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00 _ Introduction

Today, companies serving the Media & Entertainment industry, such as TV channels, radio stations, non-linear channels (OTT, VoD, WebTV, Streaming, etc.) and in general, any business or organization that works with media files on a daily basis, **share the same goal**:

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To deliver their content to a specific and defined audience in the shortest possible time, so that they can consume it whenever and on whatever platform they prefer

The industry transformation of the distribution and the production processes in recent years has had a great impact on content planning and programming. New realities such as multi-device and cross-platform distribution and consumption, together with the fragmentation of audiences and the demand for immediacy in content consumption, have greatly increased the complexity of these tasks. Now it is necessary to have access to new and much more efficient programming tools, that are able to take into account, all the aspects that might be involved in addressing these varying media consumption behaviours (amongst others, the management of broadcasting rights and the control of all investment in content and advertising, as well as the ROI obtained from it).

Likewise, the sale and planning of cross-platform advertising slots has also created consumer delivery complexity due to the multiple variables that have to be considered such as specific broadcasting rules applied by advertisers, the various platforms and time-slots available and of course variable pricing options taking into consideration aspects such as the rating of the programs. Hence, some key functionalities like workflow automation and setting up automatic rules for smarter time slot planning, begin to take centre stage in traffic and scheduling solutions.

With all these factors considered, professionals such as scheduling operators, content editors and individuals responsible for advertising and content

00 _ Introduction

sponsorship, play an increasingly important role in Media & Entertainment companies. Likewise, some crucial aspects in this new environment are content planning (single or multichannel), the management of daily rundowns or play-lists, as well as the analysis of content and the ability to exploit its advertising profitability.

Traffic and scheduling systems have become an indispensable component of media companies of all kinds. They are being used primarily to avoid any manual, redundant or tedious tasks that may slow down the work of operators and reduce their productivity.

These systems allow companies to extract the maximum added value of their available resources, boosting collaborative work between departments and users, supported by essential automation and workflow orchestration. Likewise, the process transaction time of all operators working with it decreases, thanks to the new tools that allow them to have a holistic view of all the available content and media files. In summary, the management of resources becomes much more efficient, so as to better address the demands of the content consumer.

01 - What can a Traffic and Scheduling system provide you with?

Whether it is used by a single department, a non-linear broadcast platform (OTT, VoD, Web TV, etc.), a large television network, a radio station or a private corporation, the main benefit that a system for traffic and scheduling provides is a complete view of all the planned and broadcasted content in real time, as well as the expected revenue derived from advertising associated with this content.

These systems allow companies to save costs and speed up tasks such as advertising placement & management, content rights' management, programme planning and a total view of all the content and advertisements already broadcasted or published, just to mention a few.

When choosing a management system such as

this, it is very important to consider the type of software solution being acquired. Certain aspects become essential such as a **simple and intuitive interface design** allowing users to have a quick and clear view of their content catalog, programming grids and available time slots..

Other features that are worth highlighting are the flexibility and ability to customize the workspace, with custom metadata and new features and integrations that can be added via API and plugins.

Also, the **ease of programming content** both daily and long term; smart advertising planning

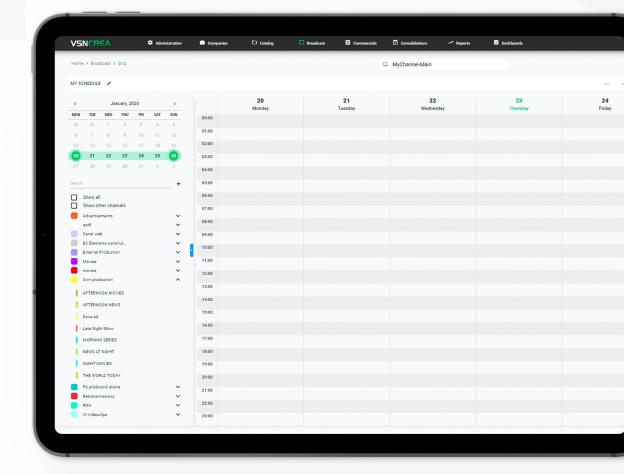
features which allow users to forecast the expected costs and revenues; or the possibility to adapt the platform to the specific requirements needed in each individual market (i.e.: advertising regulations). Amongst many others, these are some indispensable requirements worth evaluating in order to decide whether the system fits the needs of a media company.

With technology progressing at an ever-increasing rate, other factors now need to be closely evaluated such as remote operation over WAN which requires 100% web-based development, the system's ability to run in cloud environments, its availability under pay-per-use models (SaaS). Integration with Media Asset Management systems (MAM), playouts and

01 - What can a Traffic and Scheduling system provide you with?

non-linear platforms, are also key aspects which need to be considered when it comes to ensuring a smooth, cohesive and uninterrupted workflow.

As in any distribution chain, media companies need a holistic view of their entire operation and an integrated management of their inventory, tasks and resources to avoid redundant processes and inconsistencies that can undermine their efficiency.



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02 L VSNCrea: The Best ally for Planning and Scheduling Your Programming

VSNCrea is the latest web-based version of the VSN's traffic and scheduling system, it is 100% developed in HTML5 to allow for more flexible workflows and multi-region use.

With this system you can manage the catalog of productions (for advertising, programs, live broadcasts, promos, etc.) and smartly schedule these contents. You can also monetize your content and advertising creating analytical reports and dashboards, as well as manage the rights of all your productions based on customised sets of rules. Likewise, the system enables advanced integration with all kinds of proprietary and third-party systems (MAM systems, play-out automation, EPGs, billing software, etc.) to offer the most seamless workflow possible between systems, all centralized in a single platform.

02.1 .. How does VSNCrea work?

With VSNCrea, your company will be able to:

- Flexibly schedule all programming content for delivery.
- Access and view all archived and stored content in your catalog from any web browser and device, anywhere and at anytime.
- Confirm if the media has already been correctly received and therefore, the content is ready to be delivered. It also allows users to preview the video from the same interface.
- Manage and track the advertising and sponsorship slots available for sale.

- Plan the commercial slots and establish advanced rules for their placement, avoiding the repetition of advertisements of the same category or avoid playing a certain type of advertisement in inappropriate time slots (e.g.: protected time or prime time).
- Control the costs of contracts and productions.
- Design and schedule daily and weekly playlists for short, mid and long-term programming, taking into account broadcasting rights available for each territory or country.

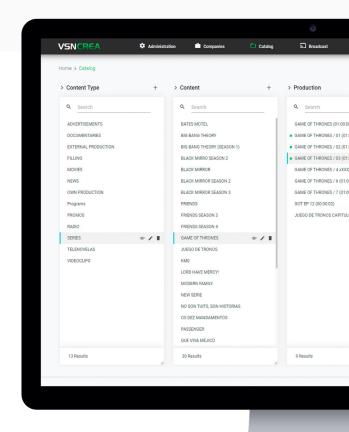
- Provide specific information for mass media delivery playtforms such as Web, OTTs and EPG of Digital terrestrial television (DTT).
- Perform Return on Investment (ROI) analysis and reports of programming, content and advertising effectiveness.
- Easily adapt the system to your specific needs, thanks to custom metadata and the integration with third-party software via open API or by installing plugins.

02.1 .. How does VSNCrea work?

VSNCrea is a key system to improve the efficiency of a media company, of any type (be it a news, sports, religious or general entertainment channel). VSN's traffic and scheduling system optimizes human resources and promotes collaborative work between various users, departments and subsidiaries in a simple and transparent way. Therefore, the tedious and repetitive tasks are minimized, while "bi-directional" communication between all operators is enhanced.

This powerful business-enhancing technology presents the following advantages:

- It enables all departments to access the new materials available in the archive or in the Media Asset Management system (MAM) so these files, including their metadata and related information, can be reviewed by the operators.
- The information contained in the catalogue and in other areas of the software can be customized to adapt to the specific needs of each client, including personalized metadata that will be automatically synchronized with all inter-related departments.
- Any changes that occur in the scheduling system are automatically reflected in the archive, the MAM system, the playout



02.1 .. How does VSNCrea work?

automation software and continuity system.
In addition, any task related to content
segmentation, planning and/or scheduling that
is required before final broadcast will also be
completed.

- The playlists of live broadcasting in both linear, non-linear or streaming channels (that are often affected by last minute changes), can also be automatically extracted from the delivery and automation systems, in order to create reports for analysing the final content delivery and the advertisements that need to be invoiced.
- In the case of digital terrestrial television
 (DTT), information can be generated for the
 EPG (Electronic Program Guide) that allows
 users to check scheduling information,
 synopsis, etc. of the channel programming.

Thanks to the 100% HTML5 web architecture of the system and its new and improved interface, Crea is a very user-friendly software, making its installation and implementation very easy. This easy-access web architecture even allows operators to start using the system in a SaaS environment as soon as it is purchased without the lengthy delays often associated by on-premise deployments.

02.2 .. System modules



Administration Module

VSNCrea is made up of several modules that logically group all the tools of the system by work area or specialty.

In this area the system administrator can configure VSNCrea to adapt to the unique requirements of each user and/or organization. Among the configurable parameters, the system administrator will be able to customize the permissions for each user profile, the channel setups, the software's metadata and install the necessary 3rd-party plugins and configure any new system functionalities with ease



Catalog Module

From this module, users can manage and organize in a hierarchical way, all the content within the platform, according to their inherent permissions. The VSNCrea catalog is key to controlling the available content (be they programs, series, advertisements, etc.), including the possibility to segment content, and add many types of metadata that can be automatically synchronized with a MAM system or even preview the content scheduled for delivery.

02.2 _ System modules



Broadcast Module

It is one of the most relevant modules of the system, from where content scheduling is carried out daily, weekly or on a long-term basis. For scheduling either a few hours or a whole month, users use virtual blocks that can be predefined and populated with content in advance, making it easier to plan and edit the broadcast programming at any time. Once the programming calendar has been prepared, it is possible to send all the media to the broadcast automation system or to any non-linear platform (WebTV or OTT) with one click.



Acquisition Module

This module controls all the purchased media. Once content has been acquired, after a simple process, the acquired contents will be available so that they can be scheduled, always taking into account the broadcasting rights that have been stipulated and agreed upon at the time of purchase.



Commercials

The commercials module allows users to prepare and plan advertising and sponsorship campaigns, stipulating for each of them the related advertisements, the number of runs, the time slots in which they should be scheduled, as well as the profitability and economic viability of each one of the advertising runs.

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02.2 . System Modules



Analytics Module

The analytics module allows users to create advanced reports, graphs and dashboards that can be quickly and easily customized. The system is able to intelligently cross-reference data and information and summarize the most relevant results in the form of a table and / or graph. In addition, all these reports can be subsequently exported in different digital formats, such as Word, Excel or PDF.

02.3 _ Advantages of VSNCrea



VSNCrea has been specifically designed to be able to operate in cloud environments, both public (Microsoft Azure, AWS, GCP, etc.) as well as private cloud deployments. In addition, VSN allows companies to acquire it under a pay-per-use or SaaS business model. Therefore, the client only needs a web browser to start using the system instantly, as soon as it is installed. However, VSNCrea can also be deployed in a local or "on-premise" environment to allow the software to run in isolation on the client's servers.

The familiarisation and training period necessary to get the most out of the system is very short since the VSNCrea interface is modern, intuitive and can also be adapted to the different user profiles of each company and to the specific tasks of each department.



Maximum security and control

This component of the software allows you to strictly control all the contents of any company or channel, the number of times they have been broadcasted, advertising contracts and acquisition contracts of closed content, along with its distributors, and the cost-benefit analysis of each of them, among many other aspects. In practice, having quick and direct access to all this information allows companies to avoid errors caused by the lack of information or misinterpretation of the data.

Similarly, VSNCrea also allows you to have absolute control of all your own, third-party and outsourced productions, as well as allocate costs per chapter or for full production, as established by the system administrator.

02.3 . Advantages of VSNCrea



Total synchronization for faster response times

In VSNCrea, it is possible to make last minute changes in the broadcast programming, guaranteeing that all the departments and systems involved are aware of the changes made and reflect them correctly in their operation.

Any changes made to the information contained in the system (contents, contracts, rundowns, etc.) are immediately communicated to all the departments involved, including the playlists that are modified accordingly. This is possible thanks to the constant synchronization of VSNCrea with the

rest of the technology systems that connect the various inter-related departments.

In addition, by reading the As-RunLog, VSNCrea is able to identify and faithfully report the contents that have been broadcasted by the automation system, as well as the total amount that must be invoiced for the advertising insertions made. This allows the software to cross-reference this data with all the information contained in the system and generate analytical reports that summarize them accurately.

The system is capable of interpreting numerous
As-RunLog formats, which enables VSNCrea to
integrate with a multitude of automation systems.

02.3 _ Advantages of VSNCrea



System customization

VSNCrea has been developed, in order to be easily customized - so that it can adapt to the different needs and use-cases of each client. Either by customizing the existing metadata of any area or by creating new metadata, VSNCrea ensures that this information will be captured and analysed at all times by its Business Intelligence module.

Also, thanks to the availability of a comprehensive and well documented API, it is possible to easily integrate the Crea system with any third-party solutions.



Smart advertising planning

The new VSNCrea module for advertising planning makes easy to manage advertising campaigns in an optimal and smart way. More specifically, it allows users to define time slots (i.e.: children's viewing time) to have greater control over the content that is broadcasted. It also allows to determine rules for prime-time broadcasting and managing different price ranges for advertising based on the time slot and channel.

These key elements help users to set automatic rules and adjustments to avoid the repetition of a specific commercial or even forbid the

broadcasting of a certain type of advertising in specific time slots, such as children's viewing time. In essence, users are free to automate the advertising planning of their linear or non-linear channel however they want to.

02.3 _ Advantages of VSNCrea

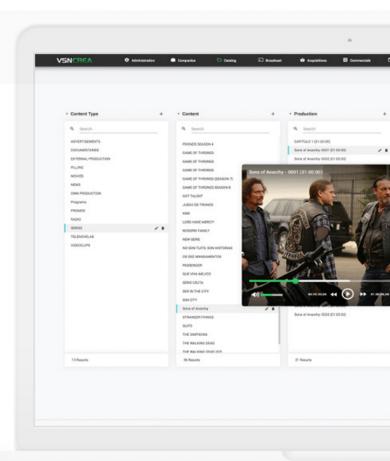


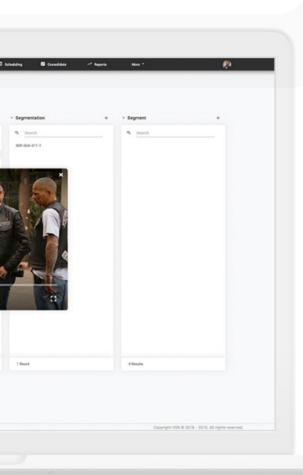
Advanced integration with VSNExplorer MAM

"Bidirectionality" between VSNCrea and the VSNExplorer MAM guarantees that all changes made on the traffic and scheduling system will be automatically replicated in VSNExplorer MAM. This way, users do not need to access the MAM separately to make changes on the metadata and/or segments of the stored assets.

In addition, other notable advantages of this synchronization are the content preview of an entire programming grid, as well as the video preview and editing of all the content stored in the MAM system directly from VSNCrea. For example, a user who would like to view and edit a fragment or segment

of a video clip that has already been added to a playlist, could easily do so directly from the traffic and scheduling system based on permissions tied to their user account.





02.4 Advanced Functionalities

The automation of programming and advertising planning in any linear or non-linear channel brings numerous advantages to operators, especially when traffic and scheduling systems are integrated with Master Control Room solutions, Content Management systems or with solutions for commercial billing that replicate and automatically reflect all changes produced on the playlist and initial schedule.

Some of the main advanced features of VSNCrea that allow to maximize its potential are:

- True Multi-tenant architecture that allows a single instance of software to serve multiple clients or organizations, resulting in cost savings.
- Powerful system for managing user permissions according to their specific profile, functions and defined roles. Customizable permission hierarchy for each client and department.
- Unlimited collaborative work between technical and management departments. Multiple users can work simultaneously.
- Fully customizable and expandable metadata

02.4 Advanced Functionalities

- Creation of customized analytical reports and graphs with the Analytics module.
- Time slot control for advertising broadcasting/ delivery, including automatic rules and adjustments for price change or for the prohibition of certain types of advertising.
- Full integration with VSN's solution portfolio, such as with the Master Control Room (MCR) automation, VSNMulticom, VSNONETV or with the VSNExplorer MAM platform for content management.
- Easy and seamless integration with third-party solutions for content management or playout and MCR automation via API.

- Preview of all content stored in the MAM system from the Crea interface itself. The system is also able to automatically reflect all changes made to content and media files from both systems, thanks to its tight integration with the VSNExplorer MAM platform
- Automatic collection of content and broadcasting data (As Run Log), in order to compare them with the original playlists that were planned.
- Ability to integrate with current ERP management systems (SAP, COVI, etc.) for advertising billing.

 Ability to plan a parallel playlist and select the most appropriate programming grid just before broadcast starts, essentially allowing last-minute decisions on programming

03 - Use Cases & Applications

Whether it is used for a single department of a company, a digital channel or for a large television network, VSNCrea allows users to be synchronized in their daily tasks.

Departments such as advertising, finance or content & programming are some of the main beneficiaries that can see their efficiency and productivity increased exponentially thanks to VSNCrea.

Some of the use cases and applications of VSNCrea are listed below:

Department of Advertising

- Availability of time slots for advertising.
- Campaign definition by advertiser.
- Advertising assignment to the playlists.
- Reconciliation and accountability of the advertising broadcasted.
- Description of technical details.
- Supervision of advertising runs.
- Automated analytical reports for customers.

Department of Programming

- Management of purchase orders or content acquisitions.
- Management of content rights.
- Content planning based on smart automatic rules.
- Synopsis and technical details' description .
- Control of all the costs associated with content purchases.
- Analytical reports for the reconciliation and verification of programming.

03 - Use Cases & Applications

Some of the use cases and applications of VSNCrea are listed below:

Department of Broadcasting

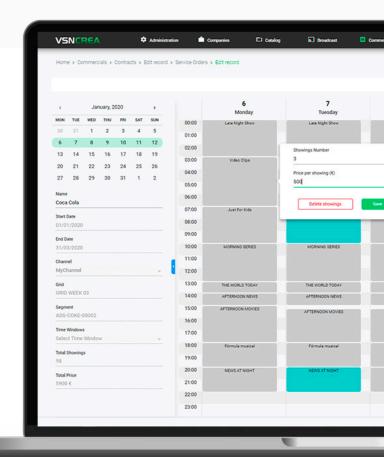
- Support of multi-channel and opt-out (regional variation).
- Definition of templates and broadcasting criteria.
- Design of daily, weekly or long-term playlists and grids.
- Display of content gaps and overlays.

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- Creation and export of secondary actions and auxiliary events.
- Information for media, Internet, OTT and EPG for DTT.

Department of Finance

- Financial management of all the programming costs per day, week, month, etc.
- Management of rundowns and advertising profitability.
- Check and modify the cost assignment in the weekly planning.
- Synchronization with third-party billing systems.
- Integration with accounting and financial systems (SAP).



04 References

For more than 30 years, VSN has installed solutions and projects worldwide in more than 100 countries, helping different companies within the Broadcast, Media and Entertainment sector to transform the business and achieve their most ambitious goals.

Book a Demo of VSNCrea with our team

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