AEQ AudioPlus

System Presentation

General Description

AUDIO PLUS is the most advanced automation, management and emission system for professional broadcasting. It is the latest generation of automation systems developed by AEQ, collecting the experience of thousands of workstations of MarSystem (1992-1999), Mar4win (1998-2009) and Mar Suite PRO (2008-2012).

It consists in a set of applications and services that provides the necessary tools in order to carry out any regular work at a radio station, as well as a series of tasks related to storage, editing and audio broadcasting in television stations.

The basic need for automation in radio stations is the management, scheduling and sound storage. This is specifically what is provided by **AEQ AUDIOPLUS-** A solution to all the needs reported to us by the users of our previous automation systems and of other brands, and that created a synergistic process in its development.

It is essential to perform the broadcasting in an unattended and occasionally centralized way, preparing data in remote stations and remotely controlling from a master station the program broadcasting that incorporate local disconnections with different schedules.

Through these pages we will refer most extensively to the core modules of the **AEQ AUDIOPLUS** system and its operation. Data Management, Manual and Automatic Broadcasting, Automatic Scheduling, Internet, Audio converter, Audio extraction from CD´s and the Musical classification, still providing a detailed description of the many possibilities offered by its features to automate, as of whole, the radio workflow.

Hardware and Software Requirements/Installation

AEQ AudioPlus is a self-installed software that provides a set of applications and services developed on the Microsoft Windows platform, on its client and server versions. The system relies, for its operation, on the Microsoft SQL Server database engine.
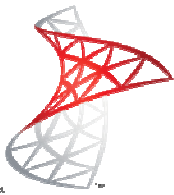
The operating systems currently supported for the operation of **AEQ AudioPlus** are: Microsoft Windows 2003 Server, Windows 2008 Server, Windows XP Professional and Microsoft Windows 7 Professional in 32 and 64 bits* versions. The supported database engine is the Microsoft SQL server in its 2000, 2005 and 2008 versions, from the Express (MSDE version 2000) Edition as in the above versions (Workgroup, Standard and Enterprise).

AEQ AudioPlus can be executed from common computers up to high-performance workstations. Its minimum requirements are:

- ✓ Double-core processor
- ✓ 4 GB RAM
- ✓ 250 GB HDD
- ✓ Gigabit network card
- ✓ Parallel Port (only required for disconnections by external devices, such as remote control and fader start)

To better integrate the different applications in the daily operations of the end user, the implementation of two or four monitors is now possible to allow the simultaneous and independent view of the applications, optimizing response times and operators' performance.

In the section of the supported audio hardware, **AEQ AudioPlus** works with sound cards of any manufacturer, with the own multimedia cards already incorporated as standard on current motherboards, even with those of USB and Firewire format.* *

In any case, non-professional audio cards, embedded on the computers and laptops motherboards, allow pre-listening on all kind of workstations and in newsrooms or similar. Further this also allows for simple editing and playback.

It is also possible to use **AEQ AudioPlus** with a series of modern Audio consoles, such as **AEQ CAPITOL** and **AEQ FORUM**, without the need for audio cards. Using USB connections as interfaces, the console's hardware provides the sound cards. The consoles can also link though IP for Fader Start functions.

AEQ AudioPlus is installed with great simplicity and flexibility by a self-installing software, and in addition to integrating a wizard that allows the user to configure the system and start working immediately.

AEQ AudioPlus does not require any license dongle hardware. Its security scheme enables independent installation, avoiding costs associated with the license hardware.

AEQ AudioPlus allows temporary license generation.

(*) Parallel port option and virtual-multimedia cards not available.

(**) Consult with your AEQ dealer first to validate and confirm the operation of the selected audio card.

AEQ AudioPlus Scheme

Menu bar: Appears at the top of the application and displays the menus from where the user and passwords can be changed, applications opened or closed, the workstation configured and player layouts opened. From here is also accessed Data Manager layouts and access help centre. System's time is shown on the top right.
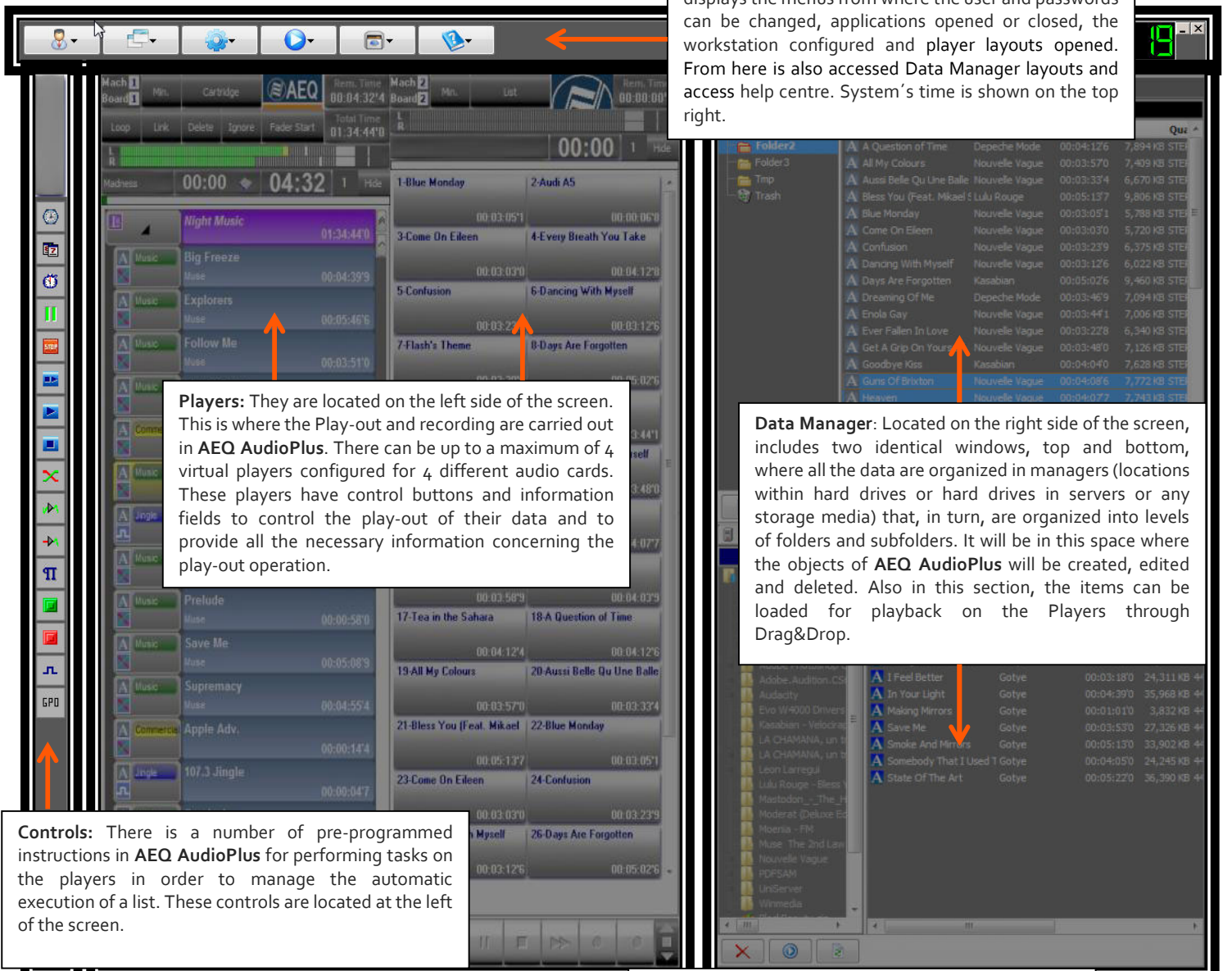
Players: They are located on the left side of the screen. This is where the Play-out and recording are carried out in **AEQ AudioPlus**. There can be up to a maximum of 4 virtual players configured for 4 different audio cards. These players have control buttons and information fields to control the play-out of their data and to provide all the necessary information concerning the play-out operation.

Data Manager: Located on the right side of the screen, includes two identical windows, top and bottom, where all the data are organized in managers (locations within hard drives or hard drives in servers or any storage media) that, in turn, are organized into levels of folders and subfolders. It will be in this space where the objects of **AEQ AudioPlus** will be created, edited and deleted. Also in this section, the items can be loaded for playback on the Players through Drag&Drop.

Controls: There is a number of pre-programmed instructions in **AEQ AudioPlus** for performing tasks on the players in order to manage the automatic execution of a list. These controls are located at the left of the screen.

Information bar: It consists in a series of informative labels concerning the system to which the user is connected, the active user, and sometimes, messages related to audio cards and information or data with regards to objects and work modes.

AEQ⁺AudioPlus
Radio Automation

Functionality:
Data Manager

The Data manager module is the "main storage" of the System Files. Any audio file, play-lists or texts stored in the system that we need to use (either on local disk or remote disk or network storage) will be classified within this application.

The Data manager is critical to **AEQ AudioPlus** and this part of the application is responsible for converting files into the internal standard format and also ensures that all the data associated to each "object" is correctly stored.

There are different types of managers, which will be used to access different types of objects according to their use or origin.

A wizard will be in charge of the process of self-installation of the product and allows the creation and configuration of the most frequently used managers with the possibility to create other types of more specific managers once the installation has been accomplished.

The most commonly used Managers are:

✓ **NETWORK Manager**. This is where all the common files are stored, i.e. files that are shared by all users. User access to each Network Manager can be differentiated according to their access level and user key (if this function is active).

✓ **REFERENCE Manager.** It is specially designed to create play-out lists with data from different managers. In essence what are stored in this manager are the mere references to where the different objects are located.

✓ **LOCAL Manager.** Corresponds to local file storage on the hard disk of the PC. These files are not shared with other users (in case a network of several workstations has been set up).

✓ **ON-THE-FLY Manager.** Provides access to the different types of **AEQ AudioPlus** compatible audio file formats (MPEGII, MP3, WMA,...), that reside on external drives (CD-ROM, Pen-Drive...), allowing the data transfer between them and the structured managers.

✓ **FTP Manager.** It is used for distribution or exchange of files between remote servers or between different applications that are not related to **AEQ AudioPlus**.

✓ **Autoloader Manager.** Its content, which can come from different managers, is loaded automatically on the players for automatic and remotely controlled play-out.

There are two additional and different Managers that have been implemented to facilitate the tasks of locating and quick access to certain elements stored in the system and that we are using frequently.

✓ **Favourites Manager.** They provide a way to select objects, so they can be quickly located later.

✓ **Search Manager.** It is possible to search for objects in a manager or in the whole system. The result of this searching is displayed as a manager, something that allows the user to interact with it, the same way as with the rest of the managers.

All the above mentioned managers are divided into folders and subfolders. It is possible to create as many folders as necessary for the correct classification of the data and these folders can be divided, in turn, into subfolders and levels of subfolders, according to the needs.

The presentation of these folders and subfolders is made in a typical Windows format (for better understanding) and can be organized as required for the type of operation to be performed.

These managers and folders may be visible only by authorized users, not showing those that are not of interest for that type of user.

Data Manager:
The Manager Window:
The Information Repository

As mentioned at the beginning of this document, the flexibility and variety of supports that can be provided for the data managers renders the system and subsequently the radio station, an unlimited data storage capacity and the way to save items.

The **window** representing the information

Tabs at the top of each window representing the managers that are available to the user.

Most of this window is occupied by the representation of the stored objects together with the information concerning each one of

A horizontal bar in dark colour contains the name of the selected manager.

Ty	Name	Singer	Duration	Size	Quality	Last Update	Audio Type	State
A	All the small things	Blink 182	00:02:48'2	5,260 KB	STEREO 20-20.000	28/09/2012 13:51:30	Comercial	
A	Aristeia Main Theme	Marios Aristopoul	00:01:35'1	2,973 KB	STEREO 20-20.000	01/10/2012 13:47:57	Musica	
A	Better day	Dover	00:03:17'2	6,166 KB	STEREO 20-20.000	03/08/2012 14:45:24	No definido	
A	Bill Gates Statement		00:01:01'7	11,583 KB	STEREO 20-20.000	08/10/2012 11:36:58	No definido	
A	Bill Gates Statement		00:01:01'7	11,583 KB	STEREO 20-20.000	08/10/2012 11:36:58	No definido	
A	Celebration Day	Led Zeppelin	00:03:28'5	6,518 KB	STEREO 20-20.000	06/07/2012 10:06:33	Especial	
A	Church on Sunday	Green Day	00:03:18'5	6,204 KB	STEREO	12:57:16	No definido	
A	Coca cola		00:00:15'0	2,813 KB	STEREO	12:09:57	Jingle	
A	Deadbeat Holiday	Green Day	00:03:35'2	6,727 KB	STEREO	09:55:29	No definido	
A	green day - basket case		00:03:03'0	5,720 KB	STEREO	09:35:49	No definido	
A	Highway to Hell	ACDC	00:03:54'7	7,338 KB	STEREO	12:38:15	No definido	
A	Let There Be Rock	ACDC	00:06:03'9	11,373 KB	STEREO	13:39:14	No definido	
A	Microsoft Corporation		00:00:04'5	780 KB	STEREO	11:39:41	No definido	
T	Microsoft patent applica		00:01:46'3	3 KB		11:40:11		
A	Money Talks	ACDC	00:04:19'3	8,104 KB	STEREO	13:39:38	No definido	
A	Radio Station 107.3		00:01:35'1	2,973 KB	STEREO	11:27:29	Musica	
A	Some Flowers	Love Of Lesbian	00:04:06'1	7,693 KB	STEREO	13:32:27	Musica	
A	The 2nd Law: Isolated S		00:00:27'0	0	STEREO	12:15:25	No definido	
A	The Ecstasy Of Gold	Metallica	00:03:22'0	6,316 KB	STEREO	09:30:20	No definido	
A	The Rock Show	Blink 182	00:02:51'6	5,365 KB	STEREO	12:37:18		
A	Voice Over YOU SHOOK		00:00:29'9	936 KB	STEREO	13:33:23		

Folders: Classical Music, DESCONEXIONES, Funk, Games, JESUS, Modern Music, Musical, Oldies, Rock, Sorted, Tecno, Test, Audio, Tonos, Unplugged, Various, Trash

Pop-up menu: Select All, Duplicate Object, Fragment Audio, Export Audio, Convert to..., New, Edit, Delete, Execute, Print, Folders, Search, Info

An alternate pop-up type Menu, with right click, which allows the user to perform the most common tasks in the objects management.

The folders form a tab on the left side. The colour of the folder opened by the user is lighter than the others. This functionality can be altered for more flexibility.

The bottom of the window manager displays a series of buttons to work on managers and its objects: New, Edit, Delete, Run, Preview, Print, Folders, Search and Info.

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Functionality:
Broadcast Player

- **Rem. Time:** Indicates the remaining time of audio that is selected on the player. This time is updated in real time during playback.

- **Loop:** If applied to a specific object, it will restart the play-out of this object when the play-out reaches its end. If applied to a list, and If "link" mode is enabled, when the play-out of the complete list is accomplished, the play-out will automatically restart from the top of the list.

- **Link:** When the play-out of an object in the list is completed, it continues with the next object and until the end of the list.

- **Delete:** Eliminates an object from the player when the play-out is completed.

- **Ignore:** Deactivates the playback of the selected object.

- **Fader Start:** Enables the starting of the players from the mixer.

- **Total Time**: Indicates the time value of the total number of files loaded on the player.

- **Vu meter:** Represents the audio level playback or recording.

- **Progress information Bar of the playing object**: provides a representation and the name of the object and intro time. The counter indicates the remaining time or the elapse of the audio.

- **Hide:** Allows the user to hide the play buttons of the player.

The Broadcast player consists in a set of virtual players for playback/recording, and constitutes the support of the play-out system.

The user can create up to four virtual players per workstation. In each one of these, it is possible to select, at any time, the data to be presented as a List with its associated configuration data or as an Audio Cartridge (direct play buttons) that gives instant access to the audio play-out. This is very useful for the playback of non pre-defined audio intros, tunes, jingles and others. This feature is also ideal to use in combination with a touch screen monitor.

The way to load or carry the objects to be broadcast on the virtual player is very simple. Select with the mouse the objects stored in the managers and drag them, holding down the left button of the mouse, up onto the player.

The configuration of each one of these players is very flexible and is linked to the user, in a way that, when changing a workstation, the format and the method of work will follow the user.

Upper Control on Broadcast Players

At the top of each one of the broadcast players, the following controls and information are displayed:
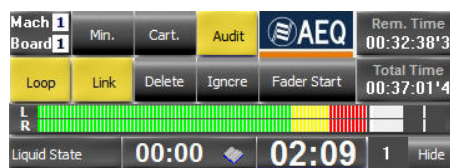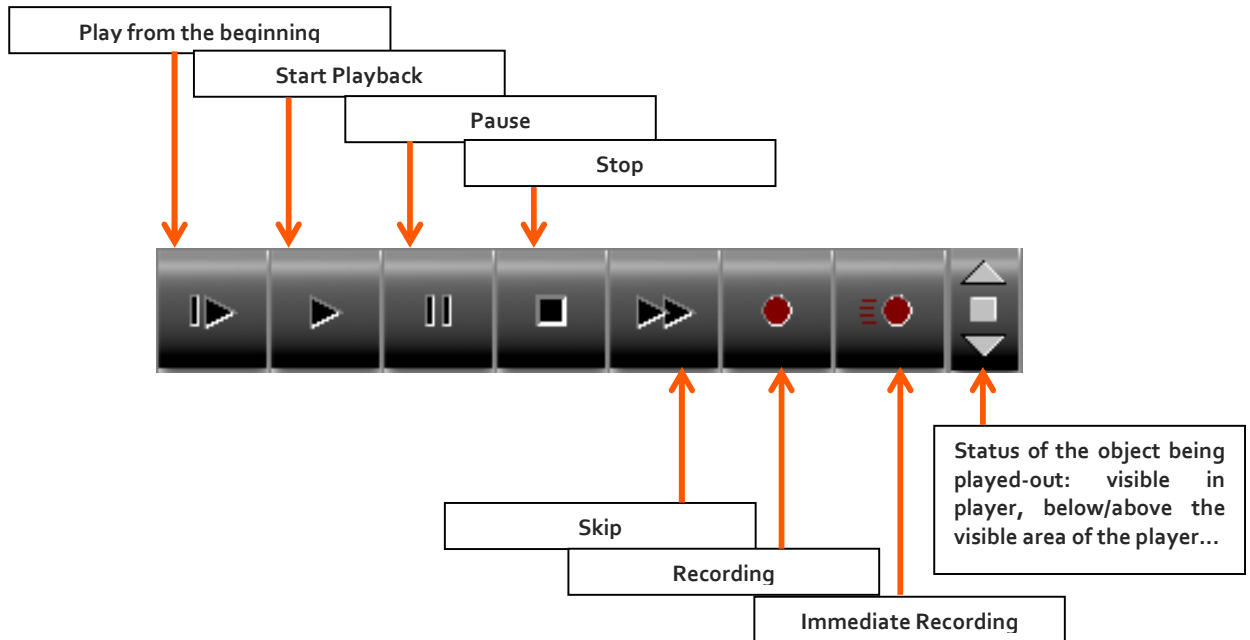

- **Mach-Board:** Number of player and number of the associated sound card.

- **Min.:** Through a single press on this button, the size of the player can be reduced to provide more space on the screen.

- **Cartridge/List:** A single keystroke can change the List format to the Audio Cartridge format.

- **Audit:** Registers and keeps a log of the play-out session of this particular player.

Playback Controls

Playback Controls

Located at the bottom of the player, allow manual control of the playback functions and access to the recording. These are the standard controls of a tape recorder to which additional controls have been added:

Play from the beginning
Start Playback
Pause
Stop
Skip
Recording
Immediate Recording

Status of the object being played-out: visible in player, below/above the visible area of the player...

Functionality:
Control Bar

The elements displayed at the left of the screen, once dragged onto the virtual player, contribute in optimizing the playback.

- ✓ The start of the player at a specific time.
- ✓ The start of the player at a specific day.
- ✓ A visible counter on screen.
- ✓ The temporary or definitive stop of the playback.
- ✓ The switch to player n, start or stop of a player inside or outside the same workstation.
- ✓ The mixing edition, progressive levels fade out at the end and at the beginning of playback.
- ✓ Sound card bypass.
- ✓ The inclusion of the theme´s presentation.

AEQ⁺AudioPlus Radio Automation

Functionality:
Automatic Broadcast

AEQ AudioPlus allows automatic play-out of generated data, avoiding the need for constant human presence at the moment of play-out.

The operation consists in managing automated broadcast schedules, using a time control that can be programmed from a play-out station or a dedicated workstation connected to the local network.

The automatic play-out scheduling can be configured to any time zone that the user wishes, it can be even scheduled for several days, weeks, months or years.

Playlist can be viewed in a scrolling list, making it possible to know at what exact moment of time each object, loaded on the player, is played, for a period of a few hours or even several days.

While the player is not playing back, the Bypass function allows routing the card's input signal towards its output, protecting this way the availability of the station: in case of lack of specific data, the data received at the card's input will be played out.

Functionality:
Remote control
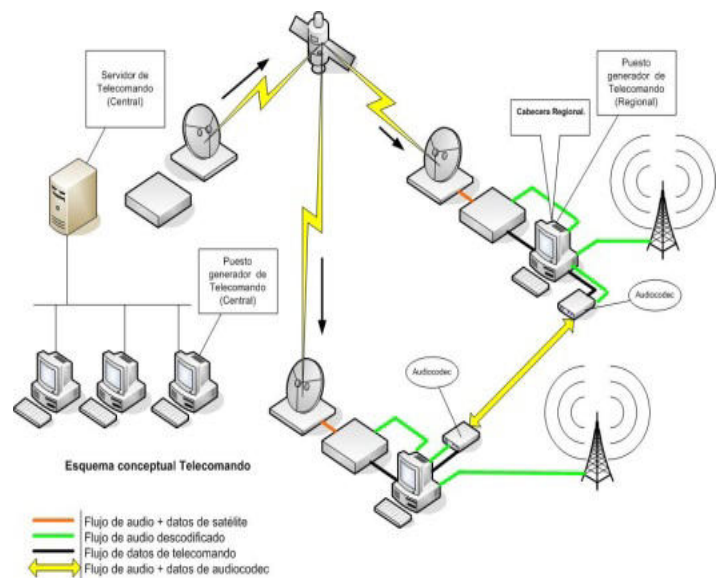
Functionality:
Automatic Generation of Broadcast Lists
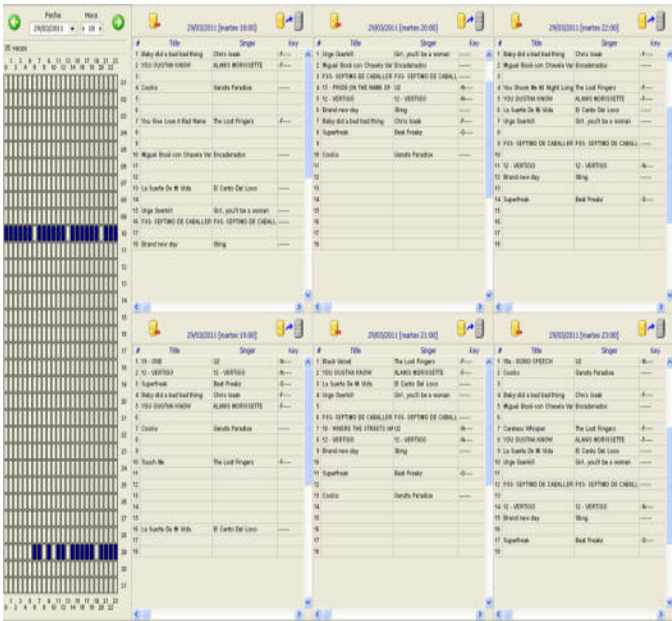
This **AEQ AudioPlus** module allows the indexing and processing of the music available in a station, automatically generating play-lists based on sorting criteria.

It is possible to integrate the inventory of music that a station possesses according to different sorting criteria: Nationality, Genre, Rhythm, Speed, BPM, Priority and Version.

The **AEQ AudioPlus** information managers store the objects that makes up the play-lists and compose the play-out guidelines generated by the application.

Implementation: Based on a layout that collects audio played every hour, the user can select the type of audio to be inserted in each one of the positions. Linking the layouts, the user will obtain the daily schedule of the station with the possibility to edit the data generated.

Functionality:
Exchange (Integration for External Editors

Through the integration of an external editor in AEQ AudioPlus, the Exchange allows the user to import different objects in the Data Manager module, regardless which folder or manager they come from. It also incorporates a module for automatic import of audio objects in different formats to the system.

This way, the user can integrate an external editor of his choice; from freeware such as Audacity, to the more common and specialized on the market, for example Adobe Audition.

The freeware editor Audacity is included as basic standard with AEQ AudioPlus.

Some of its main features are:

- ✓ Multi-channel Editor
- ✓ Recording from microphone, input line and external devices
- ✓ Remix on tracks to create multi-track recordings
- ✓ Import/export in multiple format
- ✓ A large variety of effects available
- ✓ Spectrogram view modes for frequency display.
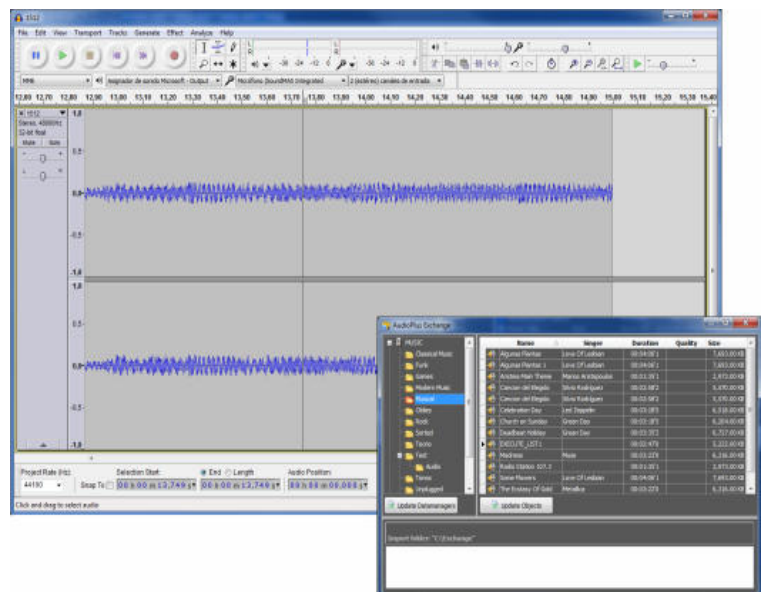
Functionality:
Extraction CD-Audio

This module allows the user to extract cuts from audio CDs for direct importation into the **AEQ AudioPlus** system. When the user inserts a recorded CD, its content is represented in the same format as in the rest of the application managers. By dragging the file with the mouse to a Network or Local manager, the file is automatically exported, changing its audio format to the application default.

In addition, it allows the connection to various web pages, such as www.CDDB,org, enabling the automatic downloading of the artists name, themes and the CD duration, simplifying the process of importation.
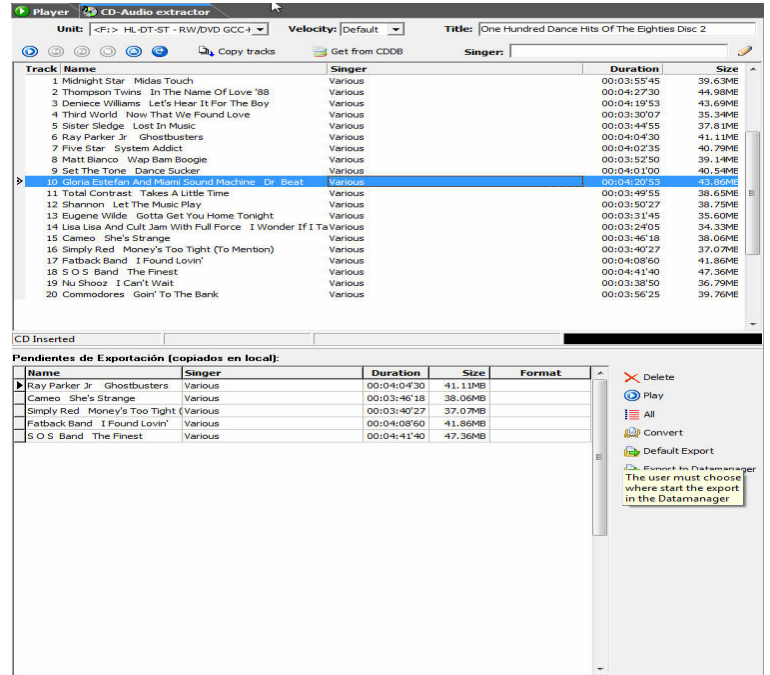
Functionality:
Internet Browser
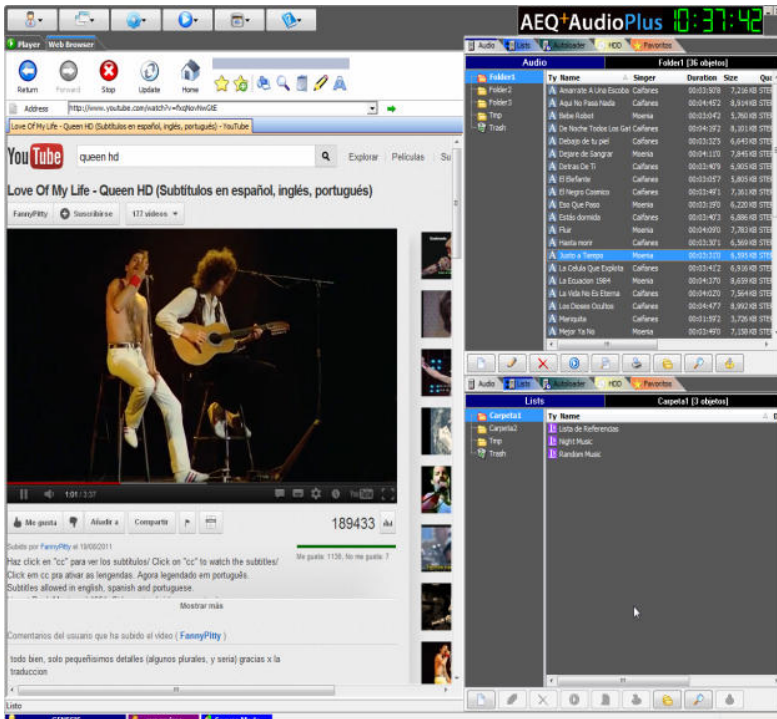
The Play-out on Playback Mode (1)

The central part of the virtual player provides lots of information about the objects that are ready for broadcast. At the top, it is possible to view an example of a virtual player with objects:

Each play-out object is distinguished from other objects in two ways: by colour and by an icon.

The audio that is playing is "Follow Me".

There is a scheduled list.

A standby control of 5 seconds precedes the next objects scheduled in broadcast player

This Control will start player number 2 automatically.

There are various types of objects in play-out: music, commercials and jingles

The remaining time to complete the broadcast list is 01:23:34'7, while the total duration of the whole list is 01:34:54'0

The object currently played indicates that it has been classified as "Music" and with an associated Fade control, as well as an intro time of 10 seconds.

All objects in play-out display the name of the theme and the interpreter, as well as their exact duration.

The Play-out on Playback Mode (2)

Audio Playback

Audio files playback is performed in a very simple way. The audio is selected from the window of the Data Manager and dragged onto the player. The selection may be one by one or through multiple selection. Once the audio is in the play-out module, just select it and press **PLAY**.

If the user wishes to play all the files loaded on the player he just have to click the button **Link** at the top.
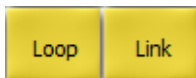
If the user wishes to play an audio continuously, he should click the **Loop** button at the top.

Playing back of Test objects

There are some particularities with regards the playing text objects in the Virtual player: the way of loading the player is always the same (select, drag and drop), but in the case of texts the difference starts when the user clicks <**PLAY**>

At that moment a text reading window will appear with vertical scrolling arrows and a button to close the window. This way you can proceed with loading other data or stop the play-back. It is the user who must close the text reading window in order for the player to continue with the remainder of the play-out.

In case of texts with embedded audio, something similar happens: it must be the user that triggers the playing out of the embedded audio by clicking on the cartridge button that represents this audio. The button will be blue if the audio not being reproduced and red if being played-out. The user must also close the text window when he wants to pass to the next object in the play-list.
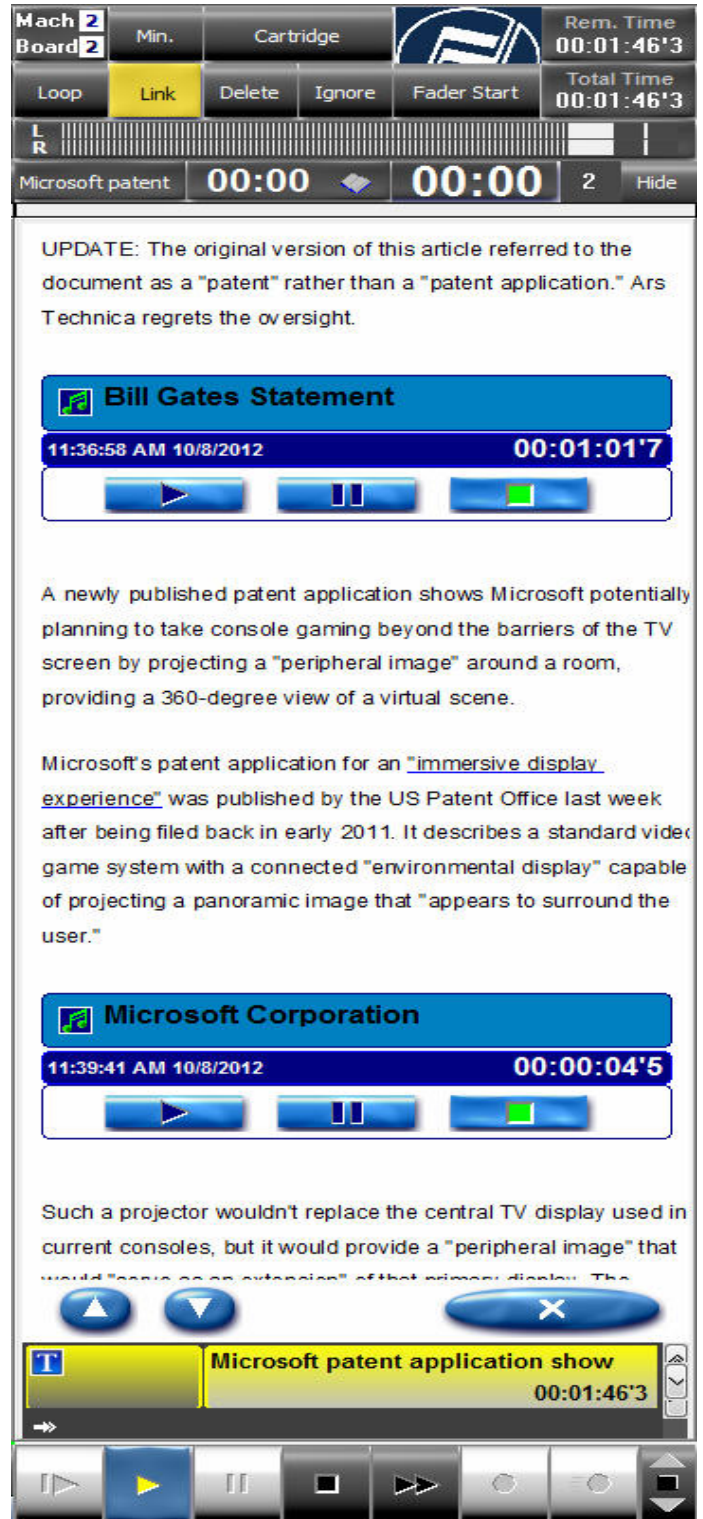
The Play-out on Playback Mode (3)
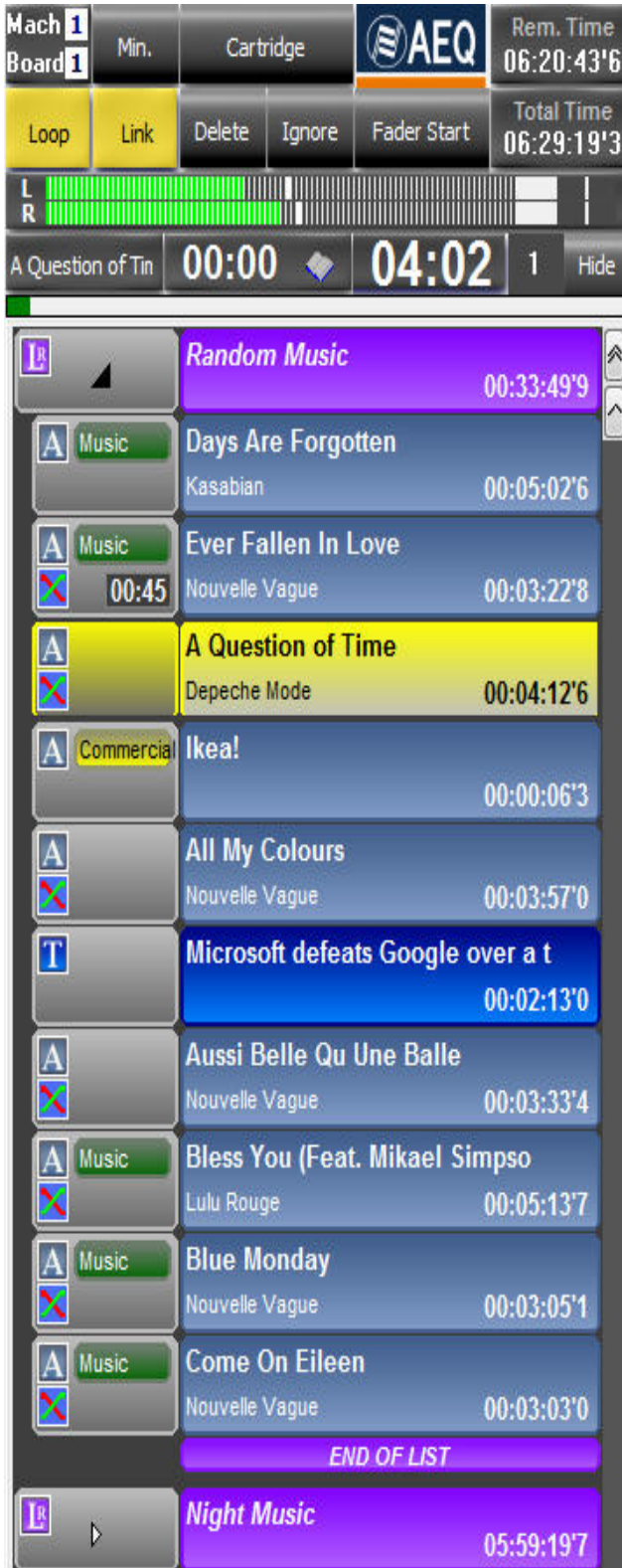
Playlists

The operation of play-lists has some peculiarities. The lists have two possible statuses: expanded or collapsed.

In collapsed mode, the representative icon of the list object, its name in italics and the total duration, are displayed on the virtual player. What will not be displayed is its content, nor will it be possible to enable the marks in order to display the text associated information and the countdown.

In expanded mode, the lists title and its content will be displayed immediately next to the icon. A bar with the inscription "End of List" under the last object will inform about its end.

In the case of the play-out list, the users can make changes on the go when the list is already loaded on the player. They can drag new objects, alter the existing order, delete objects, or copy them from one player to another, etc. However, if the user wants to make these changes permanent to the play-list, he must edit the list or create a new object list as a temporary object. To play-out the list, just drag it onto the player enable the **Link** button and press <**PLAY**>.

Audio Mixing Edition

Within the play-out modifier controls, special mention should be made with regards to the editing of the mixing of the audio objects in a list. Through the editing of the modifier control "Fade", it is possible to access the window to edit the mix of two audio objects in the list. We can decide whether to mix the audio of the objects or not, how do they fade out at the end, how do they fade in at the beginning and how the audio is presented superimposed on the transition. The pre-editing of the mix the components of a play-list has ultimately the aim to provide an automated play-out with smooth transitions.

Creating and Editing Objects (1)

To create and modify objects, the user must first follow some common steps: Click on the New or Edit button, located on the lower part of the window, select the type of the object to create or modify and fill in the corresponding information. The information data has various fields to classify files providing them with additional information and determining their status for its possible play-out.

These are some processes of creating/editing objects:

✓ **Only Record / Quick Recording:**

To save the audio, monitoring this through the mixing console, there is an option for instant recording that allows the user to start recording without entering any data in the information area.

✓ **Record and Adjust:** with a simple editor that in addition to eliminating blanks (silences) allows the creation of a new audio by selecting fragments of recorded audio.
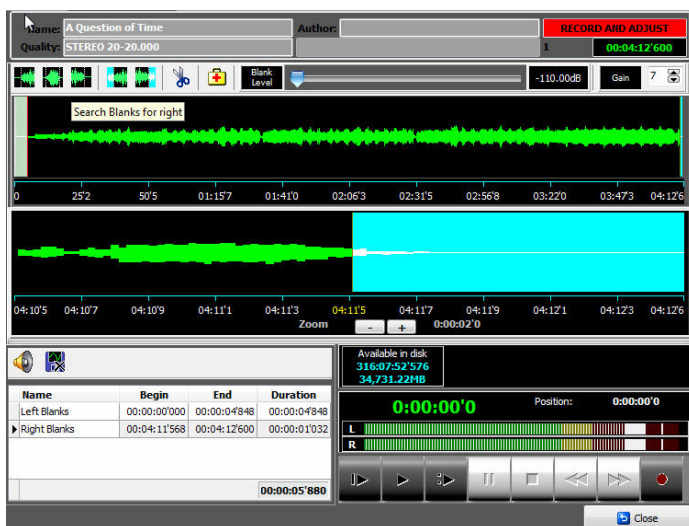
The screen represents a track where, once the recording is completed, the audio will be represented in a waveform.

Using the buttons at the top of the window, the user can choose the level of discrimination of blanks, look for blanks at the beginning and at the end of the wave, delete them, adjust audio level of the file, preview and make fine adjustments on the audio.

✓ **External editor**: Establishes a link with the users favourite editor from which audio can be recorded and edited. By default, the Audacity editor that is provided with the AEQ AudioPlus installation package can be installed.
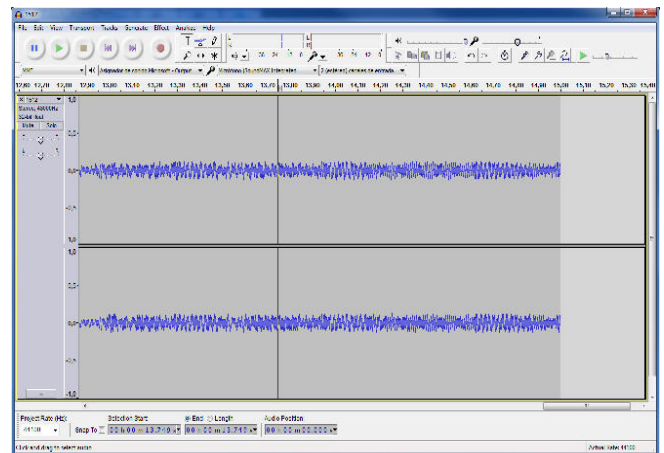
✓ **Convert objects**: Enables the import of different types of objects to the system through Drag&Drop, from On Fly or FTP managers.
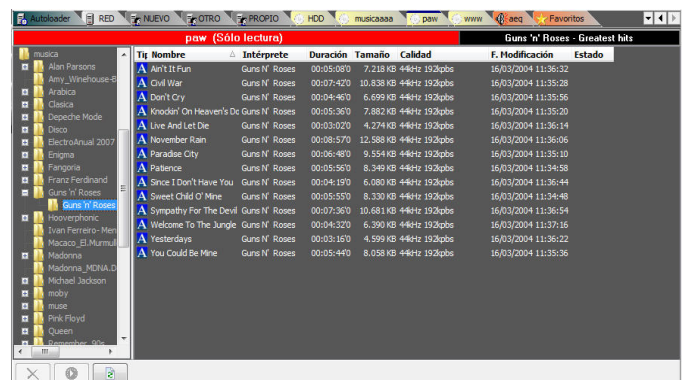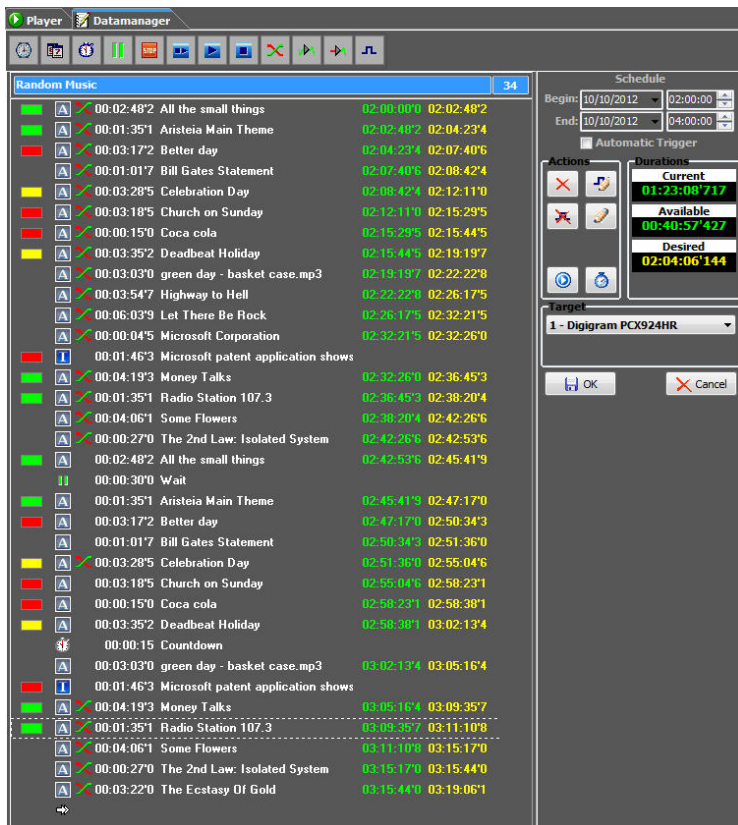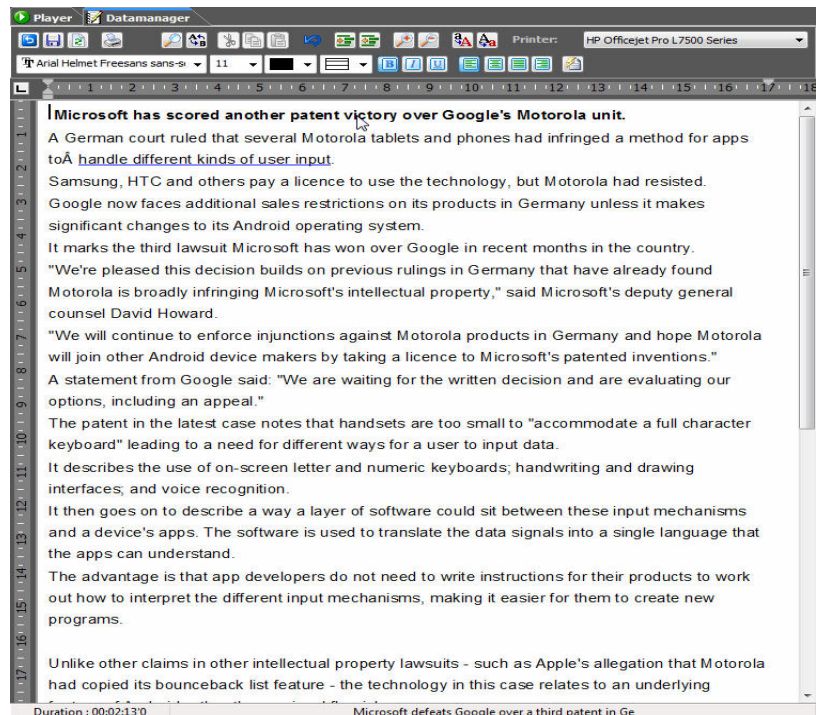
Creating and editing Objects (2)

Creating and Editing Objects

In Data Manager, click the button New and choose create a text, or select a text object and click Edit. The file information data of the text object will appear. Activate Edit Text and access a text editor with the standard options for adjusting the shape, type, size and colours of the font as well as close, print, undo, cut, copy, and paste. It is also possible to integrate an external and more powerful text editor. (Microsoft Word, LibreOffice, etc.).

A specific option of the **AEQ AudioPlus** text editor, very important and useful when creating news objects, is to embed testimonial audio in the text. This is accomplished by simply selecting the audio object, dragging it from the Manager window onto the text editor.

Creating and editing playlists or broadcast guidelines

The properties of a list and that can be defined by the user are the name, expiry date, status, and associated text. Only the name is compulsory. Once the name field is completed, Edit List is enabled.

To make a list, load the objects by dragging them onto the **'List Editor'**. It is possible to drag an existing list to the **'List Editor'**. This will expand and after this moment appear as a set of objects.

To the left of each one of the objects that form the list on the left side of the screen, a red, green or yellow box is displayed. This colour code informs about the Status of an object and allows the user to follow a criterion for sorting or labour distribution.

Red indicates that the object is 'Pending', yellow 'Prepared' and green that the object has been 'Supervised' or "signed off".

Play-out modifiers can also be included in that lay-lists accompanying the objects (audio or text).

If these play-lists are prepared for automatic play-out, it is possible to assign date and time of broadcast.

AEQ AudioPlus adapts to your needs

Throughout AEQ´s history, our company has been doveted to adapting its products to the specific needs of each client. **AEQ AudioPlus** is no exception.

In order to facilitate integration with for example advertising management and on-air systems, **AEQ AudioPlus** has all the necessary features to provide data connectors and exchange of information with standard applications on the market, such as **Advertising Star of Microjisa, PC-Radio of Broadcast Partners, WinRadio of WinMedia, Key Radio of Activa3's,** as well as integration with **Total Recorder of High Criteria**, oriented to the Continuity Recording (Logger).

In addition, it is possible to bind **AEQ AudioPlus** with other management and guideline applications such as **Music Master and Selector by RCS.**

If the features and performance of **AEQ AudioPlus** require any modification or any specific additional module is needed, please contact your sales representative and request information about your particular needs. Jointly our technical office and R&D department will assess the feasibility of the requested solution and validating the proposed operational solution.

AEQ AudioPlus is by default provided in English and in Spanish. Should you require **AEQ AudioPlus** in oher languages, please contact us.

REQUEST A DEMO LICENSE TO YOUR SALES REPRESENTER

PROFESSIONAL AUTOMATION WITHIN EVERYONE'S REACH

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