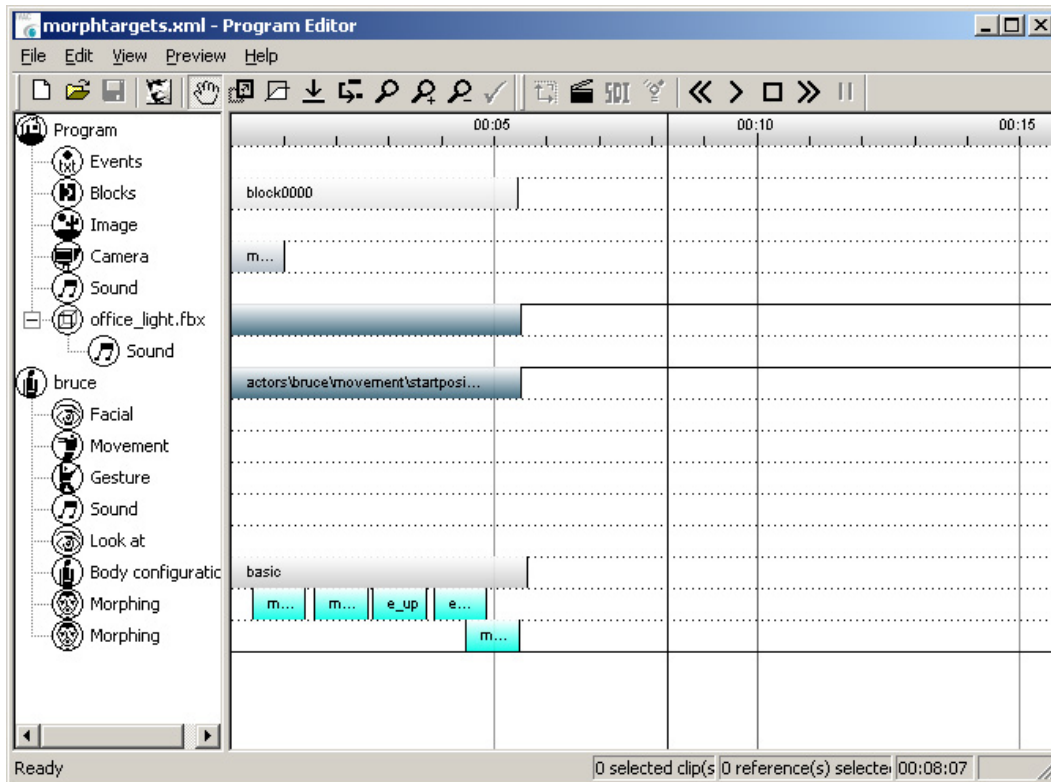
In this screenshot we can see that the Look At track on our actor “Bruce” has two clips, telling in which moment we want the actor to look at the camera. As soon the clip has end the actor will move back to its default position.

If the movement is too abrupt we can use the “fade clips” tool to create a smooth transition between the previous position and the new position of the eyes.

9.7 Tutorial 6. Morph (Using the Morphing Track)

Program Editor allows using morph-targets to enhance the visual quality. It helps the artist to give more expressivity to the actor in those context where is not enough with the skeletal animation. Using morph targets we can deform the mesh.

To do this we need to right-click on the actor name and select “add morph target track”. This will create a new track inside the actor called “Morphing” which allows activating a specific morph-target from the FBX. When we create a clip inside this track the program will ask us the name of the morph-target we want to use to deform the mesh.



We can have several morph targets active at the same moment, the result will be the sum of all of them.

Remember you can use the “fade clips” tool to make the transition smoother.

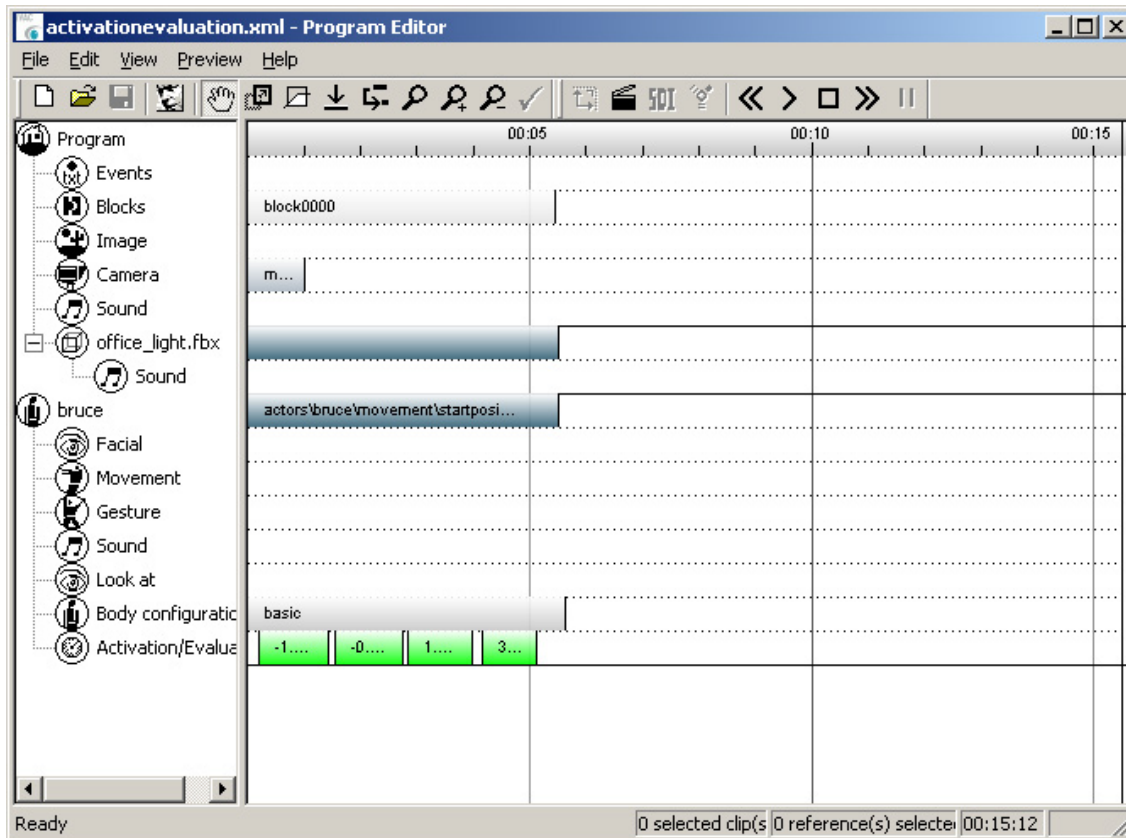


9.8 Tutorial 7. The Activation-Evaluation Track

The activation-evaluation is a way to model emotional states. It can be use to animate the character applying emotional facial animation.

To use the activation-evaluation method, we need to create a Activation/Evaluation track, this is done by right-clicking in the actor’s name and choosing the “Add Activation/Evaluation track”.

In this example we can see the track:



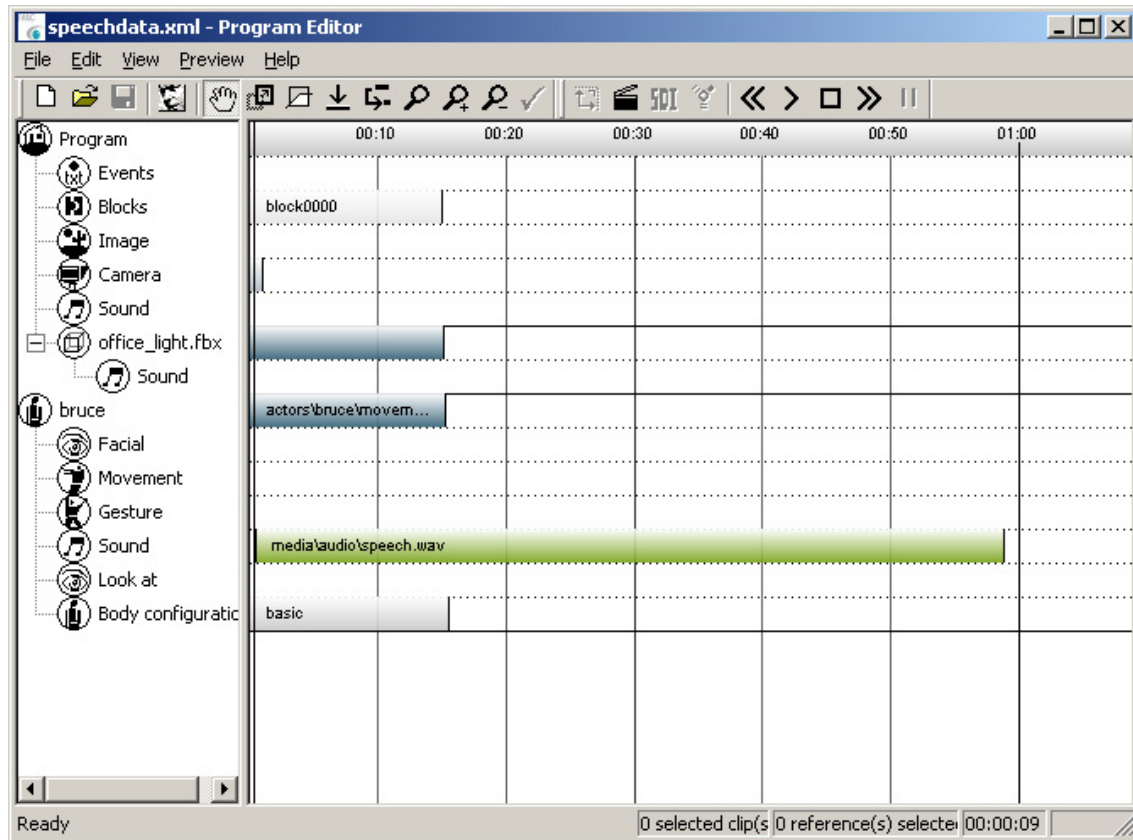
Once we have created a clip in this track a pop-up window with a circle will appear. The circle represents different emotional states for our the character. We can pick any position inside the circle and see the results in our character.

Remember you can use the “fade clips” tool to make the transition smoother.

9.9 Tutorial 8. Speech (the Sound Track)

Finally, we can make our character to move the mouth according to a sound file, this is done by attaching with the sound file an specific XML file with the proper movements of the face (mapped as morph targets).

If this file is available in the same folder as the wave file, the actor will move the mouth properly.



This screenshot shows the sound clip what will be used to make the character's mouth move.