UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF FLORIDA

Case No.: 1:24-cv-21226-RAR

DR. EDWIN A. HERNANDEZ, and EGLA CORP.,

Plaintiffs,

v.

STINGRAY GROUP INC. f/k/a STINGRAY DIGITAL GROUP, INC. STINGRAY MUSIC USA, INC., MOOD MEDIA LLC f/k/a MOOD MEDIA CORPORATION, AT&T ENTERPRISES, LLC f/k/a AT&T Corp., MILLICOM INTERNATIONAL SERVICES, LLC, BLUE STREAM COMMUNICATIONS, LLC dba BLUE STREAM FIBER, and DOES 1-100,

Defendants.

JURY TRIAL DEMANDED

SECOND AMENDED COMPLAINT

EXHIBIT
1012

Plaintiffs, Dr. Edwin A. Hernandez, ("Dr. Hernandez") and EGLA CORP. ("EGLA CORP") (Dr. Hernandez and EGLA CORP, collectively "Plaintiffs"), by their undersigned counsel, brings this action against Defendants Stingray Group, Inc. f/k/a Stingray Digital Group, Inc. ("Stingray Group"), Stingray Music USA, Inc. ("Stingray Music") (Stingray Group and Stingray Music, collectively "Stingray"), Mood Media LLC f/k/a Mood Media Corporation ("Mood Media"), and AT&T Enterprises, LLC f/k/a AT&T Corp. ("AT&T"), Millicom International Services, LLC "(Millicom"), Blue Stream Communications, LLC d/b/a Blue Stream Fiber ("Blue Stream") and DOES 1-100 (Stingray, Mood Media, AT&T, Millicom, Blue Stream and DOES 1-100, collectively "Defendants"), and state:

INTRODUCTION

1. This case arises from the theft of Plaintiffs' proprietary technologies (trade secrets and patented technology) used in the distribution of music channels to millions of subscribers in the United States and around the world, included but not limited to "Stingray Music" service to subscribers of AT&T, Millicom, Blue Stream, and DOES 1-100.

2. From about 2012 through 2014, Dr. Hernandez developed technology to deliver audio and video content using cloud-based platforms and mobile applications using secure remote servers. During this time, this technology was maintained as Dr. Hernandez's trade secrets. Later, some of this technology was disclosed in Dr. Hernandez's patent applications, which ultimately resulted in patents-at-issue, namely, U.S. Patent Nos. 10,127,074; 10,524,002 and 11,140,441 ("Asserted Patents") (**Exhibits 1-3**). However, prior to the publication of the patented technology on June 30, 2016, they remained Dr. Hernandez's trade secrets. Technology that was not disclosed in the Asserted Patents remains Dr. Hernandez's trade secrets.

3. The Stingray defendants acquired unauthorized access to Dr. Hernandez's proprietary technology in connection with the acquisition of certain assets of Defendant Mood

Media, who was using Dr. Hernandez's proprietary technology under an agreement with Dr. Hernandez's company EGLA CORP. Stingray's unauthorized use of Dr. Hernandez's trade secrets and patented technology allowed Stingray to replace competitors such as Music Choice to become the leading provider of music services to Cable TV operators with music channels offerings to over 700 operators worldwide (**Exhibit 4** at 2[1]) at Dr. Hernandez's expense.

4. Ultimately, from 2014 to 2024, Stingray increased its revenues from C$15M to C$100.4M[2] per quarter, and increased its customer base to at least 413 operators, including Defendants AT&T, Millicom, and Blue Stream (**Exhibit 4** at 2), generating US $37.1 million per quarter in revenues the United States.[3]

5. In December 2014, Dr. Hernandez filed for patent protection for certain of his technological innovations and has received approval of 94 claims spread across 4 U.S. patents and 8 claims in an European Patent covering 17 jurisdictions, patents that are infringed or were infringed by Defendants.

BACKGROUND

6. In or around 2012, a company called "DMX Music" was having financial troubles and used approximately 50 desktop computers to broadcast music-only content to cable operator affiliates. DMX relied on satellite delivery systems and antiquated hardware and software. DMX management at the time met with Dr. Hernandez to see if something could be done. Dr. Hernandez suggested a different approach for DMX's music delivery, including a project to develop an "alternative" solution to satellite delivery. Dr. Hernandez proposed developing a new technology using cloud-based platforms and mobile applications, provided that this technology remained

[1] Page numbers refer to actual document page/PDF page numbers as opposed to the internal page numbers.
[2] https://www.digrin.com/stocks/detail/RAY-A.TO/earnings
[3] https://corporate.stingray.com/wp-content/uploads/2024/02/press_release_q324_en.pdf

exclusively Dr. Hernandez's proprietary technology. DMX agreed. As DMX didn't have a budget, Dr. Hernandez began developing this technological platform in multiple phases and multiple products, and DMX agreed to provide its clients as "testbed" for those technological solutions.

7. However, before disclosing any technical information, Dr. Hernandez and his company EGLA CORP entered a Non-Disclosure Agreement ("NDA") on March of 2012 with DMX (**Exhibit 5**), and subsequently disclosed confidential and proprietary strategies, architecture documents, and software strategies to be used by Dr. Hernandez.

8. The NDA explicitly recited that "[n]o licenses or rights under any patent, copyright, or trade secret" were granted or were implied with the agreement.

9. Dr. Hernandez's research and development included a web-based cloud platform, that DMX called DMX2GO, as well as prototype audio box devices for commercial music customers, mobile applications including "Mediamplify Music," and servers to replace satellite delivery with internet-based transport for the existing audio-only platform.

10. The associated web-based products and mobile application technologies developed by Dr. Hernandez were demonstrated to DMX and DMX used those products to revamp sales.

11. Beginning in 2013, Dr. Hernandez hired services to host his streaming platform, including iWeb (**Exhibit 6**), Equinix data centers (**Exhibit 7**), and other providers.

12. As part of the development of the technology, Dr. Hernandez shipped several servers that contained music and audio-only prototype solution and installed at cable TV head-end operators including CABLEMAS, CABLEVISION, AXTELTV, ENCOMPASS, and others.

13. Among the many proprietary disclosures, Dr. Hernandez presented to then DMX Media General Managers and executives, Gustavo Tonelli and Alejandro Cacciola, confidential

technical documents, server plans, technology updates, access to cable operators that were needed in order to perfect and test Dr. Hernandez's developments.

14. To replace antiquated hardware encoders and wiring, a server-based solution was envisioned by Dr. Hernandez to deploy a software-defined system to each Cable Operator. To solve this problem, Dr. Hernandez proposed a software-defined solution to replace hardware encoders and satellite delivery, which was novel and innovative at the time.

15. In or around March of 2012, DMX was acquired by Defendant Mood Media for $86.1M cash (**Exhibit 8**) and the nascent relationship between DMX and Dr. Hernandez was formalized with Mood Media. Post-acquisition Mood Media continued using the DMX brand and platform ("Mood Media/DMX"), which included several of Dr. Hernandez's ongoing projects and intellectual property using web-based technologies and mobile applications, including DMX2GO (Web-based), Mediamplify Music Mobile App, DMX2GO Widgets, and other Set-Top-Box projects.

16. Dr. Hernandez was the main software developer, architect, solo entrepreneur, test engineer, and sole provider of technologies for Mood Media, and started deploying several versions of his software and conducted testing and integration at different major Cable TV systems (e.g., DirectTV in California, Cablevision in Mexico City) where Mood Media/DMX had clients to test the solutions using real head ends that connected end-users with Set Top Boxes (STB).

17. As noted, the first version of Dr. Hernandez's software was music-only and did not deliver visual assets. It was not until mid-2013, when Dr. Hernandez developed his first prototype, wrote a specification, and implemented a python-based software to manage HTML-based screen enhancements for Cable TV and Satellite Operators. Dr. Hernandez finalized all this work in or around May 2014.

18. As explained below, Defendants used, and continue to use, Dr. Hernandez's trade secrets and patented technology to offer streaming audio and music services to millions of subscribers in the U.S. and worldwide.

PARTIES

19. Plaintiff Dr. Edwin A. Hernandez, a native of Honduras, is a resident of Coral Springs, Florida. Dr. Hernandez is an inventor and entrepreneur that has owned a technology incubator and accelerator, called EGLAVATOR, from 1997 to 2023. The EGLAVATOR was a 10,000 sq ft. facility was in Boca Raton, FL. Dr. Hernandez was Fulbright scholar and named inventor and owner of 15 issued U.S. and foreign patents. Dr. Hernandez spends his time helping entrepreneurs to launch technological startups with technical leadership, oversight, and capital. Dr. Hernandez is a member of the board of advisers, a reviewer for international journals and technical publications, and is the biggest shareholder of several entities, and main founder of EGLA CORP and the inventor of the patents-at-issue.

20. Plaintiff EGLA CORP is a Florida corporation with its principal place of business at 4890 NW 101st Ave Coral Springs, FL. EGLA CORP is owned by Dr. Hernandez and his parents (Dr. Alcides Hernandez and Reina Gladys Hernandez), and the company has an exclusive license to the technologies owned by Dr. Hernandez.

21. On information and belief, Defendant Stingray Group is a Canadian corporation with its principal place of business at 730 Wellington Street, Montreal, Quebec, Canada H3C 1T4. Stingray Group currently has over 250 employees across the world. Stingray Group is doing business in the United States, in the State of Florida, and in this judicial district.

22. On information and belief, Defendant Stingray Music is a Delaware corporation with its principal place of business at 2127 Ayrsley Town Blvd., Suite 202, Charlotte, North

Carolina 28273. Stingray Music is doing business in the United States, in the State of Florida, and in this judicial district.

23. On information and belief, Defendant Mood Media LLC f/k/a Mood Media Corporation is a Texas corporation located at 2100 S. IH 35, Suite 201, Austin, TX 78704. Mood Media is doing business in the United States, in the State of Florida, and in this judicial district.

24. On information and belief, Defendant AT&T Enterprises, LLC f/k/a AT&T Corp. is a New York corporation with offices at 20445 Biscayne Blvd, Suite H1, Aventura, FL, 33180 and its principal place of business at One AT&T Way, Bedminster, New Jersey 07921-0752. AT&T Corp.'s registered agent for service is CT Corporation System, 28 Liberty Street, New York, New York, 10005. AT&T is doing business in the United States, in the State of Florida, and in this judicial district.

25. On information and belief, Defendant Millicom International Services, LLC is a Florida limited liability company with a principal place of business in Miami, FL at 255 Giralda Ave, Suite 800 Coral Gables, FL 33134. Millicom is doing business in the United States, in the State of Florida, and in this judicial district.

26. On information and belief, Defendant Blue Stream Communications, LLC is a Delaware limited liability company with a principal place of business at 12409 NW 35 St Coral Springs, FL 33065. Blue Stream is doing business in the United States, in the State of Florida, and in this judicial district.

27. Plaintiff is unaware of the true names or capacities, whether individual, corporate, associate, or otherwise of defendants DOES 1 through 100, inclusive. Plaintiff therefore sues said defendants by such fictitious names. Plaintiff will amend this Complaint to show their true names or capacities when the same have been ascertained.

JURISDICTION AND VENUE

28. This is an action for (a) trade secret misappropriation under both the Defend Trade Secrets Act, now codified at 18 U.S.C. § 1836 et seq. ("DTSA"), and Florida Uniform Trade Secrets Act, Fl. Stat. § 201 *et seq*., (b) patent infringement under the patent laws of the United States, 35 U.S.C. § 100 *et seq*., (c) breach of contract, (d) unjust enrichment, (e) fraud, and (f) unfair competition pursuant to Florida Deceptive and Unfair Trade Practices Act (or "FDUTPA"), *et seq*.

29. This Court has subject matter jurisdiction over patent claims in this action pursuant under 18 U.S.C. § 1836(c) (actions arising under the DTSA), 28 U.S.C. §1338(a) (patent infringement), 28 U.S.C. § 1331 (federal question jurisdiction), 28 U.S.C. § 1367 (supplemental jurisdiction); and the doctrines of ancillary and pendent jurisdiction.

30. This Court has personal jurisdiction over Defendants and venue is proper in this District pursuant to 28 U.S.C. § 1391(b) because Dr. Hernandez resides in this district and a substantial part of the events giving rise to the claims occurred in this district, pursuant to 28 U.S.C. § 1400(b) because the domestic Defendants have a regular place of business in this District and committed acts of infringement here, and pursuant to 28 U.S.C. § 1391(c)(3) as to foreign Defendant Stingray Group. Dr. Hernandez is informed and believes and alleges thereon that Defendant Stingray Group is a foreign corporation with no offices in the United States, and Defendant Millicom International Services, LLC is a Florida limited liability company with a principal place of business in Miami, FL at 255 Giralda Ave, Suite 800 Coral Gables, FL 33134. Defendant Blue Stream Communications, LLC is a Delaware limited liability company with a principal place of business at 12409 NW 35 St Coral Springs, FL 33065. Dr. Hernandez is informed and believes and alleges thereon that these Defendants have committed acts of infringement in this District, including using, distributing, promoting, marketing, selling, offering

for sale, importing, and/or advertising their infringing products and services in or to this District and/or to businesses and individuals in this District. Dr. Hernandez is further informed and believes and thereon alleges that these Defendants derive substantial revenue from using, distributing, promoting, marketing, selling, offering for sale, importing of their infringing products and services in, or to users in, this District. Dr. Hernandez is informed and believes and thereon alleges that Defendants Stingray Music and Mood Media do business in the state of Florida and this judicial district, a substantial part of the events giving rise to the claims against Stingray Music and Mood Media occurred in this district, and harmed Plaintiffs who are residents of Florida and reside in this judicial district.

FACTUAL ALLEGATIONS COMMON TO ALL CAUSES OF ACTION

A. Dr. Hernandez's Background

31. Dr. Hernandez is a Ph.D in Computer Engineering from the University of Florida and an inventor of 15 issued patents. Dr. Hernandez is an innovator and in 2017 founded his startup accelerator and incubator, the EGLAVATOR. His incubator has developed and invented multiple devices and launched several companies. Dr. Hernandez continues to develop technological advancements and recently filed for a new patent application for MEVIAOS, a decentralized multimedia operating system, the evolution of MEVIA.

32. Among his patent portfolios, Dr. Hernandez has licensed some of his inventions to mobile carriers, phone manufacturers, including Verizon Wireless, through his company Mobility Workx, LLC.

33. Dr. Hernandez also works as an expert witness for patent, trade secret, and technology intellectual property cases, and has testified in trial, and deposed dozens of times for high-profile litigations.

34. The patents at issue here do not include many aspects of Dr. Hernandez's streaming platform and R&D existing around 2013 and 2014, including Dr. Hernandez's work on:

A. iWEB cloud and multimedia streaming cloud APIs and streaming for web,

B. Mobile Applications with Music Streaming and Video,

C. Multimedia CDN and Cloud Storage (e.g., Huladrive),

D. APIs for metadata and music information from the server(s) and used by the mobile applications, and

E. Music-only streaming to Cable TV operators.

These aspects remain Dr. Hernandez's trade secrets.

35. The Asserted Patents cover 94 issued claims that include streaming broadcasting of unicast and multicast systems, where the source of the generated content is HTML, multimedia files, and broadcasting platforms. In simple terms, one of the aspects of the Asserted Patents is the generation of visual representations with background images generated using web-based elements that are already used in mobile applications creating a unified user experience. The screens displayed in set top boxes or Smart TVs are generated with images, html, and styles from a web page that are displayed and broadcasted in a multicast address, which is compatible with MVPD operators (*e.g.*, AT&T, Millicom's TIGO, etc).

36. The Asserted Patents also cover the use of virtual machines, headless browsers, m3u8 streaming, fault-tolerance, MPEG-based multiplexers, use of caching units, multicast servers, unicast servers, CSS, HTTP, JSON, H.264 encoders, MPEG2Video encoders, among other innovations.

B. Dr. Hernandez's Development of his Proprietary Technology, Including his Trade Secrets

37. Since 2010, Dr. Hernandez has, and continues to, develop, architect, and implement cloud-based platforms for multimedia delivery.

38. Dr. Hernandez's technologies are required to distribute music content where, instead of having one computer per music channel, all channels are generated and encoded from a single arrangement, including backup systems, that can be implemented with 2 or 3 servers. Additionally, configuration, management, and adaptability of the system are software-driven instead of depending on hardware changes.

39. Before implementing Dr. Hernandez's technology, DMX used 50 desktop servers with ASI (Asynchronous Serial Interface) cards that were interconnected to a set of multiplexers and encoders that ultimately were delivered to a satellite system and managed by Digital Latin America (DLA) from Coral Springs, FL. In general, most of the industry used these methods, including DMX competitors Music Choice, Galaxy, and others.

40. In and around early 2010, Dr. Hernandez invested his own personal funds developing and investing in cloud platforms, a cluster-filesystem called HULADRIVE, and testbeds. These were integrated in an efficient and cost-effective way using open-source tools such as FFMPEG to work with the early-stage formats that were being developed at that time.

41. The first set of technologies developed were streamers and cloud-based systems to stream a set of music channels (*e.g.*, 100) and provide a link for web applications, mobile applications, and web-based platforms. Dr. Hernandez provided Application Programming Interfaces (API) to retrieve metadata from any of the music channels.

42. Around 2012 to 2013, Dr, Hernandez developed an audio-only broadcasting platform for cable operators and replace satellite delivery that was delivered from a server without

using hardware encoders and was compatible with cable TV Set Top Boxes. The audio-only streaming solutions was designed in several ways using several streaming protocols. The vision was to develop a new platform that integrated existing web-widgets, javascripts, and Cascade Style Sheets (CSS) to provide a graphical User Experience (UX) with metadata and high-quality music content.

43. Around 2013, Dr. Hernandez further investigated how to generate, not only audio streams, but incorporate visual components to the stream. After several iterations of the solutions were made, and several algorithms were implemented, Dr. Hernandez determined that adding visual components could also be done asynchronously but would require heavy production efforts, great amounts of bandwidth, and the off-line generation of video assets. Dr. Hernandez's vision was to use real-time video generation using HTML assets to assemble and present User Interfaces while encoding and broadcasting the audio stream in a format compatible with IPTV, Cable TV, or Satellite system. This solution was more efficient and even today is still in use.

44. In or around 2013, Dr. Hernandez notified Mood Media, under confidentiality, that he was working on a real-time solution that was going to generate on-the-fly video assets with metadata and other widgets, and broadcast to set top boxes or other IPTV systems. After multiple iterations, Dr. Hernandez found that using a headless rendering engine and incorporating web assets was going to be the way to solve a real-time solution that could be scaled.

45. Dr. Hernandez incorporated a solution relying on web user interfaces and javascript for on screen animations and updates and concluded this to be the most efficient way for real-time broadcasting visual assets to set-top-boxes was going to work. Dr. Hernandez showed the results of this solution in operation at a cable operator, Cablevision Mexico, in March 2014, but did not share any technical details as it remained Dr. Hernandez's trade secret at that time.

46. This innovative solution greatly improved head-end software and streaming management as well as music license tracking. As part of the services rendered for Mood Media, for example, Dr. Hernandez hosted in his platform all the required web-assets, music, and user interfaces that were necessary for Mood Media's services like DMX2GO or mobile applications that were being commercialized by Mood Media/DMX. As such, Dr. Hernandez's novel solution enabled a unified distribution system and shared resources across web, mobile, and cable TV.

47. From about 2013-mid-2014, Dr. Hernandez continued to work on developing proprietary technology, including creating visual components were rendered and generated on-the-fly with metadata, configurable backgrounds, and music content. In or around mid-2014, Dr. Hernandez perfected these innovations while developing his latest version of the platform's source code. Collectively, these innovations for delivering multi-media are "Dr. Hernandez's Trade Secrets."

48. Dr. Hernandez's Trade Secrets, thus include, but are not limited to, source code, HTML and XML code, functional requirement specifications, operating procedures, automation validation test scripts, equipment listings, configuration specifications, all architecture methods and systems with encodings scripts, source code to generate screens, source code implementation on how "still images" were generated by the caching unit and broadcasted using an MPEG Transport Stream, use of multicast IP Addresses, GOP sizes, audio encoders levels, and information in the Asserted Patents before their public disclosure on June 30, 2016 (*see e.g.*, **Exhibits 24-26**).[4]

[4] Plaintiffs will provide under the terms of a protective order entered in the case and at the appropriate time a specific disclosure of Dr. Hernandez's trade secrets.

49. Dr. Hernandez spent thousands of hours researching, testing, analyzing and compiling data, which ultimately lead to developing Dr. Hernandez's Trade Secrets. This compiled information included the computing resource utilization, network and processor performance, user experience and overall costs associated with various different software and system architectures, and the interplay between aspects of those various different architectures and how each contributes to such performance and costs. Based on the analysis of the research and testing data, Dr. Hernandez determined that a unique and proprietary software and system architecture to provide streaming audio and video content.

50. Dr. Hernandez's Trade Secrets derive independent economic value from not being generally known to the public or to others who can obtain economic value from its disclosure or use. Dr. Hernandez together with various members of his team performed extensive research and development, testing and trials in relation to developing Dr. Hernandez's Trade Secrets. This included work performed and know how gained over several years involving a significant investment of time and money.

51. This significant economic value of Dr. Hernandez's Trade Secrets derives from the following:

- Dr. Hernandez spent thousands of hours of research, development and testing around the world in order to develop Dr. Hernandez's Trade Secrets.
- Dr. Hernandez's Trade Secrets include source code.
- It took Dr. Hernandez and others working for him many years to develop and write source code.
- The development of the Dr. Hernandez's Trade Secrets source code required a significant investment of time and money.

52. Except for certain of Dr. Hernandez's Trade Secrets that disclosed in his published patent application June 30, 2016, his trade secrets remained secret. For example, the hardware and software were never provided to third parties without confidentiality agreements, and access to the hardware and software was strictly controlled and limited to the engineers working on it. The software is provided via a cloud server provider, which hosts software applications and simply makes the application accessible to authorized end users over the Internet. These host servers were controlled by Plaintiffs and, accordingly, the software and the source code was not known or accessible to others.

53. Throughout the development of Dr. Hernandez's technology for streaming audio and video content, all the source code and software was kept confidential pursuant to NDAs and confidentiality agreements, and all access to the servers and source code was exclusively managed by Dr. Hernandez. Dr. Hernandez personally visited several sites or hired an engineer contractor to visit the Cable Operator sites (head-ends) where his servers were going to be located to confirm servers would have adequate internet access, power, and physical security. All software and firmware updates were made using secured IP tunnels that connected using iWeb or Equinix.

54. As a result of Dr. Hernandez's security measures, access to Dr. Hernandez's confidential and proprietary technology, including his source code, was only possible if the servers and corresponding hard drives were unlawfully accessed.

C. Mood Media Induces Dr. Edwin Hernadez to Disclose its Trade Secrets to Stingray with a Fraudulent Agreement

55. During the Fall of 2013, EGLA CORP and Mood Media/DMX negotiated a term sheet agreement to license the platforms in iWeb, Equinix, mobile applications, and other web applications, and an option to include future platform development. The term sheet was signed on

December 18, 2013 with an Effective Date of January 1, 2013 (**Exhibit 9**) by Dr. Alcides Hernandez as CEO of EGLA CORP.

56. During these negotiations, Dr. Alcides Hernandez was not informed that a merger transaction was taking place behind the scenes with Stingray, and that Stingray intended to gain unauthorized access to Dr. Hernandez's Trade Secrets, including his servers, and source code, via its acquisition of Mood Media/DMX.

57. When Dr. Hernandez discovered around March 2014 that Mood Media/DMX division was being acquired by Stingray for $16M, he immediately communicated with Alejandro Cacciola (**Exhibit 11** at 5-6). As noted, Messrs. Cacciola and Tonelli were DMX Media General Managers and executives who later became executives of Stingray. However, during the negotiation with EGLA CORP before February/March 2014, despite being employed by Stingray, even appearing in industry magazines (**Exhibit 10** at 16), both executives posed as Mood Media/DMX contacts to EGLA CORP when negotiating for access and use of Dr. Hernandez's technologies.

58. By April 24, 2014, after Mood Media had consummated the $16.3M Stingray transaction, Dr. Hernandez received a letter from the Vice President of Legal for Mood Media, Melanie McCool, purporting to terminate the "term-sheet" that covered Mood Media/DMX's access to and use of Dr. Hernandez's technologies (**Exhibit 11** at 1). Ms. McCool further claimed that the "[t]echnology didn't work" and that it was not in use by Mood Media, hence such agreement was unenforceable.

59. The term sheet agreement had a duration of three years and made clear that all Intellectual Property and technology ownership was owned by Dr. Hernandez and his companies.

In fact, all servers that were installed in all cable operators contained a "End User Licensing Agreement" that prohibited any reverse engineering (**Exhibit 12** at 3).

60. As noted, in an around March 2014, Dr, Hernandez found out via an internet search that Mood Media/DMX had been sold to Stingray. However, Mood Media never notified Dr. Hernandez, much less sought authorization for Stingray to access and use his servers containing his proprietary technology. At no time did Dr. Hernandez and EGLA CORP agree to give Stingray access any of Dr. Hernandez's servers.

61. Around April 10-14, 2014, Dr. Hernandez was concerned that his server assets had been compromised and that he needed to delete and disconnect his services to avoid unauthorized access and use of his technology by Stingray, who now appeared to be controlling head-ends and customers previously licensed by Mood Media. Dr. Hernandez sent emails to Mr. Tonelli, Ms. McCool (then working for Mood Media, now working for Stingray), and others in an attempt to confirm that there was no unauthorized access and use of his technology (**Exhibit 11** at 5-6).

62. By April 2014, Mr. Tonelli was already using a @stingraydigital.com email address (**Exhibit 13** at 2), however around 2014, Mr. Tonelli wrote from his mac.com account (**Exhibit 14.1**) and "privately" stated that, by discontinuing his services to Mood Media/DMX, "MOOD will sue you for breaching the agreement without proper notice, and it will seek (and most likely get, because you don't have a case) damages for all the money STINGRAY will sue them for."

63. At about that time, as shown in Florida's Department of State Corporation records website, Sunbiz.org, Mr. Tonelli became a director of a company affiliated with Stingray, Stingray Music USA, Inc (**Exhibit 14**). In addition to Messrs. Tonelli and Cacciola, it is unknown what other Stingray personnel at that time would have had access to Dr. Hernandez's servers by virtue of their former employment by Mood Media.

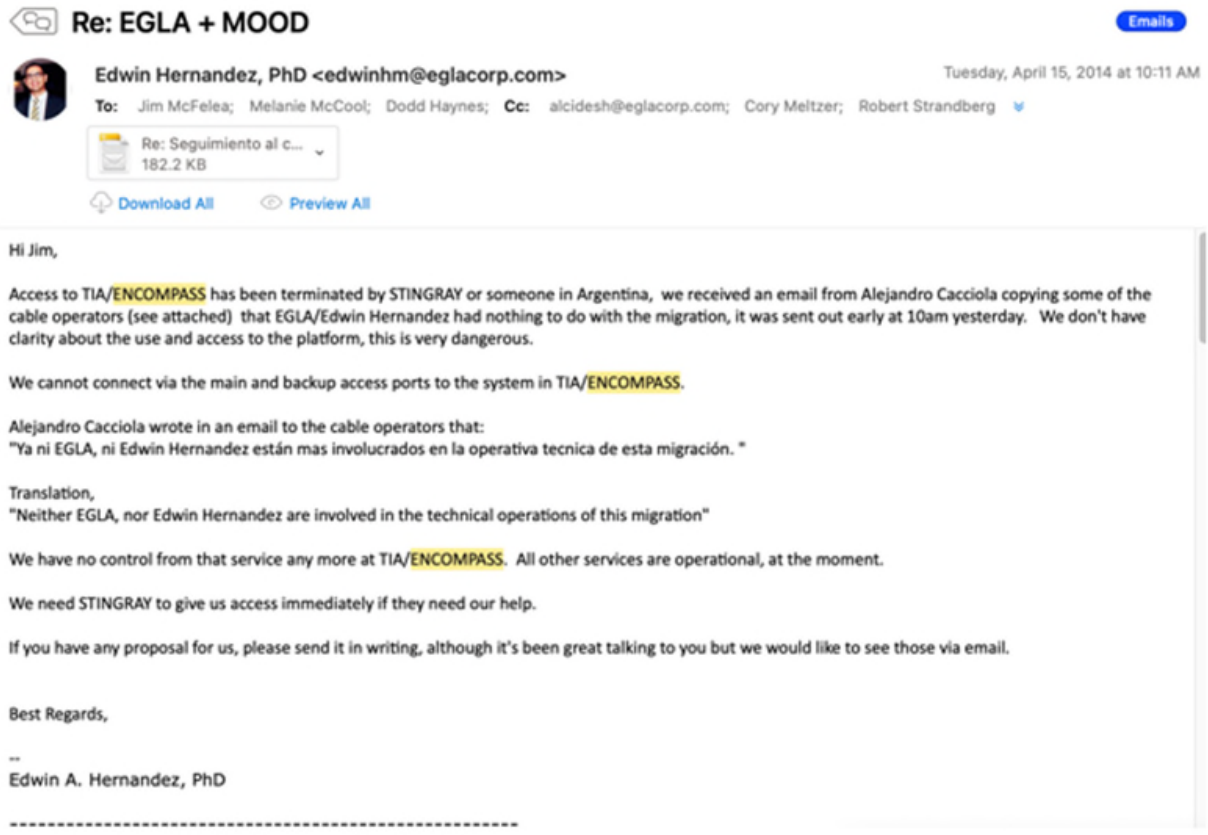
64. As Dr. Hernandez later discovered in April of 2021, and shown in the **Exhibits 15 and 16**, Stingray had access to the same cable operators where Dr. Hernandez had his servers in operation. See, for example, CableMAS (**Exhibit 15** at 20), AXTEL TV (*Id.* at EGLA-TRELLO-000143), CABLE VISION (*Id.* at EGLA-TRELLO-000435, ENCOMPASS (**Exhibit 16** [11] at EGLA-TRELLO-000520).

65. On April 14, 2014, Dr. Hernandez contacted the Intellectual Property division, Department of Homeland Security (DHS) of the FBI (**Exhibit 17**) to report his concern that Stingray may have access to his servers.

66. When Dr. Hernandez raised his concerns about Stingray's possible access to his servers and thus his technology, Mr. Tonelli warranted that "STINGRAY DIGITAL has no knowledge of, nor involvement on, the specifics of MOOD MEDIA's content delivery technology - EGLA's or otherwise - nor has the intention of acquiring or learning such technology" (**Exhibit 14.1** at 2).

67. Despite his concerns, in light of Mood Media's assertion that Stingray did not have access to Dr. Hernandez's technology, he had no choice but to assume Mood Media was acting in good faith and honor the term sheet agreement that was signed or risk being liable for a $16M transaction between Stingray and Mood Media.

68. On April 15, 2014, as memorialized in his email (copied below) to individuals at Mood Media, Dr. Hernandez's remote access via Dr. Hernandez's pre-established IP Tunnels, was severed by Stingray or Mood Media, and, on information and belief, all of his servers at all cable operators were unlawfully stolen by Stingray.



Re: EGLA + MOOD

Emails

Edwin Hernandez, PhD <edwinhm@eglacorp.com>

Tuesday, April 15, 2014 at 10:11 AM

To: Jim McFelea; Melanie McCool; Dodd Haynes; Cc: alcidesh@eglacorp.com; Cory Meltzer; Robert Strandberg

Re: Seguimiento al c... 182.2 KB

Download All Preview All

Hi Jim,

Access to TIA/ENCOMPASS has been terminated by STINGRAY or someone in Argentina, we received an email from Alejandro Cacciola copying some of the cable operators (see attached) that EGLA/Edwin Hernandez had nothing to do with the migration, it was sent out early at 10am yesterday. We don't have clarity about the use and access to the platform, this is very dangerous.

We cannot connect via the main and backup access ports to the system in TIA/ENCOMPASS.

Alejandro Cacciola wrote in an email to the cable operators that:
"Ya ni EGLA, ni Edwin Hernandez están mas involucrados en la operativa tecnica de esta migración. "

Translation,
"Neither EGLA, nor Edwin Hernandez are involved in the technical operations of this migration"

We have no control from that service any more at TIA/ENCOMPASS. All other services are operational, at the moment.

We need STINGRAY to give us access immediately if they need our help.

If you have any proposal for us, please send it in writing, although it's been great talking to you but we would like to see those via email.

Best Regards,

--
Edwin A. Hernandez, PhD

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69. Throughout the development of Dr. Hernandez's Trade Secrets and proprietary technology and at all times afterward, Dr. Hernandez and his company EGLA CORP made every effort and followed procedures to ensure that all of the trade secrets of his system remained secret. For example, Dr. Hernandez followed all best practices to secure configuration files, manuals, and all source code behind firewalls and IP secured Tunnels. Additionally, physical access was strictly controlled at the EQUINIX data center in Boca Raton, FL as well as iWeb.com. All employees to EGLA, associates and partners were required to sign NDAs in order to preserve the secrecy of all of Dr. Hernandez's Trade Secrets and innovations.

70. It is evident now that Mood Media and Stingray worked together to gain access to Dr. Hernandez's Trade Secrets, including his source code. As explained below, it wasn't until around mid-April 2021 that Dr. Hernandez realized that the term sheet agreement signed with

Mood Media was breached and Plaintiffs were defrauded by Mood Media's $16,000,000 transaction with Stingray wherein Mood Media provided Stingray with unauthorized access to Dr. Hernandez's Trade Secrets and server technology.

71. The term sheet agreement between Plaintiffs and Mood Media prohibited the transfer and use of Dr. Hernandez's technology by any party other than Mood Media/DMX. Accordingly, Plaintiffs are informed and believe that Mood Media had no intention to honor the agreement and instead intended to provide Stingray access to Dr. Hernandez's Trade Secrets and intellectual property upon completion of Stingray's acquisition of Mood Media/DMX.

72. Once Mood Media completed its transaction with Stingray, and provided Stingray access to Dr. Hernandez's technology, it terminated the agreement with Plaintiff in or around April 24, 2014.

73. Mood Media later asked Plaintiffs to sign a "settlement" agreement under the false and fraudulent premise that Dr. Hernandez's intellectual property had not been tampered with, stolen, or provided to Stingray.

74. Therefore, Mood Media and Stingray were enriched from their unlawful actions and put at risk Dr. Hernandez's Trade Secrets and intellectual property assets.

D. Dr. Hernandez Discovers Theft of his Intellectual Property in April 2021

75. On information and belief, Stingray uses a server device called UBIQUICAST. However, no documentation on how this device operates and works is publicly available.

76. Despite Stingray's secrecy provisions and the lack of public disclosure regarding the operation of Stingray's streaming services, in and around April 11, 2021, Dr. Hernandez discovered a website called **trello.com** and learned from it that the technologies used by Stingray incorporated his trade secrets and infringed on his patents (**Exhibits 15-16**).

77. As a result, Dr. Hernandez then realized that Stingray had gained unauthorized access to Dr. Hernandez's source code in or around April of 2014 by physically having control of his servers that contained his source code and other of his trade secrets. As noted above, on information and belief, at that time Stingray also terminated access to Dr. Hernandez's servers.

78. Until recently, Stingray has concealed how its UBIQUICAST software works. During the period corresponding to 2017 to 2020, Dr. Hernandez carefully examined several heavily redacted documents from the patent infringement litigation pending in the Eastern District of Texas between Music Choice and Stingray, Case No. 2:16-CV-0586-JRG-RSP (**Exhibit 18**), and tried to extract as much information as possible.

79. In this patent litigation between Stingray and Music Choice, and its associated breach of contract case, the closest disclosure was found in Judge Payne's order disclosing that Stingray had two versions of their technology (**Exhibit 18** at 344):

- OSE1 pre-Fall 2014 – not accused of infringement and trade secret misappropriation by Plaintiffs
- OSE2 after-Fall 2014 - accused of infringement and trade secret misappropriation by Plaintiffs

80. On information and belief, Ubiquicast OSE2 server was created by Stingray no later than March 2015 (".. prior to March 2015, Stingray did not offer or provide any music video TV channels to MVPDs…") as indicated by Stingray attorneys in the following partially redacted filing on June 4, 2019 (**Exhibit 18** at 9).

REDACTED

HIGHLY CONFIDENTIAL-ATTORNEY'S EYES ONLY

(STINGRAY118548 (Ex. 9)). Although Stingray provides at [redacted]

[redacted] t (the "Stingray Music TV App"). (*Id.*; Report (Ex. 1), ¶49). Stingray first provided [redacted] with the accused Stingray Music TV App in March 2015. ([redacted] (Ex. 11), pp. 1, 9); [redacted] (Ex. 12)). Prior to March 2015, Stingray did not offer or provide any music video TV channels to MVPDs that are accused of infringing the patents-in-suit. (*See id.*; Report (Ex. 1), ¶¶62, 88).

81. Additionally, in the complaint and amended complaints filed by Music Choice, Music Choice attorneys stated that Stingray had two versions of the UbiquiCAST platform. In particular, Music Choice alleged that "Stingray, in the fall of 2014, launched, as part of AT&T's U-Verse® services, an improved digital audio music and video on demand… included the features and functionality infringing Music Choice's patents – features and functionality that Music Choice had not previously observed in Stingray's product offering prior to Stingray's access to the information it obtained from Music Choice." (**Exhibit 18** at 717, ¶ 41)

82. Therefore, on information and belief, by Q4 of 2014, Stingray had a new version of the server, called Ubiquicast OSE2 server, that incorporated Dr. Hernandez's Trade Secrets, which Stingray obtained unlawfully by its unauthorized access to Dr. Hernandez's servers and source code.

83. Through subsequent investigation, Dr. Hernandez learned that Stingray continued to develop new products into which Stingray has incorporated Dr. Hernandez's Trade Secrets thus misappropriating Dr. Hernandez's and other EGLA CORP's proprietary information and know-how for its own benefit at Plaintiffs' expense. For example, Stingray has gained customers such

as AT&T U-verse®, Millicom's TIGO®, Blue Stream, and over 700+ cable operators resulting in 400 million subscribers in 156 countries (*See* **Exhibit 4**, listing some of the cable operators).

E. Dr. Hernandez's Offer to License his Patented Technology to Stingray

84. On information and belief, Stingray gained access to employees, documents, servers, and source code that was compromised during the Mood Media/DMX acquisition in 2014. Stingray was able to see all components and Dr. Hernandez's technologies in operation at a cable operator and severed all access to Dr. Hernandez in and around April 15, 2014.

85. To this date, Stingray's UbiquiCAST servers' information are not publicly available and rather vaguely described by Stingray on their web page[5]:

> Ubiquicast servers are set-up and configured to each client's specific requirements before being shipped to head-ends. This process facilitates installation and expedites time to market for new services. Stingray's technical team is available 24/7 for help and support, ensuring reliable and uninterrupted service for your customers.

86. As a result, Dr. Hernandez was unaware of any misappropriations and, beginning in 2017, proceeded to offer his help and expertise to Stingray as part of the patent dispute with Music Choice. Around September 15, 2017, Dr. Hernandez's company, EGLA CORP, and Stingray signed an NDA in connection with business discussions (**Exhibit 19**). Dr. Hernandez informed Stingray about his patent applications and proposed that Stingray would use his patented technologies as an alternative non-infringing solution to Music Choice's dispute.

87. Around 2018, Dr. Hernandez approached Stingray, as his first patent issued on November 6, 2018, and offered to license his patent portfolio and include all source code. As noted above, Dr. Hernandez and EGLA CORP were unaware that Stingray had misappropriated Dr. Hernandez's Trade Secrets at that time.

[5] https://www.stingray.com/business-solutions/tv-providers Last Visited March 28th, 2024

88. Again, on July 12, 2019, once USPTO granted the '074 patent to Dr. Hernandez, he presented a similar offer as he made in 2017 to Stingray's Board of Directors (**Exhibit 20**).

89. After several attempts and discussions held from 2017 to 2019 with Stingray's technical staff and its Vice President of Legal, Lloyd Feldman, that included providing Stingray with a copy of Dr. Hernandez's U.S. Patent Nos. 10,123,074 and 10,524,002, documentation, and presentations (**Exhibits 21, 22, and 23**), none of these communications received any positive or negative feedback from Stingray's counsel. Stingray's management and executives ultimately showed no interest in obtaining any licensing or developing any collaboration with EGLA CORP. Therefore, Dr. Hernandez ceased all communications with Stingray.

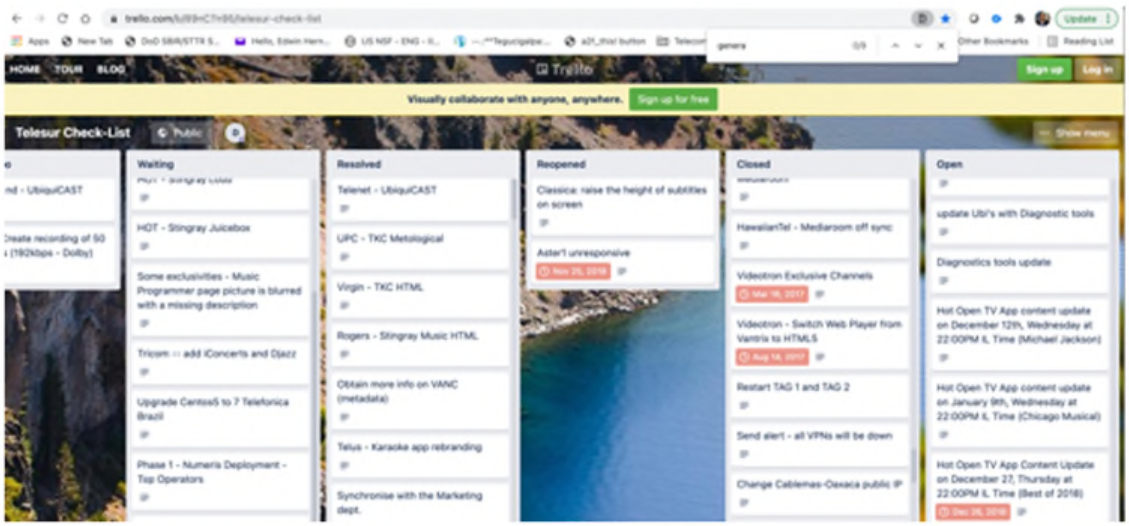
90. In hindsight, it is evident now that Stingray had no need to purchase or license Dr. Hernandez's technology as Stingray had illegally stolen Dr. Hernandez's Trade Secrets and was already using his technologies, including those that had been patented.

F. Stingray Misappropriation of Dr. Hernandez's Trade Secrets

91. As noted above, on or about April 7, 2021, Dr. Hernandez, as part of his diligence process and continuing its investigation into the possible unauthorized access to his proprietary technology by Stingray, discovered the trello.com website. From about April 7, 2021 to April 20, 2021, Dr. Hernandez reviewed all trouble tickets published on Trello and compiled them as shown in **Exhibits 15 and 16**.

92. The site's url, https://trello.com/b/89nC7n95/telesur-check-list, contained hundreds of trouble tickets generated by Stingray regarding its OSE2 Ubiquicast Server. The evidence also points to internal servers at stingray.com and stingraydigital.com, primarily JIRA instances "Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-1284," as

well as other Stingray internal sites such as "confluence."[6] A screen shot of the website is shown herein:



93. The trello.com website contains hundreds of entries from what appears to be all trouble tickets that Stingray handled with customers as early as March 2015 and as late as 2018. An example is shown in the following screenshot from **Exhibits 15 and 16**:

[6] https://www.atlassian.com/software/confluence/features. Confluence is an Atlassian tool. (Last accessed on April 16, 2021).



94. Dr. Hernandez proceeded to download relevant content and evaluate this evidence, none of which was disclosed in Stingray's patent litigation with Music Choice. Dr. Hernandez concluded that the content of the tickets was genuine and that there was sufficient evidence in these files to demonstrate that Stingray misappropriated Dr. Hernandez's Trade Secrets and, when it was later patented, infringes his patents.

95. For example, several of Dr. Hernandez's servers were installed at the same cable operators found at, for example, AXTEL TV, CABLE VISION and ENCOMPASS. The trello.com evidence demonstrates that Stingray had access to the servers that Dr. Hernandez installed and remotely managed. As shown in the following trouble tickets citing to AXTEL TV around April 13, 2015 (**Exhibit 15**, EGLA-TRELLO-000532), and many others.





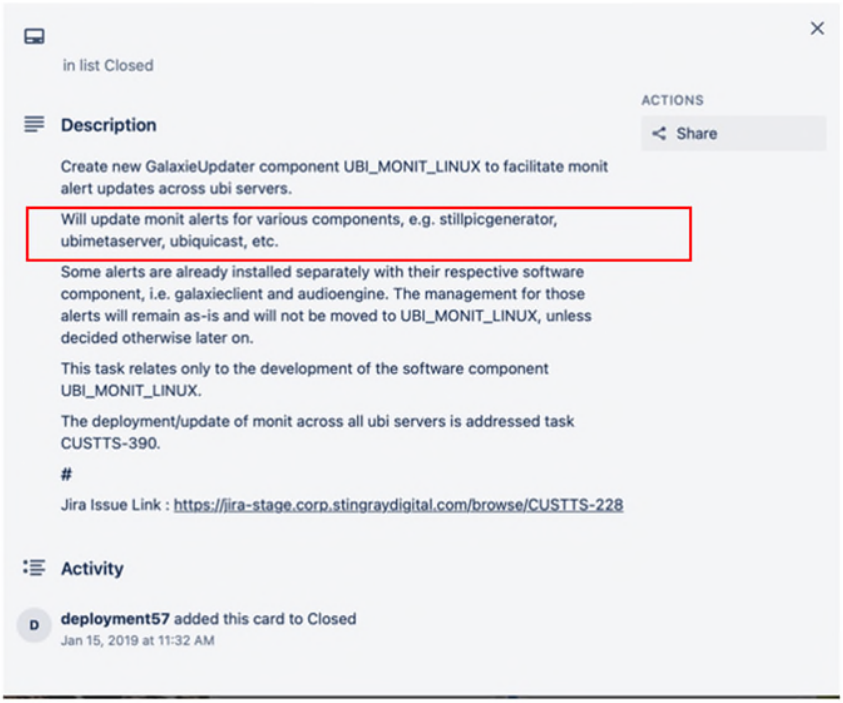
96. By examining trello.com evidence, Dr. Hernandez concluded that those skilled in the art would be able to demonstrate that Stingray's references at trello.com are representative of the software used in its UbiquiCAST servers and that those servers performed the same functions that are patented in Dr. Hernandez's Asserted Patents.

97. For instance, the Texas litigation at the "Daubert order" describes vaguely an artifact called "StillPict Generator" (**Exhibit 18** at MC-EGLA-000336):

> any prejudice to Plaintiff, the Court will **GRANT** Music Choice's Motion for Leave to supplement its expert report with respect to Dr. Shamos' specific non-infringement theory that no transmission occurs because "the Audio Engine and StillPic Generator components of the accused Ubiquicast machine purportedly send data between them via a shared RAM memory," and the allegedly new invalidity theory regarding MP4 technology. The supplemental report of Dr. Russ will be strictly limited to that scope and must be served by no later than noon on Monday, November 11, 2019. Any issues regarding the scope of this report may be raised at the November 12 pretrial conference.

98. The same component "StilPic Generator," cited by the court order, is referenced in trello.com. As shown in trouble ticket below (**Exhibit 15**, at EGLA-TRELLO-000530), the text

"monit alerts for various components " that includes: "stillpicgenerator, ubimetaserver and ubiquicast."



99. Dr. Hernandez reviewed over 654 references from trello.com to derive all claim charts (**Exhibits 24-26**) and conclude Stingray misappropriated his trade secrets and infringed his patents.

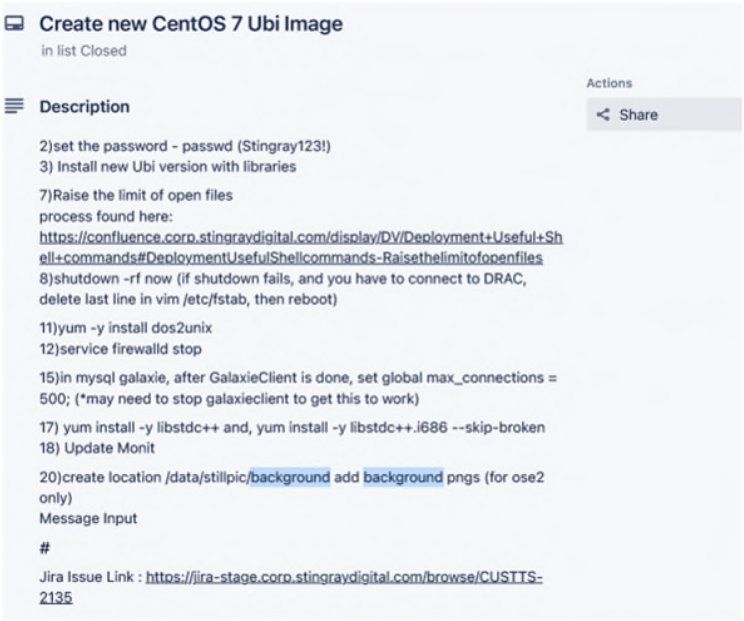
100. Dr. Hernandez's and EGLA CORP's stolen servers included confidential, proprietary, and trade secret software, designs, configuration contained in its servers that Gustavo Tonelli and Alejandro Cacciolla and other ex-DMX employees were aware of when employed by Mood Media and later when they became Stingray employees.

101. These servers contained source code in python, C/C++ encoders, a Linux-based software, PNG backgrounds, FFMPEG, MONIT, video generators, URL-based resources, and web asset processing, Audio in AC-3, Video in H.264 codecs etc. Dr. Hernandez's Trade Secrets included all architecture methods and systems with encodings scripts, source code to generate

screens, use of multicast IP Addresses, GOP sizes, audio encoders levels, and other configurations that the evidence shows were misappropriated by Stingray employees or contractors under Stingray's direction and control.

102. While Stingray's UbiquiCAST OSE2 servers appear from the trello evidence to be based on CentOS, a Linux-based system, and Dr. Hernandez used Ubuntu's platform, both systems use FFMPEG (**Exhibit 15 and 16** at EGLA-TRELLO-00063), Video Generators (*Id.* at EGLA-TRELLO-000565), URL and web asset processing (*Id.* at EGLA-TRELLO-0000565), MONIT (*Id.* at EGLA-TRELLO-000528), GOP Sizes (*Id.* at EGLA-TRELLO-000568), Multicast IP Address (*Id.* at EGLA-TRELLO-000639), EGLA-TRELLO-000604, Audio in AC-3 (*Id.* at EGLA-TRELLO-000450), Video in H.264 (*Id.* at EGLA-TRELLO-000654), for example.

103. Additionally, UbiquitCAST OSE2 servers use PNG backgrounds, which is not disclosed in Dr. Hernandez's U.S. Patent specifications, but is in the source code that was stored in the file. Indeed, the trouble tickets (**Exhibit 15** at EGLA-TRELLO-000496) and the directory "/data/stillpic/background," apparently are only supported by UbiquiCAST OSE2 servers. As shown herein:



104. Similarly, UbiquiCAST OSE2 is connected to the cloud, to Amazon's web services in the same manner that Dr. Hernandez's system operated with DMX2GO and iWeb platforms (**Exhibit 16** at 5, 10, 50, 54, and others).

105. Stingray's OSE2 software contain additional of Dr. Hernandez's Trade Secrets relating to the fact that, for example, like Dr. Hernandez's servers, they both can broadcast in different formats, including:

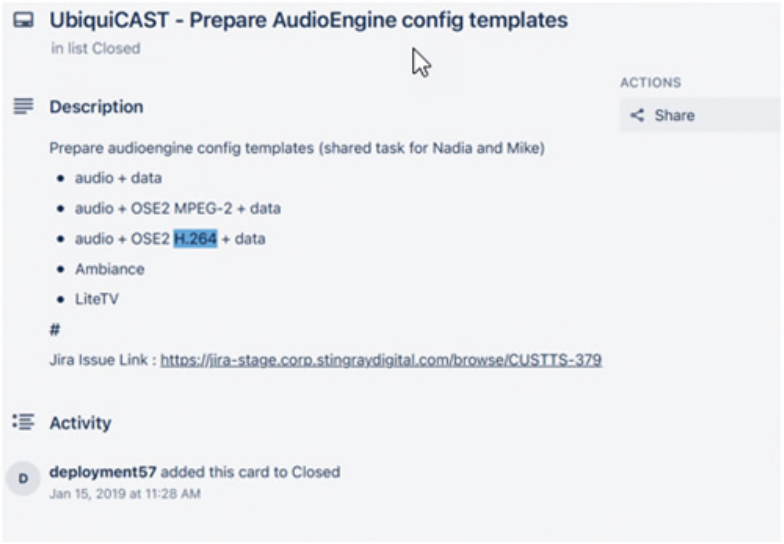
A. Broadcast audio with MPEG Data

B. Broadcast Audio with MPEG2Video and MPEG Data

C. Broadcast Audio with H.264 Video and MPEG Data

D. Where MPEG Data is optional.

The printout from trello.com reveals this fact (**Exhibit 15** at EGLA-TRELLO-000654).



106. Dr. Hernandez's Trade Secrets included, among other things, all the source code implementation on how "still images" were generated by the caching unit and broadcasted using an MPEG Transport Stream, which are fundamental parts of UbiquiCAST 0SE2 (**Exhibits 15 and 16**).

107. Therefore, Dr. Hernandez was able to demonstrate multiple instances where his trade secrets appeared in UbiquiCAST OSE2 servers before the June 2016 date when certain of the trade secrets were published as part of Dr. Hernandez's patent applications.

G. <u>Dr. Hernandez's Asserted Patents</u>

108. In December of 2014, Dr. Hernandez filed for patent protection for his technological innovations and has received approval of 94 claims spread across three (soon to be four) U.S. Patents and 8 claims in an European Patent covering 17 jurisdictions, patents infringed by Defendants.

109. On November 8, 2018, the United States Patent and Trademark Office (the "PTO") duly and lawfully issued United States Patent No. 10,123,074 ("'074 Patent"), entitled "Method, system, and apparatus for multimedia content delivery to cable TV and satellite operators." A true

and correct copy of the ’074 Patent is attached as **Exhibit 1** . Dr. Hernandez is the sole owner of the ’074 Patent.

110. On December 31st, 2019, the United States Patent and Trademark Office (the “PTO”) duly and lawfully issued United States Patent No. 10,524,002 (“’002 Patent”), entitled “Method, system, and apparatus for multimedia content delivery to cable TV and satellite operators.” A true and correct copy of the ’002 Patent is attached as **Exhibit 2**. Dr. Hernandez is the sole owner of the ’002 Patent.

111. On October 5, 2021, the United States Patent and Trademark Office (the “PTO”) duly and lawfully issued United States Patent No. 11,140,441(“’441 Patent”), entitled “Method, system, and apparatus for multimedia content delivery to cable TV and satellite operators.” A true and correct copy of the ’441 Patent is attached as **Exhibit 3**. Dr. Hernandez is the sole owner of the ’441 Patent.

112. On March 18, 2024, the United States Patent and Trademark Office (the “PTO”) issued a Notice of Allowance for US Patent Application. US17/493490 (“the ‘490 patent application”) entitled “Method, system, and apparatus for multimedia content delivery to cable TV and satellite operators.” A true and correct copy of the ’490 Patent claims is attached as Exhibit 27. Dr. Hernandez is the sole owner of the ’490 Patent Application.[7]

H. Defendants Stingray, AT&T and Millicom’s Use of the Patented Technology

113. Stingray and its customers have been and are directly infringing and indirectly infringing the Asserted Patents.

[7] The issuance of Dr. Hernandez’s fourth patent is expected within the next four to six weeks. At that time, Plaintiffs intend to add this additional patent to this lawsuit.

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Stingray Group Inc. et al v. Hernandez-Mondragon

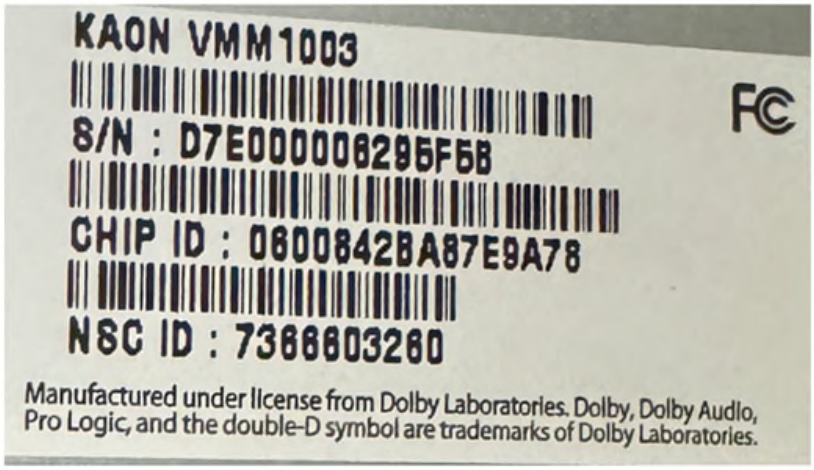
114. On information and believe, Stingray is a worldwide distributor of on-demand and liner content via the Internet, Cable Operators, IPTV Systems, and other devices, including cars.

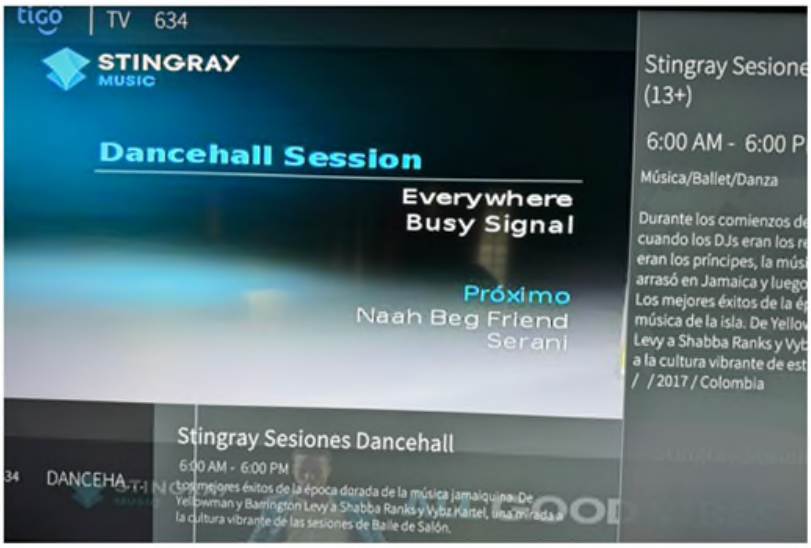
115. Stingray makes, uses, sells, and offers for sale in the United States products and services that infringe the Asserted Patents, and continues to do so. These infringing products and services include online streaming services operated by Stingray through its Application, Site, Ubiquicast and other cloud-based Server(s) using at least UbiquiCAST OSE2 (collectively, "the Accused Streaming Services").

116. AT&T offers its product "AT&T U-verse®" and has assigned channels 5100 to 5174 that, from 2014 to 2024, have been serviced using UbiquiCAST OSE2 (**Exhibit 28**) (copied below).



117. Millicom operates under the corporate trade name "TIGO." TIGO offers mobile and TV streaming Products that in countries like Honduras, Paraguay, El Salvador, Bolivia, Guatemala, Nicaragua, and Colombia. The exhibit shows the mobile application and by using UbiquiCAST OSE2 (**Exhibit 15** at 82 and **Exhibit 16** at 94) with the signal received by a Set Top Box, KAON VMM 1003 Set Top Box.





I. Stingray Made Over $2B in Revenues From 2014 – 2023 and Derived From Dr. Hernandez's Trade Secrets and Patented Technology

118. In the case between Music Choice and Stingray, under oath, Music Choice's attorney argued that OSE1 was an inferior product: "*OSE1 lacked the commercially-desirable features that were present in both OSE2 and Audio Service, while also explaining why he considered the missing features to be a significant disadvantage of OSE1.*" (**Exhibit 18** at MC-EGLA-000348).

119. During the timeframe corresponding to 2014 to 2024 and after the DMX acquisition and the trade secret theft, Stingray completed an IPO raising C$140M (over US$112 M)[8], and raised its annual revenues from around C$80.6M in 2013 to C$323M in 2023.[9]

120. In the litigation between Stingray and Music Choice, Music Choice's damages expert opined that Stingray gained US$14.6M in revenues from AT&T and $0.83M from Liberty (**Exhibit 18** at MC-EGLA-000346).

121. In sum, the release of Ubiquicast OSE2 coincides with Stringray's IPO and Stingray's increased revenues and subscriber base. Dr. Hernandez' technologies were fundamental to "upgrade" OSE1 to OSE2 and hence catapult Stingray revenues, make acquisitions, and gain a leadership position in the industry.

122. Therefore, Stingray illegally enriched itself by hundreds of millions of dollars creating OSE2, a superior product to OSE1, using Dr. Hernandez's Trade Secrets and patented technology.

FIRST CAUSE OF ACTION
Violation of Defend Trade Secrets Act 18 U.S.C. § 1836 et seq.
(Against Stingray and Mood Media)

123. Plaintiffs incorporate paragraphs 1-122 as though fully set forth herein.

124. The Dr. Hernandez's Trade Secrets, including but not limited to, source code, HTML and XML code, functional requirement specifications, operating procedures, automation validation test scripts, equipment listings, configuration specifications, all architecture methods and systems with encodings scripts, source code to generate screens, source code implementation on how "still images" were generated by the caching unit and broadcasted using an MPEG Transport Stream, use of multicast IP Addresses, GOP sizes, audio encoders levels, and

[8] https://finance.yahoo.com/news/stingray-ipo-values-music-provider-113-million-204755524--finance.html
[9] https://corporate.stingray.com/financial-results/

information in the Asserted Patents before their public disclosure on June 30, 2016 (*see e.g.*, **Exhibits 24-26**) that Stingray and Mood Media had access to via Mood Media's agreement with Plaintiffs, are trade secrets which Plaintiffs have taken reasonable measures to keep secret and from which Plaintiffs derive independent value from not being generally known to, and not being readily ascertainable through proper means by, other persons who can obtain economic value from the disclosure or use of the information.

125. As detailed above, Dr. Hernandez's Trade Secrets are used to deliver audio and video content using cloud-based platforms and mobile applications using secure remote servers which are then distributed in the United States and abroad, and as a result, are related to a product or service used in, or intended for use in, interstate and foreign commerce.

126. Stingray and Mood Media have misappropriated Dr. Hernandez's Trade Secrets in one or more of the following ways:

a) By acquiring Dr. Hernandez's Trade Secrets through improper means (e.g., misrepresentations, breach or inducement of a breach of a duty to maintain secrecy);

b) By disclosing and/or using Dr. Hernandez's Trade Secrets without Plaintiffs' consent;

c) By disclosing and/or using Dr. Hernandez's Trade Secrets without Plaintiffs' consent for their own commercial benefit while knowing, or having reason to know, at the time of the disclosure and/or use, that Dr. Hernandez's Trade Secrets were acquired through improper means;

d) By disclosing and/or using Dr. Hernandez's Trade Secrets without Plaintiffs' consent for their own commercial benefit while knowing, or having reason to know, at the time of the disclosure and/or use, that Dr. Hernandez's Trade Secrets were acquired under

circumstances giving rise to a duty to maintain the secrecy and limit the use of those trade secrets; and

e) By disclosing and/or using Dr. Hernandez's Trade Secrets without Plaintiffs' consent for their own commercial benefit while knowing, or having reason to know, at the time of the disclosure and/or use, that Dr. Hernandez's Trade Secrets were derived from or through a person who owed a duty to Plaintiffs to maintain the secrecy and limit the use of those Trade Secrets.

127. Stingray and Mood Media took such actions willfully, maliciously, and/or in reckless disregard for Plaintiffs' rights, in that Stingray and Mood Media knew, or had reason to know, pursuant to the terms of agreement with Plaintiffs, that Stingray and Mood Media were not authorized to use Dr. Hernandez's Trade Secrets in competition with Plaintiffs or for Stingray's and Mood Media's own commercial benefit.

128. As a result of Stingray's and Mood Media's misappropriation of Dr. Hernandez's Trade Secrets, Plaintiffs has suffered and will continue to suffer actual damages, and/or Stingray and Mood Media have been unjustly enriched, in an amount to be determined at trial.

129. As a result of Stingray's and Mood Media's misappropriation of Dr. Hernandez's Trade Secrets, Plaintiffs have suffered and will continue to suffer irreparable harm if Stingray's and Mood Media's misconduct is not enjoined.

130. Pursuant to 18 U.S.C. § 1836(b)(3)(C), Plaintiffs are entitled to exemplary damages for Stingray's and Mood Media's willful and malicious misappropriation of Dr. Hernandez's Trade Secrets.

131. Pursuant to 18 U.S.C. § 1836(b)(3)(D), Plaintiffs are entitled to recovery of their attorneys' fees because of Stingray's and Mood Media's willful and malicious misappropriation of Dr. Hernandez's Trade Secrets.

SECOND CAUSE OF ACTION
Violation of Florida Uniform Trade Secret Act, Fla. Stat. § 688 *et seq*.
(Against Stingray and Mood Media)

132. Plaintiffs incorporate paragraphs 1-122 as though fully set forth herein.

133. This is a cause of action for misappropriation of trade secrets under the Florida Uniform Trade Secrets Act, Fla. Stat. § 688.001, *et seq*., based on the wrongful misappropriation, use, and/or disclosure of Dr. Hernandez's Trade Secrets, including but not limited to, source code, HTML and XML code, functional requirement specifications, operating procedures, automation validation test scripts, equipment listings, configuration specifications, all architecture methods and systems with encodings scripts, source code to generate screens, source code implementation on how "still images" were generated by the caching unit and broadcasted using an MPEG Transport Stream, use of multicast IP Addresses, GOP sizes, audio encoders levels, and information in the Asserted Patents before their public disclosure on June 30, 2016 (*see e.g.*, **Exhibits 24-26**), and other highly confidential information that Stingray and Mood Media had access to via Mood Media's agreement with Plaintiffs.

134. Dr. Hernandez's Trade Secrets are trade secrets because they derive independent economic value from not being generally known to the public or to others who can obtain economic value from their disclosure or use, and they are the subject of efforts that are reasonable under the circumstances to maintain their secrecy.

135. Stingray and Mood Media gained access to Dr. Hernandez's Trade Secrets in the course of Mood Media's agreement with Plaintiffs, and Mood Media was under a contractual and

fiduciary obligation to maintain the secrecy of Dr. Hernandez's Trade Secrets during the term of Mood Media's agreement with Plaintiffs and thereafter.

136. Plaintiffs took reasonable precautions to protect Dr. Hernandez's Trade Secrets, and Mood Media was subject to obligations to maintain their secrecy.

137. In violation of their obligations to maintain the secrecy of Dr. Hernandez's Trade Secrets, on information and belief, Stingray and Mood Media improperly acquired and/or disclosed Dr. Hernandez's Trade Secrets.

138. On information and belief, Stingray and Mood Media have used and/or disclosed and continue to use and disclose Dr. Hernandez's Trade Secrets, without Plaintiffs' consent or permission, in an attempt to benefit themselves.

139. On information and belief, Stingray and Mood Media have used and/or disclosed Dr. Hernandez's Trade Secrets, maliciously and in willful and conscious disregard of the rights of Plaintiffs.

140. As a direct and proximate result of Stingray's and Mood Media's willful, improper, and unlawful use and/or disclosure of Dr. Hernandez's Trade Secrets, Plaintiffs have suffered and continue to be damaged. Plaintiffs will continue to be irreparably damaged unless Stingray and Mood Media are enjoined from further use and disclosure of Dr. Hernandez's Trade Secrets, as provided by Fla. Stat. § 688.003.

141. The aforementioned acts of Stingray and Mood Media wrongfully misappropriating the Dr. Hernandez's Trade Secrets were and continue to be willful and malicious, warranting an award of exemplary damages, as provided by Fla. Stat. § 688.004, and an award of attorneys' fees, as provided by Fla. Stat. § 688.005.

THIRD CAUSE OF ACTION
Infringement of Patent No. 10,123,074 (Against all Defendants, except Stingray Music and Mood Media)

142. Plaintiffs incorporate paragraphs 1-122 as though fully set forth herein.

143. The ’074 patent is attached to this Complaint as **Exhibit 1**.

144. Dr. Hernandez is the owner of all rights, title and interests to the ‘074 Patent, including the right to bring this suit for injunctive relief and damages.

145. The ‘074 patent is valid and enforceable.

146. On information and belief, Defendants make, use, offer for sale, sell, or import certain services and products, including but not limited to the use of UbiquiCAST OSE2 (“Accused Streaming Platforms”), to provide streaming music to Cable TV Operators, IPTV systems, and OTT Service Providers in the United States and in this District that directly infringe one or more claims of the ‘074 Patent, literally or under the doctrine of equivalents, including at least claims 1 to 19 of the ‘074 Patent as set forth in the preliminary infringement claim chart attached as **Exhibit 24**.

147. On information and belief, Defendants manufacture, or contract with vendors and others to manufacture, use and distribute the Accused Streaming Platforms. Within this jurisdiction and elsewhere, Defendants and their employees, agents and affiliates use the Accused Streaming Platforms in connection with their design, development, testing and maintenance of the Accused Streaming Platforms as well as in connection the use of the Accused Streaming Platforms by their employees, agents, affiliates, and customers.

148. On information and belief, Defendants further provide and distribute, or contract with others to provide and distribute, the Accused Streaming Platforms. Customers and/or end users use Accused Streaming Platforms in accordance with Defendants’ provided instructions, terms, and conditions.

149. To the extent that some elements or steps of a claim in the ‘074 patent are performed or provided by a different party than Defendants, those elements or steps are attributable to the Defendants because Defendants participate in the infringement (as described above and herein) and such parties receive a benefit upon use and performance of the claimed systems and methods of the ’074 patent. In particular, Defendants establish the manner and/or timing of the performance of the use of Defendants Accused Streaming Platforms and thus direct and control the actions that a user may request or the results from a user’s actions. Defendants’ customers and users receive a benefit in that they are able stream audio content (e.g., music). Defendants’ contracts with users also create an agency relationship or govern infringing activity for purposes of joint infringement.

150. On information and belief, in accordance with Defendants’ instructions, Defendants’ customers and other end users use the Accused Streaming Platforms in a way that practice the claimed methods of the ‘074 patent as set forth above. Through their software and hardware on Defendants’ equipment, as well as their contractual relationships with users, Defendants thus direct and control users to perform acts of infringement alleged above.

151. On information and belief, Defendants enter into agreements with customers and/or end users and others and condition their use of Defendants’ Accused Streaming Platforms and its functionality upon consent with Defendants’ Terms and Conditions and Privacy Policies, within this jurisdiction and elsewhere.

152. On information and belief, at least since November 11, 2019, Defendants have knowingly and actively induced the infringement of one or more of the ‘074 patent claims by, inter alia, marketing, promoting, and offering for use the Accused Streaming Platforms, knowingly and intending that the use of such instrumentalities by Defendants’ customers and by users infringes the ’074 patent. For example, Defendants intend to induce such infringement by, among other

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things, promoting users to use the Accused Streaming Platforms knowing that its use infringes one or more claims of the ‘074 patent.

153. On information and belief, at least since November 11, 2019, Defendants have contributed to the infringement of the ’074 patent by, inter alia, marketing and promoting the Accused Streaming Platforms. Defendants have used and promoted within the United States the Accused Streaming Platforms. By virtue of incorporating the patented technology described above, the Accused Streaming Platforms are not staple articles or commodities of commerce suitable for substantial non-infringing use and are known by Defendants to be especially made or especially adapted to the infringe the ’074 patent. As a result, Defendants’ Accused Streaming Platforms have been used by their customers and by users to infringe the ’074 patent. Defendants continue to engage in acts of contributory infringement of the ’074 patent.

154. Plaintiffs, under 35 U.S.C. § 284, may recover damages adequate to compensate for Defendants’ infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the Court.

155. Defendants infringe and continue to infringe after knowledge of the ‘074 Patent, such infringement is deliberate, knowing, and willful under 35 U.S.C § 284, entitling Plaintiffs to treble damages.

156. The Court should declare this an exceptional case under 35 U.S.C. § 285, entitling Plaintiffs to recover their attorneys’ fees.

157. Defendants threaten to continue to engage in the acts complained of herein and, unless restrained and enjoined, will continue to do so, all to Plaintiffs’ irreparable injury. It would be difficult to ascertain the amount of compensation that would afford Plaintiffs adequate relief

for such future and continuing acts, and a multiplicity of judicial proceedings would be required. Plaintiffs do not have an adequate remedy at law to compensate it for the injuries threatened.

FOURTH CAUSE OF ACTION
Infringement of Patent No. 10,524,002 (Against all defendants, except Stingray Music and Mood Media)

158. Plaintiffs incorporate paragraphs 1-122 as though fully set forth herein.

159. The ’002 Patent is attached to this Complaint as **Exhibit 2**.

160. Dr. Hernandez is the owner of all rights, title and interests to the ’002 Patent, including the right to bring this suit for injunctive relief and damages.

161. The ’002 patent is valid and enforceable.

162. On information and belief, Defendants make, use, offer for sale, sell, or import certain services and products, including but not limited to the use Accused Streaming Platforms to provide streaming music to Cable TV Operators, IPTV systems, and OTT Service Providers in the United States and in this District that directly infringe one or more claims of the ’002 Patent, literally or under the doctrine of equivalents, including at least claims 1-2 and 4-9 of the ’002 Patent as set forth in the preliminary infringement claim chart attached as **Exhibit 25**.

163. On information and belief, Defendants manufacture, or contract with vendors and others to manufacture, use and distribute the Accused Streaming Platforms. Within this jurisdiction and elsewhere, Defendants and their employees, agents and affiliates use the Accused Streaming Platforms in connection with their design, development, testing and maintenance of the Accused Streaming Platforms as well as in connection the use of the Accused Streaming Platforms by their employees, agents, affiliates, and customers.

164. On information and belief, Defendants further provide and distribute, or contract with others to provide and distribute, the Accused Streaming Platforms. Customers and/or end

users use Accused Streaming Platforms in accordance with Defendants' provided instructions, terms, and conditions.

165. To the extent that some elements or steps of a claim in the '002 Patent are performed or provided by a different party than Defendants, those elements or steps are attributable to the Defendants because Defendants participate in the infringement (as described above and herein) and such parties receive a benefit upon use and performance of the claimed systems and methods of the '002 Patent. In particular, Defendants establish the manner and/or timing of the performance of the use of Defendants Accused Streaming Platforms and thus direct and control the actions that a user may request or the results from a user's actions. Defendants' customers and users receive a benefit in that they are able stream audio content (e.g., music). Defendants' contracts with users also create an agency relationship or govern infringing activity for purposes of joint infringement.

166. On information and belief, in accordance with Defendants' instructions, Defendants' customers and other end users use the Accused Streaming Platforms in a way that practice the claimed methods of the '002 Patent as set forth above. Through their software and hardware on Defendants' equipment, as well as their contractual relationships with users, Defendants thus direct and control users to perform acts of infringement alleged above.

167. On information and belief, Defendants enter into agreements with customers and/or end users and others and condition their use of Defendants' Accused Streaming Platforms and its functionality upon consent with Defendants' Terms and Conditions and Privacy Policies, within this jurisdiction and elsewhere.

168. On information and belief, at least since January 1, 2020, Defendants have knowingly and actively induced the infringement of one or more of the '002 Patent claims by, inter alia, marketing, promoting, and offering for use the Accused Streaming Platforms, knowingly and

intending that the use of such instrumentalities by Defendants' customers and by users infringes the '002 Patent. For example, Defendants intend to induce such infringement by, among other things, promoting users to use the Accused Streaming Platforms knowing that its use infringes one or more claims of the '002 Patent.

169. On information and belief, at least since January 1, 2020, Defendants have contributed to the infringement of the '002 Patent by, inter alia, marketing and promoting the Accused Streaming Platforms. Defendants have used and promoted within the United States the Accused Streaming Platforms. By virtue of incorporating the patented technology described above, the Accused Streaming Platforms are not staple articles or commodities of commerce suitable for substantial non-infringing use and are known by Defendants to be especially made or especially adapted to the infringe the '002 Patent. As a result, Defendants' Accused Streaming Platforms have been used by their customers and by users to infringe the '002 Patent. Defendants continue to engage in acts of contributory infringement of the '002 Patent.

170. Plaintiffs, under 35 U.S.C. § 284, may recover damages adequate to compensate for Defendants' infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the Court.

171. Defendants infringe and continue to infringe after knowledge of the '002 Patent, such infringement is deliberate, knowing, and willful under 35 U.S.C § 284, entitling Plaintiffs to treble damages.

172. The Court should declare this an exceptional case under 35 U.S.C. § 285, entitling Plaintiffs to recover their attorneys' fees.

173. Defendants threaten to continue to engage in the acts complained of herein and, unless restrained and enjoined, will continue to do so, all to Plaintiffs' irreparable injury. It would

be difficult to ascertain the amount of compensation that would afford Plaintiffs adequate relief for such future and continuing acts, and a multiplicity of judicial proceedings would be required. Plaintiffs do not have an adequate remedy at law to compensate it for the injuries threatened.

FIFTH CAUSE OF ACTION
Infringement of Patent No. 11,140,441 (Against all Defendants, except Stingray Music and Mood Media)

174. Plaintiffs incorporate paragraphs 1-122 as though fully set forth herein.

175. The ’441 Patent is attached to this Complaint as **Exhibit 3**.

176. Dr. Hernandez is the owner of all rights, title and interests to the ’441 Patent, including the right to bring this suit for injunctive relief and damages.

177. The ’441 Patent is valid and enforceable.

178. On information and belief, Defendants make, use, offer for sale, sell, or import certain services and products, including but not limited to the use of Accused Streaming Platforms to provide streaming music to Cable TV Operators, IPTV systems, and OTT Service Providers in the United States and in this District that directly infringe one or more claims of the ’441 Patent, literally or under the doctrine of equivalents, including at least claims 1-14 and 16-26 of the ’441 Patent as set forth in the preliminary infringement claim chart attached as **Exhibit 26**.

179. On information and belief, Defendants manufacture, or contract with vendors and others to manufacture, use and distribute the Accused Streaming Platforms. Within this jurisdiction and elsewhere, Defendants and their employees, agents and affiliates use the Accused Streaming Platforms in connection with their design, development, testing and maintenance of the Accused Streaming Platforms as well as in connection the use of the Accused Streaming Platforms by their employees, agents, affiliates, and customers.

180. On information and belief, Defendants further provide and distribute, or contract with others to provide and distribute, the Accused Streaming Platforms. Customers and/or end

users use Accused Streaming Platforms in accordance with Defendants' provided instructions, terms, and conditions.

181. To the extent that some elements or steps of a claim in the '441 Patent are performed or provided by a different party than Defendants, those elements or steps are attributable to the Defendants because Defendants participate in the infringement (as described above and herein) and such parties receive a benefit upon use and performance of the claimed systems and methods of the '441 Patent. In particular, Defendants establish the manner and/or timing of the performance of the use of Defendants Accused Streaming Platforms and thus direct and control the actions that a user may request or the results from a user's actions. Defendants' customers and users receive a benefit in that they are able stream audio content (e.g., music). Defendants' contracts with users also create an agency relationship or govern infringing activity for purposes of joint infringement.

182. On information and belief, in accordance with Defendants' instructions, Defendants' customers and other end users use the Accused Streaming Platforms in a way that practice the claimed methods of the '441 Patent as set forth above. Through their software and hardware on Defendants' equipment, as well as their contractual relationships with users, Defendants thus direct and control users to perform acts of infringement alleged above.

183. On information and belief, Defendants enter into agreements with customers and/or end users and others and condition their use of Defendants' Accused Streaming Platforms and its functionality upon consent with Defendants' Terms and Conditions and Privacy Policies, within this jurisdiction and elsewhere.

184. On information and belief, at least since the filing of the original complaint, Defendants have knowingly and actively induced the infringement of one or more of the '441 Patent claims by, inter alia, marketing, promoting, and offering for use the Accused Streaming

Platforms, knowingly and intending that the use of such instrumentalities by Defendants' customers and by users infringes the '441 Patent. For example, Defendants intend to induce such infringement by, among other things, promoting users to use the Accused Streaming Platforms knowing that its use infringes one or more claims of the '441 Patent.

185. On information and belief, at least since the filing of the original complaint, Defendants have contributed to the infringement of the '441 Patent by, inter alia, marketing and promoting the Accused Streaming Platforms. Defendants have used and promoted within the United States the Accused Streaming Platforms. By virtue of incorporating the patented technology described above, the Accused Streaming Platforms are not staple articles or commodities of commerce suitable for substantial non-infringing use and are known by Defendants to be especially made or especially adapted to the infringe the '441 Patent. As a result, Defendants' Accused Streaming Platforms have been used by their customers and by users to infringe the '441 Patent. Defendants continue to engage in acts of contributory infringement of the '441 Patent.

186. Plaintiffs, under 35 U.S.C. § 284, may recover damages adequate to compensate for Defendants' infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the Court.

187. Defendants infringe and continue to infringe after knowledge of the '441 Patent, such infringement is deliberate, knowing, and willful under 35 U.S.C § 284, entitling Plaintiffs to treble damages.

188. The Court should declare this an exceptional case under 35 U.S.C. § 285, entitling Plaintiffs to recover their attorneys' fees.

189. Defendants threaten to continue to engage in the acts complained of herein and, unless restrained and enjoined, will continue to do so, all to Plaintiffs' irreparable injury. It would be difficult to ascertain the amount of compensation that would afford Plaintiffs adequate relief for such future and continuing acts, and a multiplicity of judicial proceedings would be required. Plaintiffs do not have an adequate remedy at law to compensate it for the injuries threatened.

SIXTH CAUSE OF ACTION
Breach of Contract (Against Mood Media)

190. Plaintiffs incorporate paragraphs 1-122 as though fully set forth herein.

191. Plaintiffs and Mood Media (acting through its business DMX) entered into a Non-Disclosure Agreement (NDA), a term sheet, and a mutual release/settlement agreement.

192. The NDA, term sheet and mutual release/settlement agreement are valid and enforceable contracts between Plaintiffs and Mood Media.

193. Mood Media terminated the term sheet agreement with Plaintiffs without cause and in violation of the terms of this agreement.

194. The NDA and term sheet agreement prohibited the disclosure, transfer, and use of Dr. Hernandez's confidential information to any other party other than Mood Media/DMX, which are material terms of both agreements. Mood Media violated the NDA and term sheet by transferring Dr. Hernandez's confidential information to Stingray and/or allowing Stingray to use Dr. Hernandez's confidential information.

195. Plaintiffs and Mood Media entered into a settlement agreement whereby Mood Media agreed not to disclose any of Plaintiffs' confidential information, including its trade secrets, with Stingray. Mood Media breached this agreement by disclosing Plaintiffs' confidential information to Stingray.

196. Mood Media's breaches are without excuse under law or contract.

197. Plaintiffs have fully performed all of its obligations and satisfied all conditions for performance under the NDA, term sheet and settlement agreement.

198. Mood Media has willfully, and with conscious disregard for the contractual obligations owed to Plaintiffs, breached the NDA, term sheet and settlement agreement.

199. Unless restrained and enjoined by the Court, Mood Media will continue to breach the NDA, term sheet and settlement agreement.

200. As a foreseeable, direct and proximate result of Mood Media's breach of contract, and their breach was a substantial factor in causing Plaintiffs to suffer irreparable injury to its rights and pecuniary damages. Plaintiffs have been, and will continue to, suffer such injury, loss, and damage by the breaches described herein.

201. But for Mood Media's breach of contract, Plaintiffs would not have been injured by their disclosure of Plaintiffs' confidential information, including Dr. Hernandez's Trade Secrets.

202. Mood Media has derived and received and will continue to derive and receive from the aforementioned breach of contract, gains, profits, and advantages, many of which are not known to Plaintiffs.

203. Plaintiffs are entitled to injunctive relief as well as damages, the nature and extent of which will be proved at trial.

SEVENTH CAUSE OF ACTION
Unjust Enrichment (Against Stingray and Mood Media)

204. Plaintiffs incorporate paragraphs 1-122 as though fully set forth herein.

205. Defendants Stingray and Mood Media were unjustly enriched through their knowing use of Plaintiffs' confidential and proprietary information, including but not limited to,

the period from June 30, 2016 through November 6, 2018 when Plaintiffs' trade secrets were disclosed in Dr. Hernandez's patent applications until the time when the first patent issued.

206. Defendants Stingray and Mood Media voluntarily accepted and used Plaintiffs' confidential and proprietary information to generate revenues through their streaming services, allowing Stingray to generate over US $900 million dollars in revenues and Stingray to raise around US $300 million dollars in an initial public offering and Mood Media to raise over US $16 million dollars from its sale of its DMX division to Stingray.

207. The circumstances of Defendants Stingray's and Mood Media's use of Plaintiffs' confidential and proprietary information is such that it would be inequitable for them to retain these benefits without first paying the value thereof to Plaintiffs.

EIGHTH CAUSE OF ACTION
Common Law Fraud (Defendants Stingray and Mood Media)

208. Plaintiffs incorporate paragraphs 1-122 as though fully set forth herein.

209. Mood Media entered into an NDA and later a "Term sheet" with Plaintiffs that prohibited the disclosure, transfer, and use of Dr. Hernandez's confidential information to any other party other than Mood Media/DMX. Mood Media violated the NDA and term sheet by transferring Dr. Hernandez's confidential information to Stingray and/or allowing Stingray to use Dr. Hernandez's confidential information.

210. Mood Media was aware of the terms of the agreements but had no intention of honoring them. Mood Media's representations to Plaintiffs were false, despite their representations to Plaintiffs that it would not disclose, transfer, or use of Dr. Hernandez's confidential and proprietary information to any other party other than Mood Media/DMX.Mood Media knew its representations were false when made, or that they were made recklessly and without regard to their truth, because they intended to disclose Dr. Hernandez's confidential and

proprietary information to Stingray in connection with Stingray's acquisition of Mood Media's DMX business.

211. Mood Media knowingly made these false representations to induce Plaintiffs to provide confidential and proprietary information, Based on their reasonable reliance, Plaintiffs provided Mood Media with such confidential and proprietary information.

212. Mood Media's false representations to Plaintiffs were a substantial factor in causing harm to them. By providing confidential and proprietary information, Plaintiffs suffered damages in an amount to be proven with certainty at trial as an actual and proximate result of the intentional misrepresentation by Mood Media.

213. By performing the foregoing acts, Mood Media acted with the intent to injure Plaintiffs and acted with malice, oppression, and/or fraud. Alternatively, the acts of Mood Media were despicable and in conscious disregard of the probability of damage to Plaintiffs and, thus, the conduct alleged herein supports an award of punitive damages pursuant in an amount designed to punish Mood Media and to deter such conduct in the future. To the extent that such acts by Mood Media were conducted through their employees, those employees were either its officers, directors, managing agents or shareholders of Mood Media, or such officers, directors, managing agents or shareholders were aware in advance that such conduct would occur, exhibited conscious disregard for the rights of others in employing the employee, or directed or ratified such conduct by its employee(s).

NINTH CAUSE OF ACTION
Unfair Competition Under Florida Deceptive and Unfair Trade Practices Act ("FDUTPA"), § 501.201 *et seq*. (Against Stingray and Mood Media)

214. Plaintiffs incorporate paragraphs 1-122 as though fully set forth herein.

215. Defendants Stingray and Mood Media engaged in deceptive acts and unfair practices in the use of Dr. Hernandez's Trade Secrets in violation of the DTSA and FUTSA, the

use of his confidential and proprietary information that are not trade secrets, the breach of Mood Media's agreements with Plaintiffs, and related fraudulent acts.

216. Defendants Stingray and Mood Media's deceptive and unfair practices that caused harmed to Plaintiffs' business also harmed consumers of streaming music services to pay more for such services because of the lack of competition from others, such as Plaintiffs.

217. Plaintiffs have sustained damages in decreased sales, lost profits or opportunities, a loss of reputation and consumer goodwill attributed to Defendants Stingray and Mood Media's unfair acts. Such damages include, but are not limited to, expenses connected with Plaintiffs' attempts to undo the harm caused by Defendants Stingray and Mood Media, a loss of existing customers and contracts, a loss of Plaintiffs' ability to obtain competitive pricing for its services, and a diversion of potential sales to existing customers. Such damages seek to recover such benefits that, but for Stingray and Mood Media's wrongful acts, Plaintiffs would have expected to receive.

218. Defendants Stingray and Mood Media threaten to continue to engage in the acts complained of herein and, unless restrained and enjoined, will continue to do so, all to Plaintiffs' irreparable injury. It would be difficult to ascertain the amount of compensation that would afford Plaintiffs adequate relief for such future and continuing acts, and a multiplicity of judicial proceedings would be required. Plaintiffs do not have an adequate remedy at law to compensate it for the injuries threatened.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs respectfully request the following relief:

A. Judgment in favor of Plaintiffs and against Defendants on all claims for relief alleged herein;

B. Preliminary and permanent injunctive relief that orders, enjoins, and restrains Defendants and all persons acting in concert or participation with Defendants, as follows:

a. prohibits the use, disclosure, transmission or continued possession for any purpose of Dr. Hernandez's Trade Secrets or confidential information, including but not limited to Defendants sales and importation of all streaming products that Stingray distributes in the United States;

b. compels the return to Plaintiffs of any and all records, information and/or documents in any form, hardware, firmware, software, including source code, received or removed from Plaintiffs by Defendants, including all copies, within five (5) days from the entry of this Court's Order. This requirement includes all records, information or documents, in any form, hardware, firmware, software, including source code, created by Defendants, or anyone acting in concert with Defendants, based on documents or information received or removed from Plaintiffs by Defendants;

c. prohibits any other unauthorized use or disclosure of the Dr. Hernandez's Trade Secrets or confidential information in connection with any goods or services provided by Defendants or any persons acting in concert or participation with Defendants;

d. prohibits the use of Dr. Hernandez's Trade Secrets or confidential information in any other manner to Defendants' benefit or to the detriment of Plaintiffs;

e. prohibits the direct or indirect disclosure to any person or entity of the Dr. Hernandez's Trade Secrets or confidential information; and

f. orders Defendants to turn over to the Court any proceeds that Defendants, or any persons acting in concert or participation with Defendants, have received from the misappropriation of the Dr. Hernandez's Trade Secrets or confidential information, and other unlawful conduct, such proceeds to be held in constructive trust until the conclusion of this litigation.

C. An order requiring Defendants to account for all gains, profits, increases in value, unjust enrichment, and other advantages derived from their misappropriation of Dr. Hernandez's Trade Secrets and confidential information.

D. For an order finding that Defendants have infringed the Asserted Patents directly, contributorily and/or by inducement, in violation of 35 U.S.C. § 271;

E. For an order finding that Defendants' infringement is willful;

F. For an order awarding Plaintiffs general and/or specific damages adequate to compensate Plaintiffs for the infringement by Defendant, including a reasonable royalty and/or lost profits, in amounts to be fixed by the Court in accordance with proof, including enhanced and/or exemplary damages, as appropriate, as well as all of the profits or gains of any kind made by Defendant from its acts of patent infringement.

G. An order requiring Defendants to disgorge all profits earned from their unlawful conduct.

H. An order awarding actual and compensatory damages according to proof at trial.

I. An order awarding exemplary and punitive damages to the extent allowed by law and in an amount according to proof.

J. An order awarding Plaintiffs costs of suit, prejudgment and post-judgment interest, and reasonable attorneys' fees.

K. That this Court award such further relief to which Plaintiffs may be entitled under the circumstances and which this Court deems just and proper.

DEMAND FOR JURY TRIAL

Plaintiffs hereby demands trial by jury for all causes of action, claims, or issues in this action that are triable as a matter of right to a jury.

Date: July 15, 2024

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on July 15, 2024, I electronically filed the foregoing with the Clerk of the Court by using the CM/ECF. I also hereby certify that the foregoing document is being served this day on all counsel of record or *pro se* parties either via transmission of Notice of Electronic Filing generated by CM/ECF or in some other authorized manner for those counsel or parties who are not authorized to receive electronically Notices of Electronic Filing.

By: /s/ Elio F. Martinez, Jr.
Elio F. Martinez, Jr.

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Counsel for AT&T Enterprises, LLC, f/k/a AT&T Corp. ***VIA CM/ECF***	

EXHIBIT 1

US010123074B2

(12) **United States Patent**
Hernandez-Mondragon

(10) **Patent No.: US 10,123,074 B2**
(45) **Date of Patent: Nov. 6, 2018**

(54) **METHOD, SYSTEM, AND APPARATUS FOR MULTIMEDIA CONTENT DELIVERY TO CABLE TV AND SATELLITE OPERATORS**

(71) Applicant: **Edwin A. Hernandez-Mondragon**, Coral Springs, FL (US)

(72) Inventor: **Edwin A. Hernandez-Mondragon**, Coral Springs, FL (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **15/538,911**

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§ 371 (c)(1),
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PCT Pub. Date: **Jun. 30, 2016**

(65) **Prior Publication Data**

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Related U.S. Application Data

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(51) **Int. Cl.**
H04N 21/4402 (2011.01)
H04N 21/2343 (2011.01)
(Continued)

(52) **U.S. Cl.**
CPC ... ***H04N 21/440218*** (2013.01); ***H04N 21/233*** (2013.01); ***H04N 21/2387*** (2013.01);
(Continued)

(58) **Field of Classification Search**
CPC H04N 21/440218; H04N 21/233; H04N 21/234309; H04N 21/2387;
(Continued)

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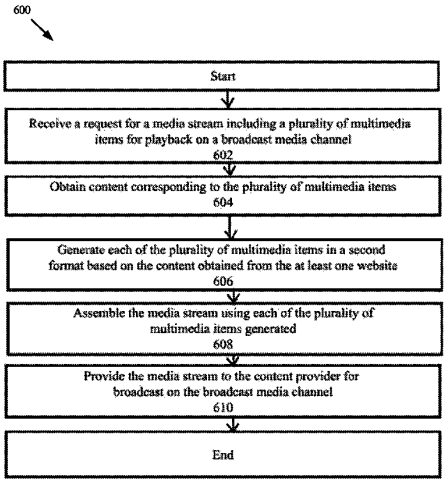
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Primary Examiner — Hunter B Lonsberry
(74) *Attorney, Agent, or Firm* — Fox Rothschild LLP

(57) **ABSTRACT**

Systems, methods, and computer-readable media for delivering multimedia content from the cloud to cable operators are disclosed. A device located at the cable headend or implemented in the cloud can receive a request for at least one media stream for playback on a broadcast media channel. Content corresponding to a plurality of multimedia files in the media stream can be obtained from the internet or a cloud based service. The content can be used to generate the multimedia files in a format that is compatible with the cable operator. The multimedia files can be used to assemble the at least one media stream which can be provided to the cable operator for broadcast on the broadcast media channel.

21 Claims, 12 Drawing Sheets



(51) **Int. Cl.**

H04N 21/84	(2011.01)
H04N 21/81	(2011.01)
H04N 21/2387	(2011.01)
H04N 21/472	(2011.01)
H04N 21/233	(2011.01)
H04N 21/61	(2011.01)
H04N 21/431	(2011.01)
H04N 21/6405	(2011.01)
H04N 21/643	(2011.01)

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CPC . ***H04N 21/234309*** (2013.01); ***H04N 21/4312*** (2013.01); ***H04N 21/47217*** (2013.01); ***H04N 21/6118*** (2013.01); ***H04N 21/6143*** (2013.01); ***H04N 21/8106*** (2013.01); ***H04N 21/8133*** (2013.01); ***H04N 21/8153*** (2013.01); ***H04N 21/84*** (2013.01); *H04N 21/6405* (2013.01); *H04N 21/64322* (2013.01)

(58) **Field of Classification Search**
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See application file for complete search history.

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2008/0098426	A1*	4/2008	Candelore	H04N 5/4403 725/38
2009/0178003	A1	7/2009	Fiedler	
2010/0192178	A1*	7/2010	Candelore	G06K 9/325 725/39
2012/0204217	A1	8/2012	Regis et al.	
2014/0068690	A1	3/2014	Luthra et al.	
2014/0098815	A1*	4/2014	Mishra	H04L 12/185 370/390
2014/0143437	A1	5/2014	Mathur et al.	
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Chris Robley, How to make album art videos for your songs on YouTube, Jul. 16, 2014.
International Search Report dated Apr. 20, 2016 for PCT/US15/67464.

* cited by examiner

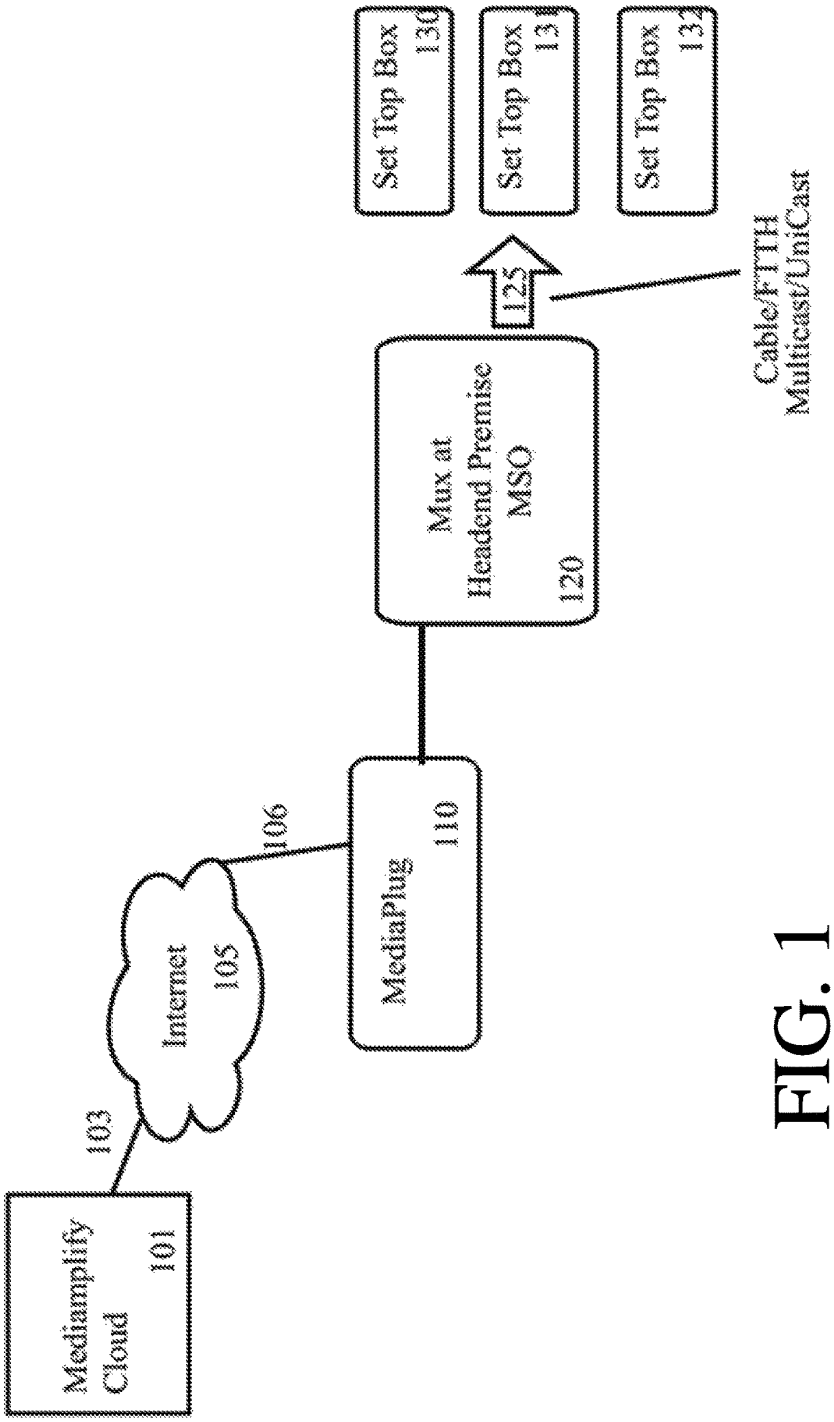

Set Top Box 130
Set Top Box 131
Set Top Box 132
125
Cable/FTTH Multicast/UniCast
Mux at Headend Premise MSO 120
MediaPlug 110
106
Internet 105
103
Mediamplify Cloud 101

FIG. 1

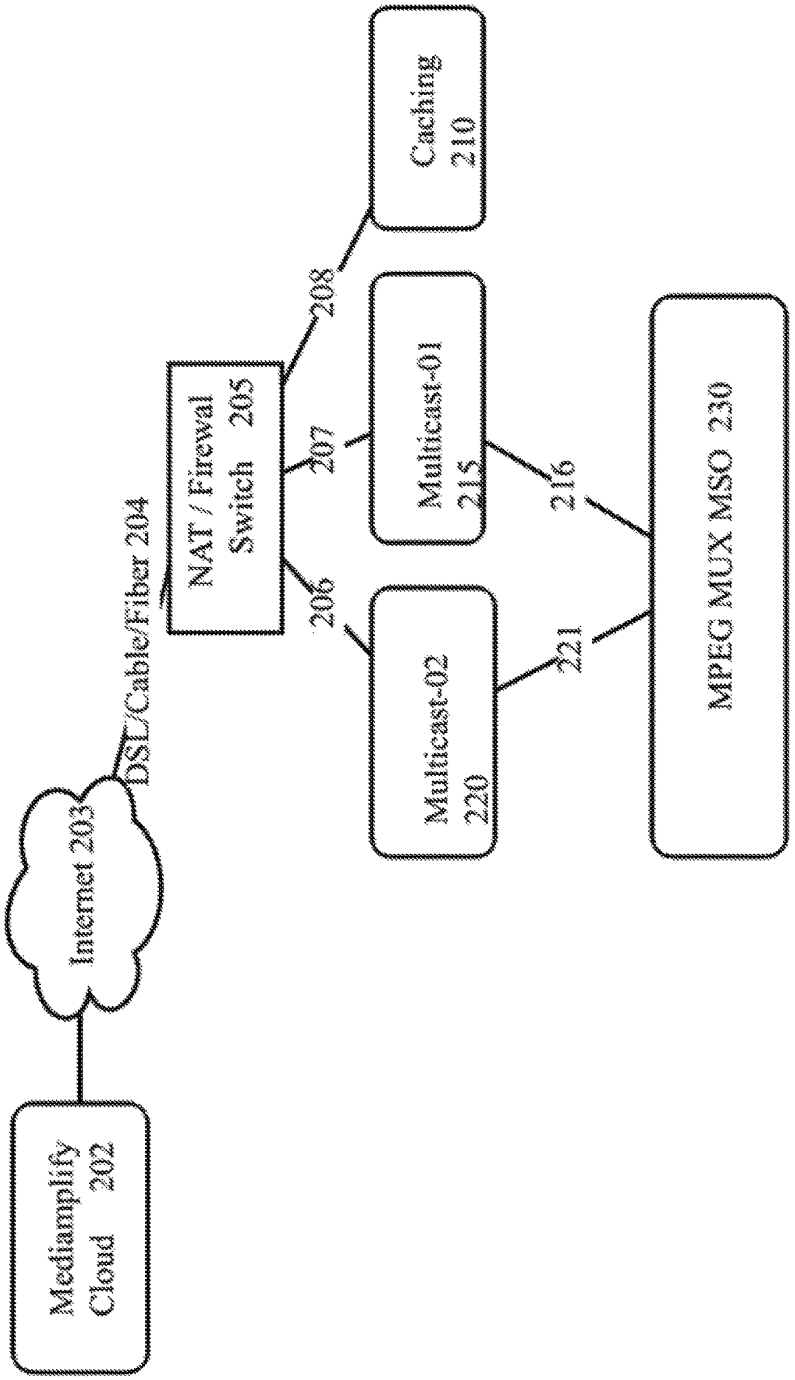

Mediamplify Cloud 202
Internet 203
DSL/Cable/Fiber 204
NAT / Firewal Switch 205
206
207
208
Caching 210
Multicast-01 215
Multicast-02 220
216
221
MPEG MUX MSO 230

FIG. 2

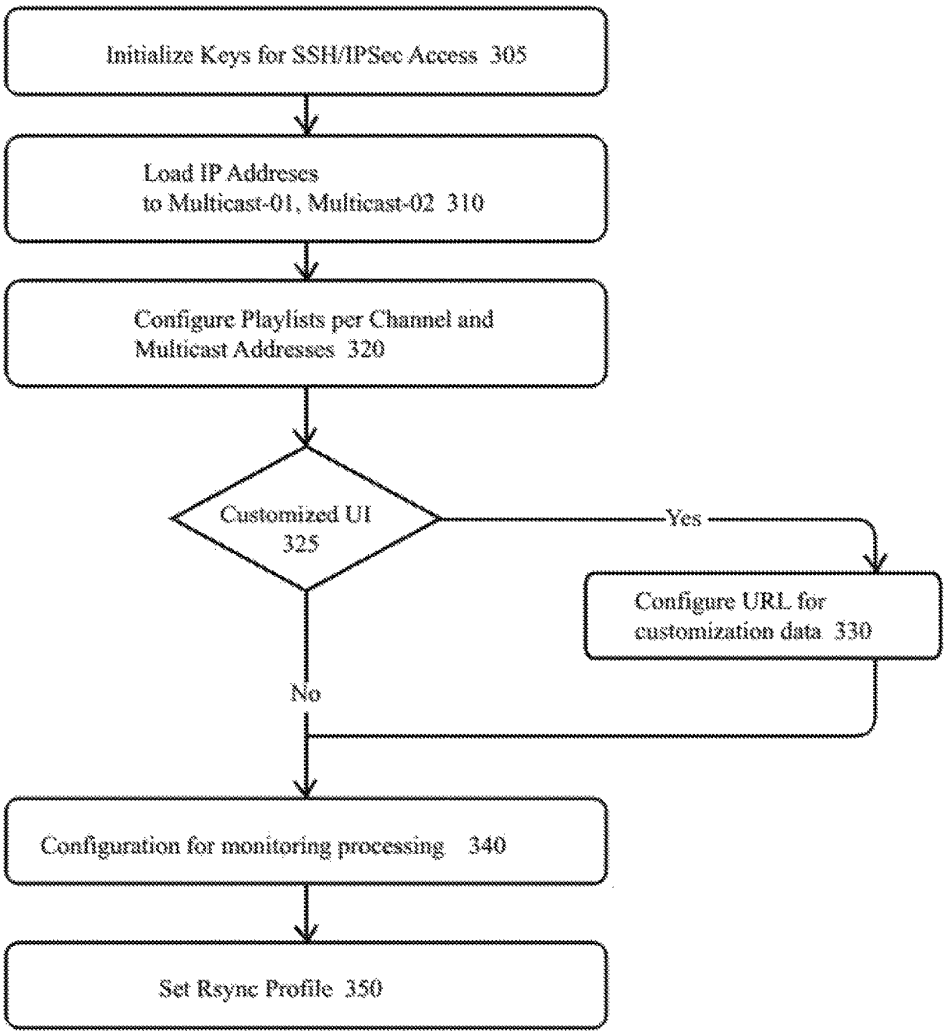

Initialize Keys for SSH/IPSec Access 305
Load IP Addresses to Multicast-01, Multicast-02 310
Configure Playlists per Channel and Multicast Addresses 320
Customized UI 325
Yes
Configure URL for customization data 330
No
Configuration for monitoring processing 340
Set Rsync Profile 350

FIG. 3

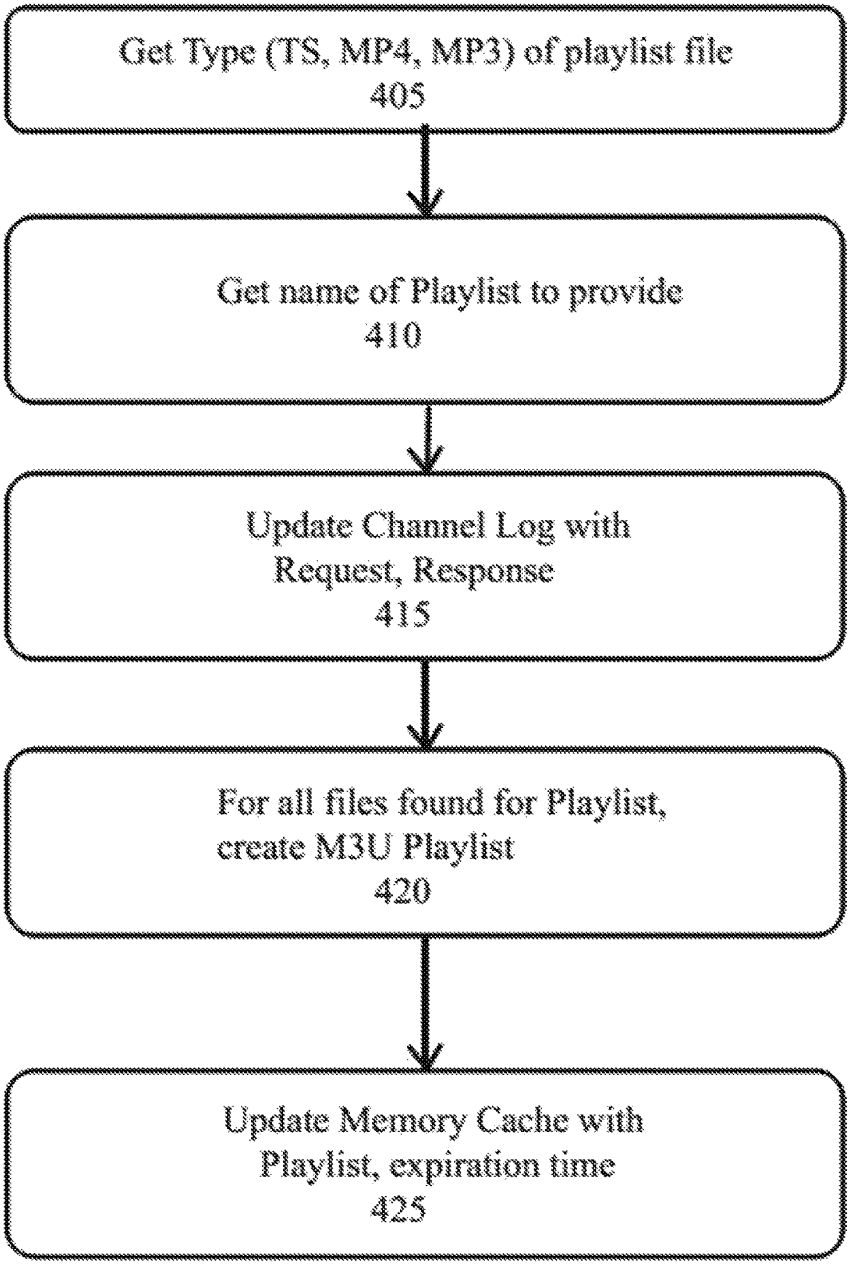

Get Type (TS, MP4, MP3) of playlist file
405
Get name of Playlist to provide
410
Update Channel Log with
Request, Response
415
For all files found for Playlist,
create M3U Playlist
420
Update Memory Cache with
Playlist, expiration time
425

FIG. 4

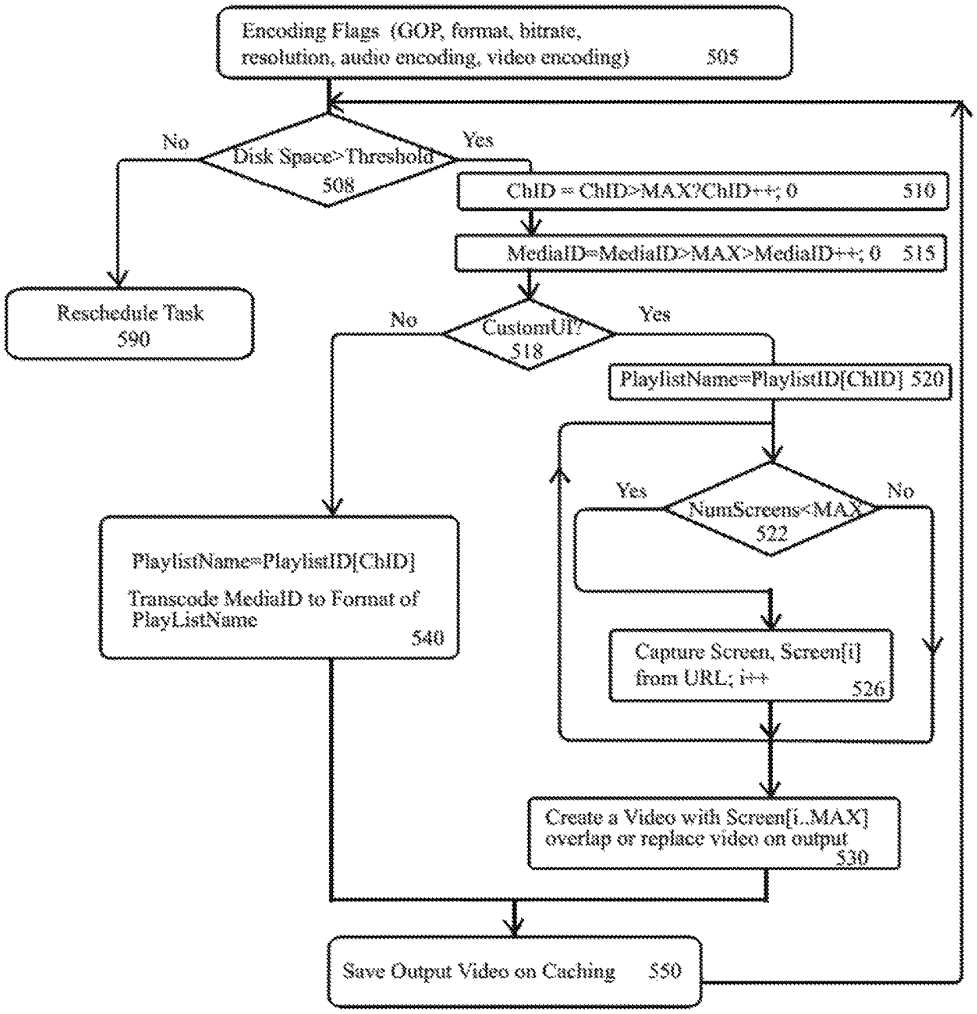

Encoding Flags (GOP, format, bitrate, resolution, audio encoding, video encoding) 505
Disk Space>Threshold 508
No
Yes
Reschedule Task 590
ChID = ChID>MAX?ChID++; 0 510
MediaID=MediaID>MAX>MediaID++; 0 515
CustomUI? 518
No
Yes
PlaylistName=PlaylistID[ChID] 520
NumScreens<MAX 522
Yes
No
PlaylistName=PlaylistID[ChID]
Transcode MediaID to Format of PlayListName 540
Capture Screen, Screen[i] from URL; i++ 526
Create a Video with Screen[i..MAX] overlap or replace video on output 530
Save Output Video on Caching 550

FIG. 5

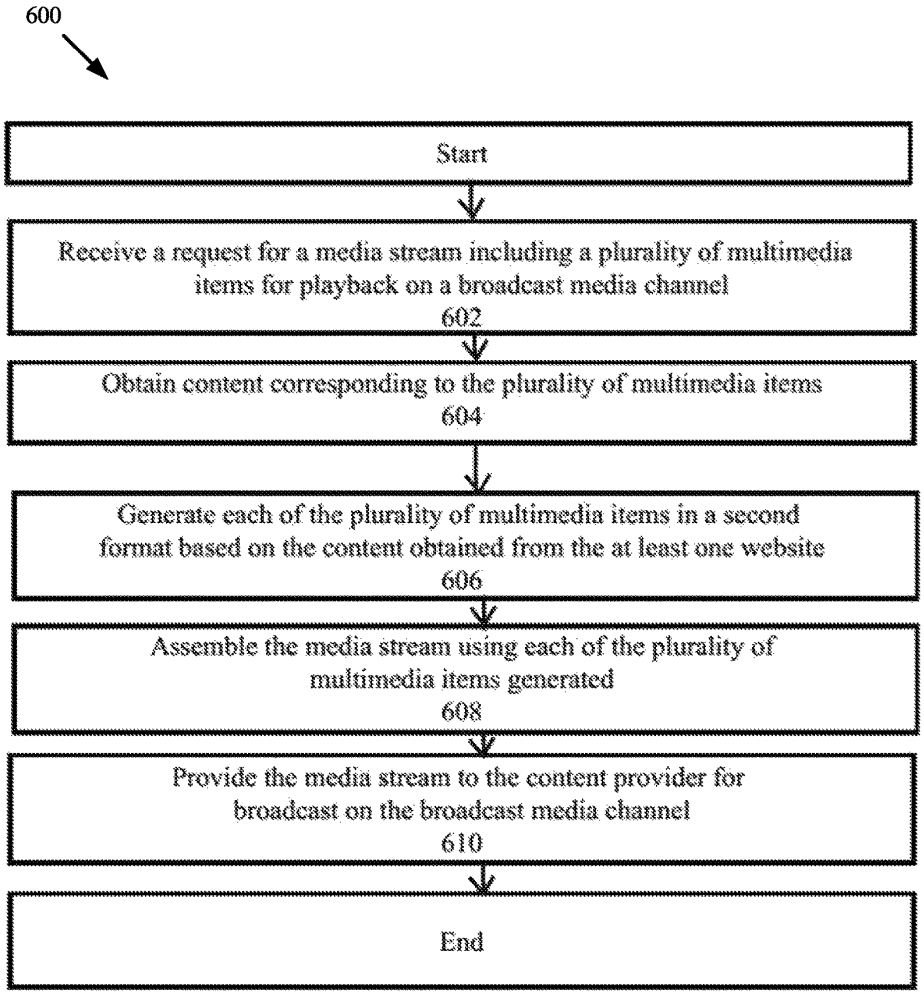

600
Start
Receive a request for a media stream including a plurality of multimedia items for playback on a broadcast media channel
602
Obtain content corresponding to the plurality of multimedia items
604
Generate each of the plurality of multimedia items in a second format based on the content obtained from the at least one website
606
Assemble the media stream using each of the plurality of multimedia items generated
608
Provide the media stream to the content provider for broadcast on the broadcast media channel
610
End

FIG. 6

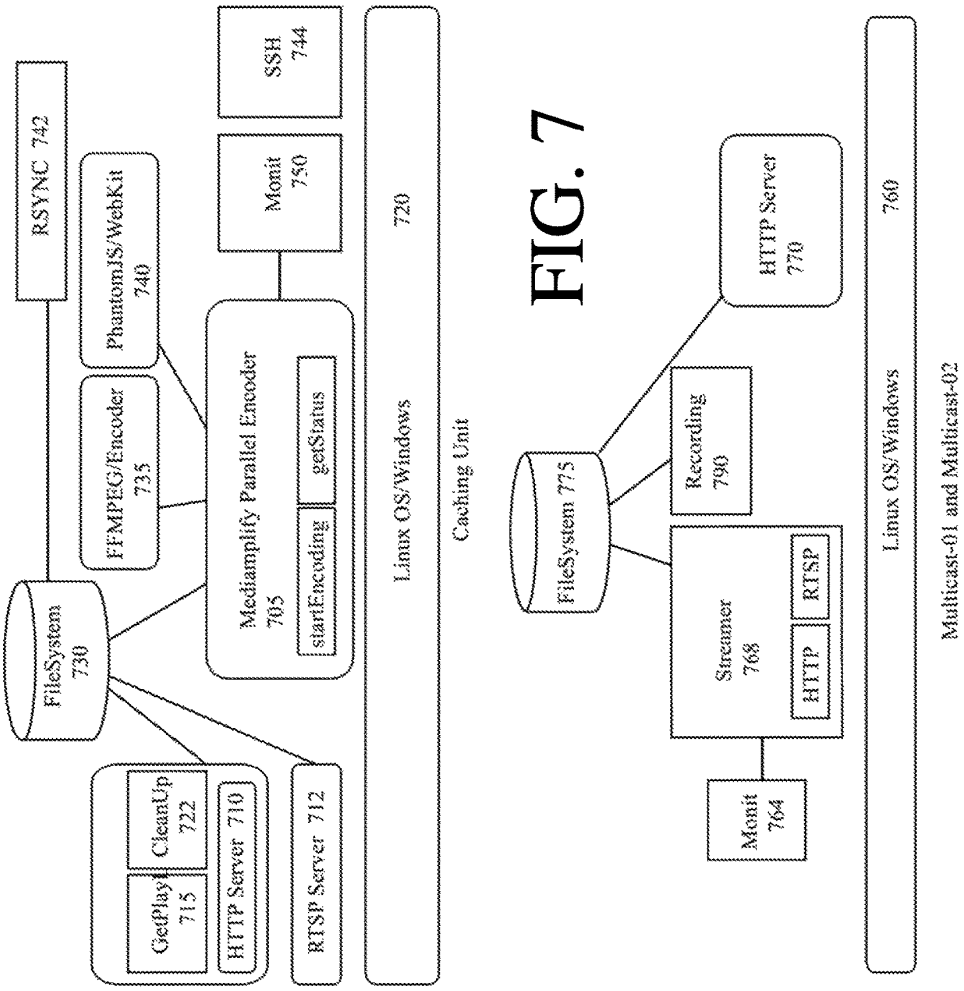

RSYNC 742
PhantomJS/WebKit 740
FFMPEG/Encoder 735
FileSystem 730
GetPlay 715
CleanUp 722
HTTP Server 710
RTSP Server 712
Mediamplify Parallel Encoder 705
startEncoding
getStatus
Monit 750
SSH 744
Linux OS/Windows
720
Caching Unit
FileSystem 775
Recording 790
Streamer 768
HTTP
RTSP
Monit 764
HTTP Server 770
Linux OS/Windows
760
Multicast-01 and Multicast-02

FIG. 7

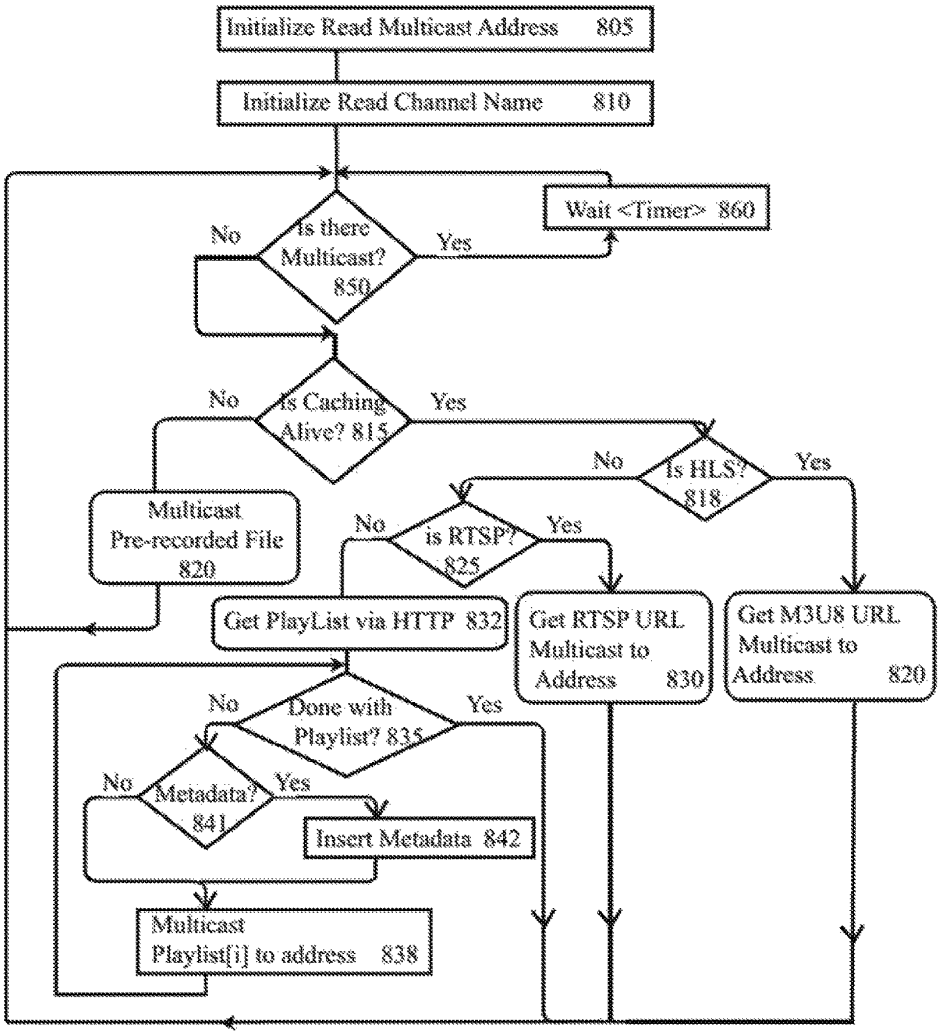

Initialize Read Multicast Address 805
Initialize Read Channel Name 810
Wait <Timer> 860
No
Is there Multicast? 850
Yes
No
Is Caching Alive? 815
Yes
No
Is HLS? 818
Yes
Multicast Pre-recorded File 820
No
is RTSP? 825
Yes
Get PlayList via HTTP 832
Get RTSP URL Multicast to Address 830
Get M3U8 URL Multicast to Address 820
No
Done with Playlist? 835
Yes
No
Metadata? 841
Yes
Insert Metadata 842
Multicast Playlist[i] to address 838

FIG. 8

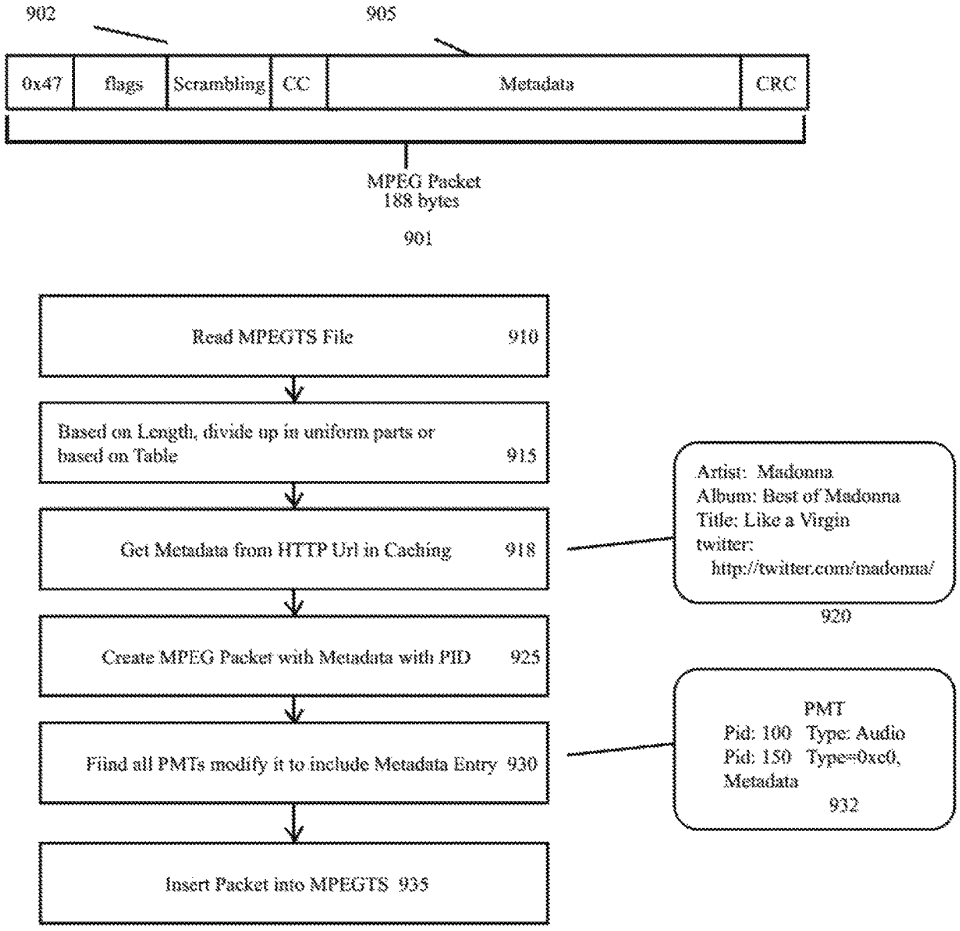

902
905
0x47
flags
Scrambling
CC
Metadata
CRC
MPEG Packet
188 bytes
901
Read MPEGTS File 910
Based on Length, divide up in uniform parts or based on Table 915
Get Metadata from HTTP Url in Caching 918
Create MPEG Packet with Metadata with PID 925
Find all PMTs modify it to include Metadata Entry 930
Insert Packet into MPEGTS 935
Artist: Madonna
Album: Best of Madonna
Title: Like a Virgin
twitter:
http://twitter.com/madonna/
920
PMT
Pid: 100 Type: Audio
Pid: 150 Type=0xc0,
Metadata
932

FIG. 9

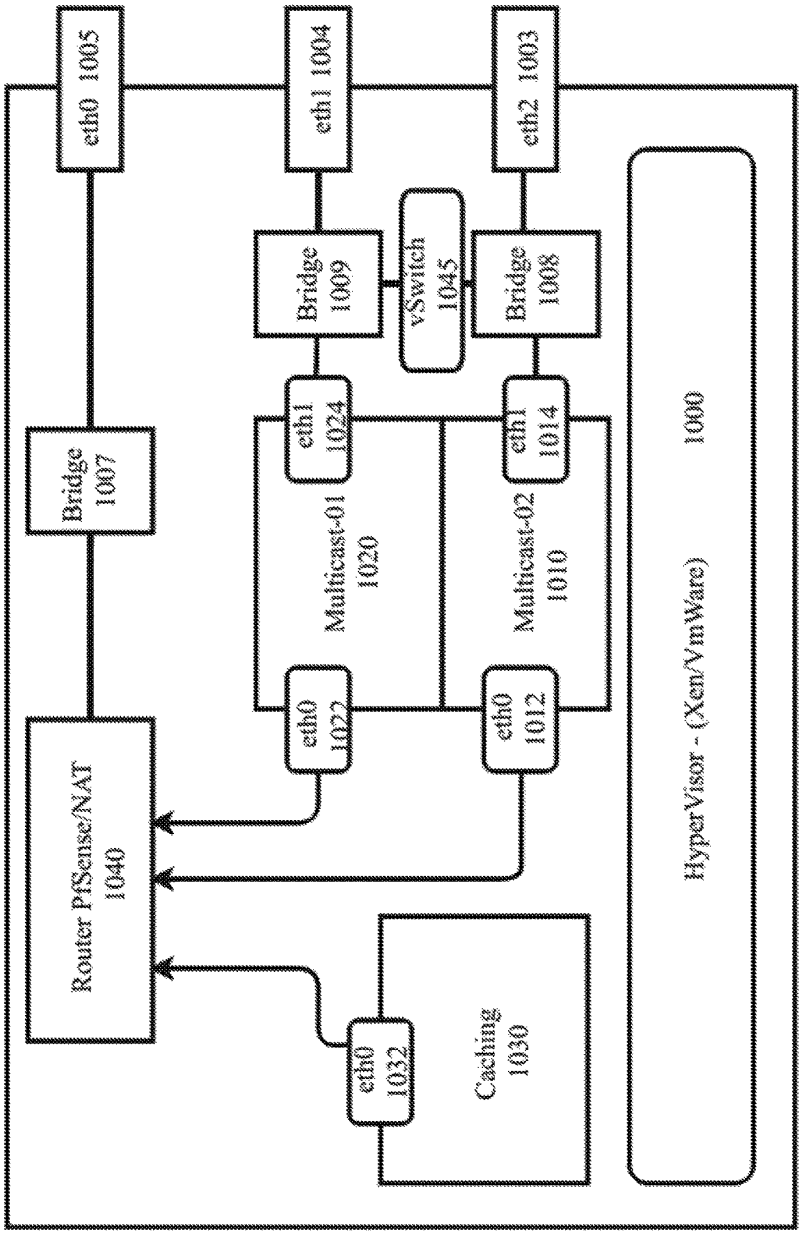

eth0 1005
eth1 1004
eth2 1003
Bridge 1009
vSwitch 1045
Bridge 1008
Bridge 1007
eth1 1024
eth1 1014
Multicast-01 1020
Multicast-02 1010
eth0 1022
eth0 1012
Router PfSense/NAT 1040
eth0 1032
Caching 1030
HyperVisor - (Xen/VmWare) 1000

FIG. 10

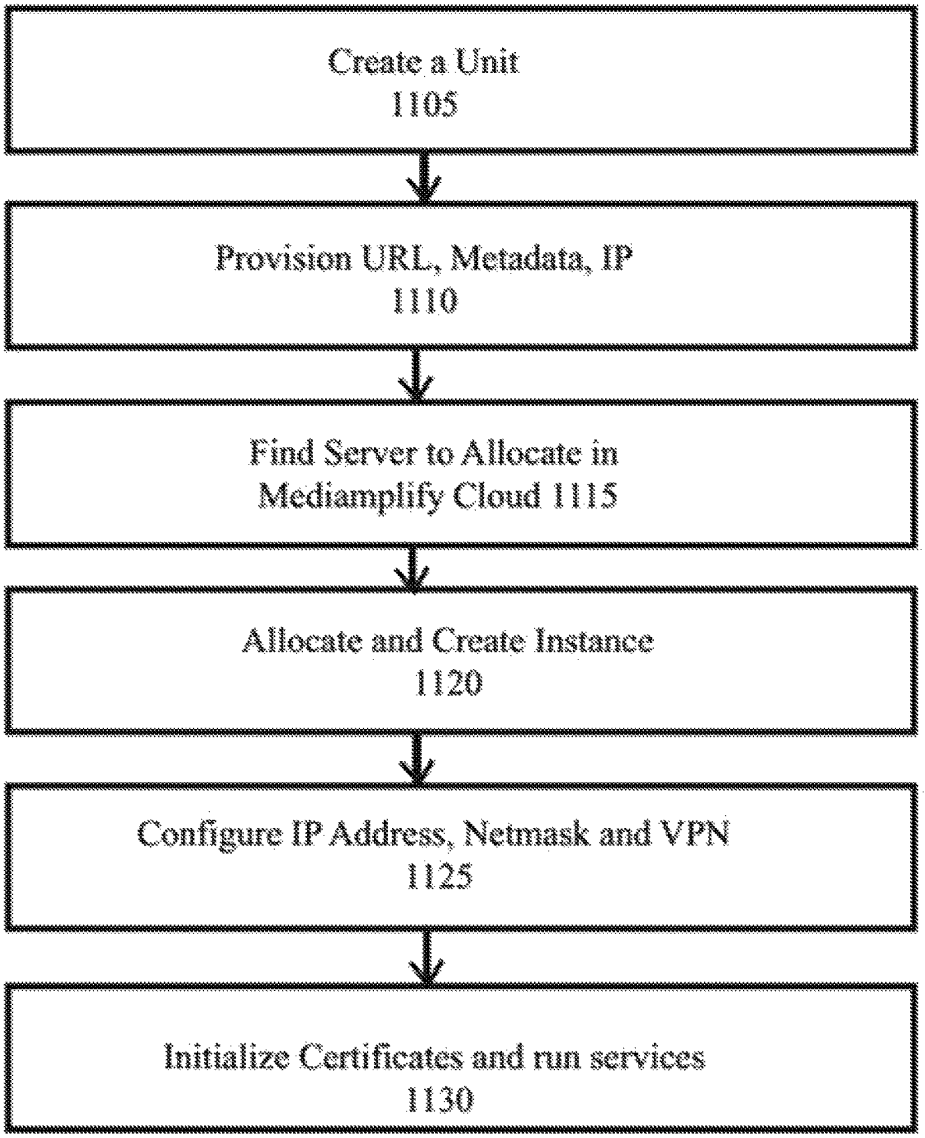

Create a Unit
1105
Provision URL, Metadata, IP
1110
Find Server to Allocate in
Mediamplify Cloud 1115
Allocate and Create Instance
1120
Configure IP Address, Netmask and VPN
1125
Initialize Certificates and run services
1130

FIG. 11

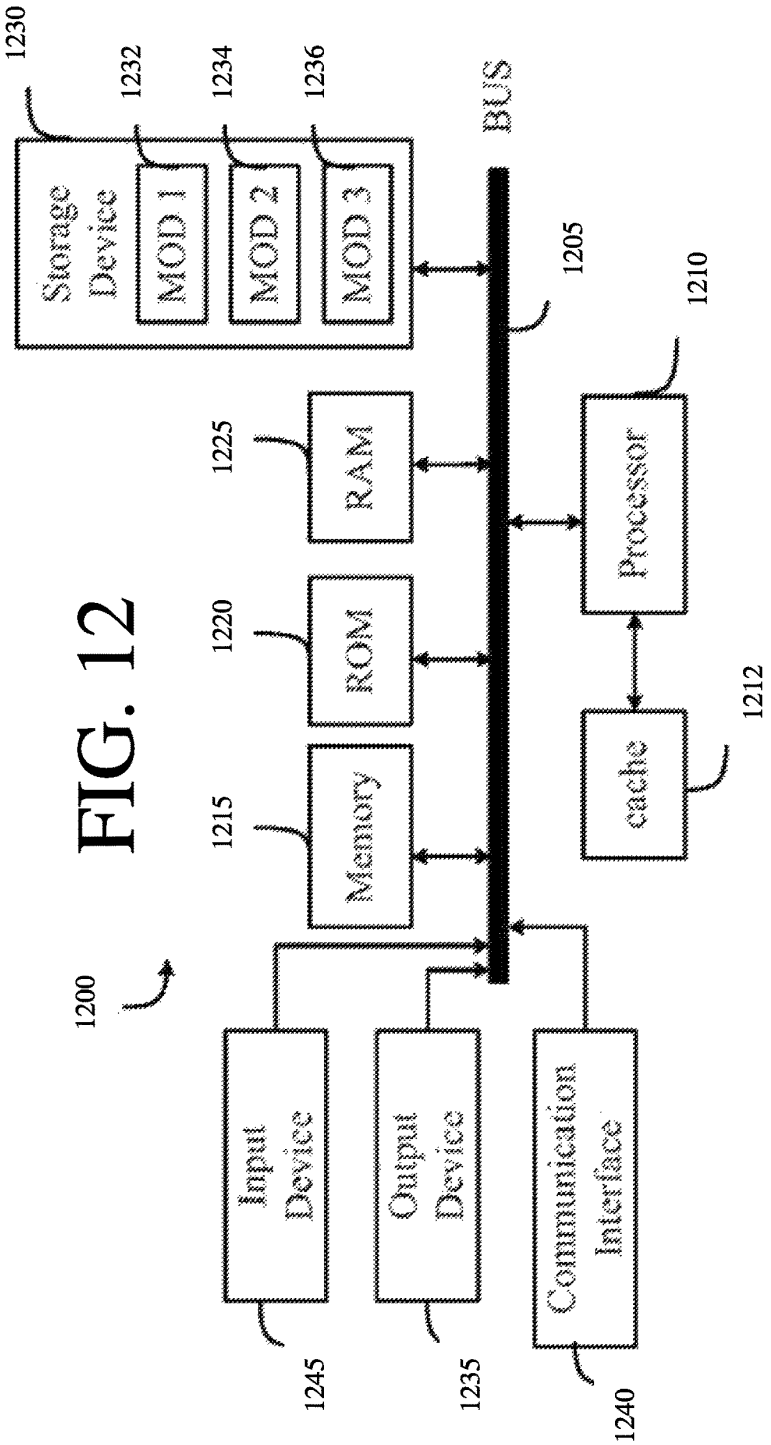

1230
1232
1234
1236
Storage Device
MOD 1
MOD 2
MOD 3
BUS
1205
1210
Processor
1225
RAM
1220
ROM
1215
Memory
1212
cache
1200
Input Device
Output Device
Communication Interface
1245
1235
1240

FIG. 12

METHOD, SYSTEM, AND APPARATUS FOR MULTIMEDIA CONTENT DELIVERY TO CABLE TV AND SATELLITE OPERATORS

CROSS-REFERENCE TO RELATED APPLICATION

This application claims priority to International Patent Application No. PCT/US2015/067464, filed on Dec. 22, 2015, and U.S. Provisional Application 62/095,504, filed Dec. 22, 2014, the complete disclosures of which are incorporated herein by reference in their entirety.

FIELD OF THE DISCLOSURE

The present disclosure provides a mechanism for delivering multimedia content from a cloud-based system to cable or satellite content providers.

The disclosure describes a novel method and a system for continuous media delivery and secured synchronization of multimedia files that are broadcasted to set top boxes or subscriber units in the field that are connected to IPTV or Cable Systems. The present technology can securely connect to a cloud-based platform (e.g. OpenStack, Amazon EC2, Mediamplify Cloud, etc.), creates a set of multimedia files (e.g. MPEG4 movies) into a secured repository (e.g. Secured File System, Linux/Windows, etc.), modifies those files according to certain rules as defined by the method herein, and reproduces those signals via a multicast video stream (e.g. User Datagram Protocol (UDP) multicast, etc.) encapsulated in a Transport Stream (TS) frame that can be a multiple transport stream (several transports in one TS frame) or a single transport stream (one transport stream according to the MPEG-2 Part 1 Specification or similar multimedia streaming that is compatible with MPEG-TS at a predetermined rate or at a variable bit rate).

BACKGROUND

Cable operators, Multiple System Operators (MSO), and Digital Satellite Systems (DSS) deliver media content by utilizing satellite, Radio Frequency (RF) and Integrated Receiver and Decoder (IRD) technologies, which provide outputs that can include Asynchronous Serial Interface (ASI) signal formats. Additionally, MSOs and DSSs use dedicated hardware encoders and transcoding systems if the source video/audio is incompatible with the set top boxes of the cable or satellite operator. In general, the video/audio content delivered via the satellite to the cable or satellite operator arrives via wireless link or receiver, which is processed by an IRD that receives the stream from the satellite and can ultimately broadcast that signal to the cable operator head end in several formats. In addition, some systems may include multicast units connected with IRDs that tune to the right transponder system.

Satellite systems are used to deliver data (e.g. TV, radio, Video-on-Demand, multimedia streams) from a particular source (e.g. third-party content provider) to cable head end systems or other satellite systems. Satellite delivery is performed via a broadcast signal containing digital pictures and audio inside a transponder frequency. Transponders are radio frequency (RF) space allocated in a particular satellite.

For example, a third-party content provider can maintain multimedia files in CD/DVDs, pre-recorded storage, or as pre-recorded files that are reproduced in a particular audio or video encoding format using a video or audio encoder (e.g. MP3, H.264, AC3, and others). The audio and video is then made part of an RF signal that is broadcasted to the satellite system. This signal is then received by the cable or satellite operator using an antenna receptor and is decoded to generate either an analog signal (e.g. RCA Cables or any other analog interface) or digital signal (e.g. ASI, Asynchronous Serial Interface). If an analog signal is received, modern DVB (Digital Video Broadcasting) Cable and Satellite systems will encode this signal to their particular video/audio encoding requirements such that it can be broadcasted in digital packets via a multicast MPEG Transport Stream. The same occurs if a receiver decodes the signal in ASI. As such, this signal is converted from ASI to Ethernet, or simply redirected to a multicast MPEG Transport stream if arriving in a compatible encoding format for the receiving head end cable system.

When no satellite is being used, video, pictures and music, are read out from the DVD or a hard-drive containing MPEG-layer 3 or MPEG-layer 2 files that were encoded at a pre-determined bit rate according. Those video feeds can be reproduced at a synchronized timing using a multicast MPEG Transport Stream using RTP (Real-time Transport Protocol)-based multicast communication and RTCP (RTP Control Protocol)-based mechanisms, as well as standard UDP (User Datagram Protocol) multicast streams with proprietary timing.

Additionally, IPTV systems can provide mechanisms to broadcast a signal using the multicast protocol in MPEG transport streams to a customer premises with compatible set top boxes (same encoder, same streams, encryption keys, etc). A compatible set top box is such that when connected to the cable TV system it can properly decode video/audio from the cable operator's head end system. Some of these IPTV systems rely on CDN (Content Delivery Networks) that enable distribution of multimedia files to IP-enabled devices. For example, a mechanism can be provided whereby a head end content (MSO) that is being broadcasted to a cable subscriber is also available to an IP-enabled device such as a smartphone, PC, or tablet computer.

SUMMARY

Disclosed are systems, devices, methods, and non-transitory computer-readable media for media delivery from a cloud or IP-based distribution network, or CDN (Content Delivery Network) to MSO (Multiple System Operators) or head-ends that include cable and satellite delivery mechanisms. The present technology unifies cloud-based delivery (Mediamplify cloud) with the cable-based mechanism (e.g. Comcast, Verizon FiOS).

An example computer-implemented method can receive, from a content provider such as a cable or satellite operator, a request for at least one media stream for playback on a broadcast media channel. The request for the at least one media stream can include a request for a plurality of multimedia items. Content corresponding to the plurality of multimedia items can be obtained from at least one website or cloud service that offers the content in at least one first format. Based on the obtained content, the plurality of multimedia files can be generated in a second format that is compatible with the content provider. The media stream can assembled using each of the multimedia items generated in the second format. The media stream can be provided to the content provider for broadcast on the broadcast media channel.

In some aspects of the present technology, obtaining the content can include retrieving at least one audio file corresponding to an audio component of the multimedia item and

retrieving a plurality of images as screen captures that can correspond to a video component of the multimedia item. Generating the multimedia files in the second format can include combining the plurality of images and the at least one audio file to create each of the multimedia items.

BRIEF DESCRIPTION OF THE DRAWING

There are shown in the drawings, embodiments which are presently preferred, it being understood, however, that the disclosure is not limited to the precise arrangements and instrumentalities shown

FIG. **1** shows an example block diagram illustrating an exemplary head end (MSO);

FIG. **2** shows an example block diagram of the apparatus located at the MSO facility (mediaplug);

FIG. **3** shows an example method for initialization of Mediaplug components;

FIG. **4** shows an example method to obtain list of files to multicast to a cable operator MSO;

FIG. **5** shows an example method for encoding video and audio files;

FIG. **6** shows an example method for providing multimedia content to a cable operator;

FIG. **7** shows an example block diagram of example software components of the Mediaplug;

FIG. **8** shows an example method to multicast from a component in the Mediaplug;

FIG. **9** shows an example method to insert metadata into in an MPEG Transport Stream;

FIG. **10** shows an example block diagram for a Virtualized Mediaplug

FIG. **11** shows an example method to initialize virtual mediaplug components; and

FIG. **12** shows an example possible system embodiment for implementing various embodiments of the present technology

While the present technology is amenable to various modifications and alternative forms, specifics thereof have been shown by way of example in the drawings and will be described in detail. It should be understood, however, that the intention is not to limit the present technology to the particular embodiments described. On the contrary, the intention is to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the present technology.

DETAILED DESCRIPTION

The following description should be read with reference of the drawings, in which like elements are numbered in similar fashion. The drawings are not necessarily at scale and are not intended to limit the scope of the disclosure. Those skilled in the art understand that there are alternatives that may be used as well which are also considered to be within the scope of the disclosure.

Generally, the disclosed technology pertains to a delivery mechanism for providing multimedia content to cable systems without the use of a satellite system in a fault-tolerant and reliable fashion. FIG. **1** illustrates a block diagram that includes aMediamplify Cloud **101**. The cloud **101** can refer to a set of virtualized instances or non-virtualized instances of one or more servers that provide access to archives and digital files with media content stored in them. For example, the cloud **101** can be implemented using VMWave or Xen and OpenStack, or simply reside in Amazon Web Services or Rackspace. In addition, special provisioning can be provided in cloud **101** for secured access.

The cloud **101** service files can be accessible via the internet **105** and can be stored in a cloud-based file system or cluster file system (e.g. GlusterFS or Hadoop, Amazon S3). These files can be multimedia files that include, as non-limiting examples, MPEG-4 Video files with H.264 encoded video and AAC encoded audio or MPEG-layer 3 audio as well (MPEG2 Video could also be used). These files can be accessed using a secured transport protocol such as, but not limited to, SSL or a synchronization tool as "rsync," commonly found in Linux/MacOS environments. The communication link **106** can be a DSL, Cable Modem, Wireless WAN, Fiber, Metro Ethernet, etc. and can be linked with the MediaPlug **110** unit. The Mediaplug **110** can reside at the "MSO" facility and can be collocated with all the cable or satellite operator equipment. The MSO is a facility used by the Cable Operator to receive all TV and Radio Programming that the cable operator will then multiplex, re-encode, and distribute from the MSO to a set of subscriber units with set top boxes, or modulate the signal in TV analog channels (2-60+).

One function of the MediaPlug **110** is to provide multimedia content, e.g., video and audio, to an MPEG multiplexer at the headend **120**. The content can be pre-formatted in MPEG Transport Streams that the multiplexer **120** (e.g. Arris TMX-2010) will then be able to capture, reformat in any way the operator requires, and deliver to the cable operator's subscribers via Coaxial Cable **125** or any other means suitable for a multicast or unicast delivery to its customers with "Set Top boxes" **130**, **131**, **132**. A "Set Top Box" is customer premise equipment that will be able to decode and display in a TV set or other screen display, via a signal received by its HDMI or analog input, the contents of the TV programming the cable operator offers.

The Mediaplug **110** can be a computer or server or set of computers of servers that can communicate with the Cloud **101** using a standard Local Area Network (e.g. Gigabit Ethernet). The Mediaplug **110** can store, encode, and transmit multimedia files in the format that the cable operator at its MSO requires. This cable format may include audio, video, and metadata (subtitles, control data, and any additional component that can be packaged in an MPEG Packet that is part of the MPEG Transport Stream). In one embodiment, Mediaplug **110** can include components such as a caching unit, and one or more multicasting servers.

FIG. **2** illustrates an example configuration of the hardware components of Mediaplug **110** which includes three servers. A server is a computer device, usually rack mountable unit with volatile memory such as RAM, one or more micro-processors, and non-volatile memory such as a hard disk. However, one skilled in the art will recognize that the present technology is not limited to a particular configuration and can be varied according to different specifications. FIG. **2** illustrates Mediamplify Cloud **202** which is connected to the Internet backbone **203**. Link **204** (e.g. DSL, Cable Modem, Fiber) provides connectivity between cloud **202** and a Network Address Translator unit **205** (e.g. Cisco RVS4000, or any other NAT device) which can provide Gigabit Ethernet switching capabilities. The lines **206**, **207**, and **208** show Gigabit Ethernet links, however one skilled in the art will understand that Gigabit Ethernet or a Wireless LAN using 802.11g/n would be also a suitable interface to be used in a Mediaplug configuration. The Caching unit **210** can be the main storage component in the system and it can contain all of the multimedia files in the format required by the cable operators, such as the Transport Stream format.

The caching unit can communicate with Multicast-**01** **215** and Multicast-**02** **220**. The two Multicast units **215**, **220** can pull or obtain information from the caching unit via TCP/IP or UDP, using protocols such as HTTP (Hypertext Transport Protocol) or RTSP (Real-time Streaming Transport). The caching unit can also encode and transcode the multimedia files it downloads from the Cloud **202**. The caching unit can also keep updated information of all the metadata and create customizable screens that can be converted into video formats compatible with the Transport Stream content that will be provided to the cable operator at its MSO. MPEG MUX MSO **230** can correspond to a program residing in a computer system that processes and handles the MPEG streams from multiple sources. The MUX **230** can also function as the bridge between the source of the signal and the customer's set top box units. A non-limiting example program would be the CherryPicker DM6400 by MOTOROLA. Each of the components or modules of the Mediaplug can include software for performing functions and/or methods according to the present technology.

FIG. **3** illustrates an example method that can be used to configure and provision the units at boot-time. Each unit can initialize keys for SSH/IP Sec access at **305**. For example, the units can use IPSec and SSH Tunnel keys that can be stored in the administrator user account. The keys can be generated by the Mediamplify Cloud that are private keys or certificates, shared secrets or similar components by which the Mediaplug can connect securely with the Mediamplify cloud. Each cable operator can provide custom-based IP addressing at **310** for the Gigabit Ethernet ports that connect to the operators' network. Changing the IP addresses of the Multicast-**01** and/or Multicast-**02** refers to the IP address by which the links **221** and **216** in FIG. **2** are linked to the MPEG MUX MSO unit. A change of the IP address can refer to the 'ifconfig' command which is used in Linux-based systems and that can be changed in an Ubuntu box at/etc/network/interfaces file. Similarly, the network routing can be changed if the multicast address cannot be routed to the default gateway which points to the **205** NAT, but to **221** and **216** respectively for Multicast-**02** and Multicast-**01**. In general, the **239**.*.*.* network address may be routed to those interfaces.

At step **320**, the Mediaplug can configure playlists per channel and multicast address. The playlist and channel configuration can be obtained from the cable/satellite operator and can include any number of channels for broadcasting multimedia content to end customers. As an example, the channels may include music channels corresponding to different music genres, e.g. rock, alternative, classical, jazz, hip hop, etc. Based on the particular genre, a corresponding playlist can be selected and/or configured. The Mediaplug can also determine the multicast address for each of the channels.

In some configurations a customizable user interface (UI) can be added to the output video MPEG Transport stream. As such, if the "Custom UI" variable is then true and valid, **325**, a link or URL **330** is loaded into the Mediaplug configuration that can be used when the video interface is created. The custom video interface can be created and fetched as needed or it can be created in real-time for a particular channel or for all the channels. The custom user interface variable can be uniquely configured per channel in the Mediaplug. The mediaplug can also monitor **340** all of the processes to ensure stability and continuous, uninterrupted operation. The initialization of the Mediaplug can also include setting the RSYNC profile **350**. The RSYNC profile can be used to update and synchronize media content with the cloud when the Mediaplug determines that the content has changed or been modified.

As described above, the Mediaplug can broadcast the multimedia MPEG stream using the programmed IP Address in multicast-**01** and multicast-**02** according to the method illustrated in FIG. **3**. In FIG. **4**, an example method is shown for obtaining the list of files to playback or broadcast to the MSO system. The file type or format requested by the multicasting embodiment, e.g. multicast-**01** or multicast-**02**, can include Transport Stream (e.g. TS) and/or MPEG-4 Part 14 (e.g. MP4) values **405**. This request is executed from any of the multicasting embodiments, usually making use of the HTTP GET Request. The multicasting unit can connect to an HTTP Server and retrieve the list of files based on the type identified by the request. As the caching unit may handle multiple channels of different types and name, each channel can have a unique identifier corresponding to the name of the playlist. For example channel name "Cool" or "Rock," **410** are names that can identify the channel to be retrieved from the caching server. The activity log in the request can also be updated keeping track what step of the process is being completed **415**. At **420**, the caching server can generate a "playlist file" of mime type "audio/x-mpegurl" which will be interpreted as a multimedia playlist file when requested. Finally, as the playlist usually may not vary for a period of time until a new request is received, the playlist can be kept in the local memory caching service **425**.

As the requests arrive at the "Caching" unit from the multicasting units, the "Caching" unit can be configured to perform parallel encoding for all the different channels available from the unit. FIG. **5** illustrates an example method that can be implemented by the Mediaplug, and in particular, by the "Caching" unit. At step **505**, encoding flags or input parameters can be received which may include GOP (Group of Pictures) which is used by certain video encoders, resolution (e.g. 640×480) in pixels, bit rate in Kilobits per second, any encoding type of video (e.g. H.264), encoding type of audio (e.g. AC-3), duration of the video feed, etc. In addition, a "format" parameter can be received which refers to the output format or encapsulation, MPEG TS or MPEG4. The caching unit encodes audio and video, and can use the disk space in the Mediaplug. Hence in **508** the method checks for sufficient space left in the memory or hard drive. This task can be run on a thread together with all the other tasks that are working in parallel in order to speed up the processes of encoding and transcoding.

Several indexes or identifiers by the name "ChID," (these integers preferably no more than an integer value from 1 to the maximum number of channels) begin (e.g. MAX could be 50) to be generated by the caching unit **510**. This method can be performed for all the channels and all media linked to that particular channel identified by "MediaID" **515**, in this particular case the "MediaID." The variable "MAX" in this context can refer to the maximum number of media files read (e.g. **500**). The data captured from the media could be "Artist," "Author," or any other variable from an audio file. If a video file is used this could be "program name," "movie name," or any associated metadata information tied to the multimedia file and the Channel Identifier (ChID) associated with it "MediaID" file.

The caching unit can add a "Custom UI," or a customizable User Interface that is designed using Hypertext Markup Language (e.g. HTML) or a web service. A web service that matches a REST interface (Representation State Transfer) and uses Javascript Object Notation (JSON) or XML (Extensible Markup Language) to respond to a custom UI request can be used. Moreover, this custom UI can

include JavaScript, CSS, and HTML content files that can be rendered using a browser using WebKit (e.g. PhantomJS or Safari) or any other browser-rendering engine compatible with HTML4/5 or any future HTML version. If a customizable UI is part of the configuration **518**, rendered images from a web service can be used to create overlapping video or replace any video in the video feed file. Likewise, this video or customized screen can be used when no video at all is defined in the multimedia file, e.g. Audio-only file. The web-service to be contacted may use the "PlayListName" to be used for the Channel identified by the channel ID "ChID," retrieved using the "PlaylistID" function **520**. Each new PlayListName may contain different identifies to retrieve new images. Therefore one or more screens will be retrieved from the rendering engine as such **522** can be used to retrieve a set of screens from the web-service being contacted.

Capturing screens **526** can be done using a tool similar to PhantomJS (Webkit-based headless engine for rendering images) or QtCapture, or simply capturing screen frame buffers from a machine running any software tool. Alternatively, the method can capture a video file from another rendering function, which can create a sequence of screens that can be used to generate a video file. Once all screens and video are captured, **530** the resulting output created can be a video file that then is either replaced or merged (multiplexed) with the original file. As an example, if an audio content file is used such as an MP3 file, this function can create a video file from all the screens captured by **526**. Those screens are generated by calling a URL where the web-service is associated and creating a video file with the input audio and the captured screens. The output format can be an MPEG Transport Stream file that can be retrievable or streamed to the multicasting embodiment.

Once the output file containing the screen shoot sequence of videos encoded in H.264 (for example, or MPEG2Video) is created, the audio can be multiplexed and added to one of the encoding channels of the resulting video output and saved into the caching unit storage disk **550**. The multiplexing can be done using tools such as FFMPEG or VLC or any proprietary tool that can multiplex audio and video files into a resulting MPEG Transport Stream (or MPEG-4 output, or any similar output).

FIG. **6** illustrates an example method **600** for providing multimedia content to a cable operator. At **602**, a device such as the Mediaplug device receives a request from a cable/satellite operator for a media stream. A media stream can be formatted according to HTTP Live Streaming (HLS), an HTTP/RTSP playlist, or an RTSP stream. The media stream can include any number of multimedia items such as audio/video multimedia items. In some instances, the request can include a channel identifier that is associated with a particular category of multimedia items, such as a music genre corresponding to rock, classical, jazz, etc.

At **604**, contents corresponding to the multimedia items can be retrieved, downloaded, or otherwise obtained from one or more websites or cloud based servers. The contents can include data corresponding to either or both of the audio and video components of the multimedia items. For example, the data corresponding to the audio portion can include a music file in an MP3 format. Similarly, the data corresponding to the video portion can include a video that is obtained directly from the cloud. Alternatively, the video component can be assembled by using one or more screen captures from a website. The screen captures can include captures of still images presented by the website as well as captures of images from videos that are available on the website. As illustrated in FIG. **5**, the screen capture process can be repeated any number of times.

The Mediaplug can then generate **606** multimedia items in a second format based on the content obtained from the web server or cloud. That is, the Mediaplug can convert/encode the audio file into a format that is suitable for the cable operator and it can also assemble the various screen captures to generate the video component of the media item. Once the audio and video files are created, they can be combined, multiplexed, or encoded to a format that can be utilized by the multimedia stream. For example, the audio can be multiplexed and added to one of the encoding channels of the video output. The various multimedia items can be used **608** to assemble the media stream in a format corresponding with the request (e.g. HLS, HTTP/RTSP, RTSP stream). The media stream can be provided **610** to the content provider for broadcast on the broadcast media channel.

FIG. **7** illustrates a block diagram of an example architecture of the Caching Unit components. The figure shows 720 as the main operating system, which can be Linux, Windows, or any other operating system in use. The caching unit can contain two types of operating system services HTTP 710 and RTSP **712**. The RTSP service provides access so the media saved or created in the repository of the caching unit file system **730**. The RTSP server can be implemented using the Live555 RTSP server or similar. Alternatively, the HTTP Server can be implemented using "nginx" or "apache" web browsers, and the RTSP Servers can be implemented using Live555 services. In the case of the HTTP Server, this can also be used to get the Playlist of files generated from the method on FIG. **5 715**.

The GetPlayList **715** command can be implemented as follows:

- Receive and process a request for the name of the channel or playlist to be used,
- Retrieve all the filenames ordered by date of creation of all the files in a particular directory,
- Cache all the files into cache memory (e.g. Memcache or similar tool),
- Add type of HTTP header as M3U or PLS (e.g. a text file with a list of files or URLs to play),
- Return a list of HTTP or RTSP URLs to access each video generated or stored in the caching unit.

In some embodiments, the HTTP Server can also be used to clean up, update, and delete operations. The block unit called "CleanUp" **722** is in charge of keeping up to date caching information data and/or deleting files already used or that are not required to be used anymore by the multicast unit(s). Also the HTTP Server functions can include servicing M3U8 files corresponding to the HTTP Live Streaming format and all the segments created by the HTTP Live Streaming function. As such, a HTTP Live Streaming (HLS) generation program will produce the files and segment them as needed by the encoder and can then be serviced by the HTTP Server **710**. The Mediamplify Parallel Encoder **705** corresponds to a block that can implement the method shown in FIG. **5**. The resulting outputs from the Media Parallel Encoder **605** are stored in the file system **730**. The Mediamplify Parallel encoder **605** can be implemented in Python and can rely on web services (such as Twisted or Django), PhantomJS, and FFMPEG. Monit **750** corresponds to a monitoring block that can ensure that the process running the "Media Parallel encoder" keeps running at all times and does not stop upon failure. Additional blocks that can be included in Mediaplug are RSYNC **742** and SSH **744**. These blocks can be used to ensure synchronization and updates of new media files coming from the cloud. The

RSYNC block uses the "rsync" protocol and program over ssh (Secured Socket Layer Shell) to download media from the "Mediamplify Cloud" and synchronize multimedia files that are newly updated and could be part of particular Channel ID and a Playlist Name. Each new file synchronized with the Mediamplify cloud has a Media ID value which the cloud can assign, and include additional metadata information such as "Artist" and "Author." The "Mediamplify Parallel Encoder" also may receive requests from other components such as getStatus or StartEncoding, indicating what file is being encoded, its progress, and what other files are in the queue for encoding.

In some embodiments, the information from getStatus or StartEncoding can be generated using a JSON message retrieved upon a request via HTTP GET to the Mediamplify Parallel Encoder. A graphical user interface can then be used to plot the status of each song being encoded or provide previews of the videos being generated. Below is one non-limiting example of a JSON response made by the "Mediamplify Parallel Encoder" service:

{"song_encoded": "ts", "artist": "Madonna", "duration": 0, "exists_on_disk": True, "genre": "Pop", "title": "Like a Virgin", "music_id": "1082863"}

Response regarding the status for a song being encoded or a list of songs being encoded, as follows:

{"music_id": "109281", "encoding": "78%", "output_file": "/var/www/eglacast/pop/109281-abcdef-uuuid.ts", "thumbnail": http://mediamplify.com/images/abcdef-uuid.png"}

In some embodiments, there are two possible TCP/IP sockets open tor listening used by the Caching component of the Mediaplug. A) Port 80 (as an example), or the standard HTTP port, used to retrieve content, view video content generated, update/delete cached files, and access the playlists, and B) Port 9553 (as an example), or the standard Mediamplify Parallel encoder port, used to monitor and review status of the songs being encoded, the data being collected, and all other related activities with encoding. Via this port, encoding/transcoding can be started or stopped.

Similarly, the "Mediaplug" components labeled "Multicast-**01**" and "Multicast-**02**" can also provide an HTTP interface to access the current song being played or being multicast via the HTTP Server **770**. For example, the HTTP Server may run a PHP or Python script that will return the current song being played by the streamer. The streamer block **768** can connect to the caching server via HTTP or RTSP protocols. The implementation of this block can be done using a combination of FIG. **8** instructions and using multicasting services available in VLC or FFMPEG (e.g. multicast, or tstools/tsplay).

One function of the streamer **768** is to read the files encoded by the caching unit, process those for multicasting and creating the MPEG Transport Stream multicast packets sent via the Ethernet port. Additionally, the multicast-**01** and multicast-**02** blocks contain a "Recording" function **790**, which is in charge or recording the multicasting streams and recording for later use in case of failure on the system. This operates by listening into the UDP (User Datagram Protocol) multicast address of each individual channels being broadcasted, and recording the output into a file. This file is then stored and made accessible for future use. Monit **764** can maintain the streamer process running at all times throughout a regular broadcasting cycle.

FIG. **8** illustrates an example method that can be performed by the streamer module in the Mediaplug. In one embodiment, the streamer can perform functions that include: connect to the caching unit; retrieve generated videos per playlist; determine if unit is working in fault-tolerant mode; playback pre-recorded audio if a failure is detected; and record units own output or any other streamer output if connected to switch or hub.

Turning to the method from FIG. **8**, at step **805**, the streamer reads the multicast address associated to the channel being broadcasted, in order to generate IGMP (Internet Group Management Protocol) messages and establish a multicast group (e.g. 239.0.0.1:8001). The channel name is also initialized at **810**. This value can be used to retrieve the proper content from the Caching server. In one embodiment, a configuration table can be created with tuples: <ChID>, <Channel Name>, <Multicast Address>, <Multicast Port>, such that no duplicates are used or created. Automation software can create these configuration tables and automate the process of creating all streamer calls. A streamer method can be called (e.g. from/etc/init.d/) at boot time and monitored with a tool such as Monit. Once the configuration is known, the streamer will check **850** if there are already multicasting transport streams generated by any other multicast component and avoid collisions. If such multicast data is detected, a delay can be used to delay a new attempt to check on that particular multicast group **860**. Hence this block indicates "Wait <Time>" or stop all processing for the amount of <Time> recommended by the specification. For example, the time for delay can be the "Main source" of input less the amount of time for receiving input from a backup server. During initialization, if the same multicast address is used to broadcast main and backup, the one with less amount of time delay will be first, followed by the "Backup." In cases were a hot spare is used, or two different multicast addresses can be in use, one for main and the other one for backup, then this step may be optional.

Once it is determined that there are no elements multicasting at the same address, the streamer will check if the Caching server is "alive" **815**. This can be performed in multiple ways, for example an HTTP Request must not generate a **404** or **403** error, but instead a successful **202** value. Likewise, ping requests can also be used before making an HTTP GET call to identify if the caching server is present and available. In the case that there are no ping responses, a timeout will trigger a failure and a pre-recorded content **820** will be played or sent to the multicast address and port of record. Recordings can be scheduled daily for an extended period of time (e.g. 8 hours or more). These recordings can store the recorded file in a temporary folder and then move that file over to the playback folder where streamer can read it.

If it is determined that the caching server is functioning properly, then there are three types of streams that can be sent to the multicast address and port:

HTTP Live Streaming (HLS) a multi-segment stream usually defined by extension M3U8, containing a set number of segments for a real-time stream source (Video/audio)

HTTP/RTSP file playlist, this means that one or many files are read from the caching server, usually defined by extension M3U or PLS

RTSP stream, this could be constant stream similar to HTTP Live Streaming (HLS) but using an RTSP protocol instead of HLS stream.

When multiple files are part of a playlist, the bit-rate may vary between playlist files. Different bit-rates among files in a playlist could cause problems in non-CBR (Constant Bit Rate) systems. To avoid such problems, the Mediaplug can maintain the stream at the bit rate of the previous stream by adding null MPEG TS packets at the same rate as the previous media file was being sent over the multicast port. This will maintain appropriate bit-rate for playlists.

In RTSP service, streaming occurs by writing the media content to a named pipe or a FIFO file and allowing the RTSP service to read from that file and generate an RTSP stream. As such, in HLS and RTSP Streaming, the caching server knows the filename of the file being streamed. When the file is streamed from via playlist, both the caching and multicast unit know the name of the file being streamed, as the multicast server can then request from the caching server the metadata associated with the file name being streamed.

Accordingly the present technology can accommodate both cases and retrieve the current file name being streamed as a JSON response. The response can identify the content displayed or played back at the end-user's set top box.

If HLS is used for streaming **818**, the streamer will connect to the proper M3U8 file **820** to pull all the segments corresponding to the live playlist file on the M3U8 stream. Programs and libraries such as FFMPEG or VLC can then be used to encapsulate the stream feed to an MPEG TS and multicast it to the pre-programmed multicast address and port. Similarly, if an RTSP stream **825** is used, the same process takes place at **830** using the RTSP as a protocol instead of HTTP.

If a list of files in a playlist **832** is in use "M3U," the list can be obtained using an HTTP GET request made to the caching server. Each file can then be streamed to the multicast address and port of record **838** until all elements of the playlist are completed and played back **835**.

In some instances, metadata can be added to the stream as an additional PID (Program Identifier) in the MPEG Transport Stream. If metadata is needed **841** then it will be inserted **842** here in accordance with FIG. **9**.

For example, the metadata added could be as simple as a string containing Artist, Name, or other information, or as complex as DCII Text (DigiCipher version 2, as specified by Motorola), MPEG TS Control messages (Two-way), or any other metadata or PID that can be inserted into the stream being sent to the multicast address and port.

FIG. **9** illustrates an example method used to insert a special data packet into the stream being written to the multicast address, without making use of timing information. Therefore, the metadata can be inserted such that it does not have timing dependency. Alternatively, certain type of metadata such as subtitles or lyrics may need to be inserted only at certain times so that it is synchronized with the video data.

The sample MPEG TS packet shown in **902** and **905** corresponds to the metadata inside the packet. This matches standard MPEG TS packet structure and may vary depending on the type of metadata being added to the stream.

The method to insert the packet starts by reading the MPEG TS file retrieved from the caching server **910**. If metadata corresponds to only song information, this information can be added at uniform times. Non-uniform timing inclusions can also be done by adding a table that includes the time and the metadata content added to the stream **915**. This metadata can be retrieved from the Caching unit using an HTTP Get request directed to the caching server **918** and may include artist name, title of song, or any other information **920**.

Creation of the MPEG Packet(s) **925** to be inserted at the appropriate times, which will set the places with those packets, will be inserted in the MPEG TS. Modify the PMT (Program Management Table) of the generated file and include the PID being inserted into the MPEG TS **930**. At step **932**, an audio PID may include a metadata PID of type DCII Text, which is added to the stream.

For each timing or location where the PID needs to be inserted **935**, the method can insert those packets and generate a buffer that can be sent to the multicast address as in illustrated in FIG. **8**.

As described above, the disclosed technology can be implemented using a set of modules included in the Mediaplug apparatus, which can be implemented using one or more servers accordingly. Alternatively, virtualization environments such as VMWare or Xen (FIG. **9**) can include a system and architecture that can be used to host all the Mediaplug functionality in a virtualized environment using a single server with multiple GbE ports.

The illustration in FIG. **10** shows a configuration of three virtual machines used for implementing the Mediaplug. Caching **1030** and its respective Ethernet port **1032**, Multicast-**01** **1020** with two virtual Ethernet ports **1022** and **1024**, and Multicast-**02** **1010**, with two Ethernet ports **1012** and **1014**. There are three bridges that include **1007**, **1008**, and **1009**. The multicast Ethernet ports **1024** and **1014** are bridged with eth**1** **1004** and eth**2** **1003** respectively via bridge **1009** and bridge **1008**, respectively. That is, the same content generated at **1024** can be forwarded via the bridge **1009** to the physical interface eth**1** **1004** in the hardware. The vSwitch **1045** or the virtual switch between the two bridged interfaces **1008** and **1009** permits the two virtual machines of Multicast-**01** **1010** and Multicast-**02** **1020** to record each other and monitor their activity.

To achieve concurrency and proper execution in a cloud environment, the Mediaplug can use the example method shown in FIG. **11**. Once a create unit command is issued **1105**, provisioning of the metadata information and proper IP Address is provided for that particular instance **1110**. Once an IP Address and metadata has been chosen for the unit, the server can be allocated in the cloud and the instance can be created using CloudStack or OpenStack tools and services **1115**. The instance is then allocated and runs in the proper node in the cloud **1120**. Configuration of the assigned IP, Netmask, and VPN credentials are loaded at **1125**. Finally, certificate information is uploaded **1130** as well as all services run to enable the unit for execution of its caching functions, multicasting functions, or both.

FIG. **12** illustrates a conventional system bus computing system architecture **1200** such as can be used in Mediaplug **110**. Those of ordinary skill in the art will appreciate that other system architectures are also possible.

In computing system architecture **1200** the components of the system are in electrical communication with each other using a bus **1205**. Example system **1200** includes a processing unit (CPU or processor) **1210** and a system bus **1205** that couples various system components including the system memory **1215**, such as read only memory (ROM) **1220** and random access memory (RAM) **1225**, to the processor **1210**. The system **1200** can include a cache of high-speed memory connected directly with, in close proximity to, or integrated as part of the processor **1210**. The system **1200** can copy data from the memory **1215** and/or the storage device **1230** to the cache **1212** for quick access by the processor **1210**. In this way, the cache can provide a performance boost that avoids processor **1210** delays while waiting for data. These and other modules can control or be configured to control the processor **1210** to perform various actions. Other system memory **1215** may be available for use as well. The memory **1215** can include multiple different types of memory with different performance characteristics. The processor **1210** can include any general purpose processor and a hardware module or software module, such as module **1** **1232**, module **2** **1234**, and module **3** **1236** stored in storage device **1230**,

configured to control the processor **1210** as well as a special-purpose processor where software instructions are incorporated into the actual processor design. The processor **1210** may essentially be a completely self-contained computing system, containing multiple cores or processors, a bus, memory controller, cache, etc. A multi-core processor may be symmetric or asymmetric.

To enable user interaction with the computing device **1200**, an input device **1245** can represent any number of input mechanisms, such as a microphone for speech, a touch-sensitive screen for gesture or graphical input, keyboard, mouse, motion input, speech and so forth. An output device **1235** can also be one or more of a number of output mechanisms known to those of skill in the art. In some instances, multimodal systems can enable a user to provide multiple types of input to communicate with the computing device **1200**. The communications interface **1240** can generally govern and manage the user input and system output. There is no restriction on operating on any particular hardware arrangement and therefore the basic features here may easily be substituted for improved hardware or firmware arrangements as they are developed.

Storage device **1230** is a non-volatile memory and can be a hard disk or other types of computer readable media which can store data that are accessible by a computer, such as magnetic cassettes, flash memory cards, solid state memory devices, digital versatile disks, cartridges, random access memories (RAMs) **1225**, read only memory (ROM) **1220**, and hybrids thereof.

The storage device **1230** can include software modules **1232**, **1234**, **1236** for controlling the processor **1210**. Other hardware or software modules are contemplated. The storage device **1230** can be connected to the system bus **1205**. In one aspect, a hardware module that performs a particular function can include the software component stored in a computer-readable medium in connection with the necessary hardware components, such as the processor **1210**, bus **1205**, display **1235**, and so forth, to carry out the function.

It can be appreciated that example system **1200** can have more than one processor **1210** or be part of a group or cluster of computing devices networked together to provide greater processing capability.

For clarity of explanation, in some instances the present technology may be presented as including individual functional blocks including functional blocks comprising devices, device components, steps or routines in a method embodied in software, or combinations of hardware and software.

Any of the steps, operations, functions, or processes described herein may be performed or implemented by a combination of hardware and software modules, alone or in combination with other devices. In an embodiment, a software module can be software that resides in memory of a client device and/or one or more servers of a content management system and perform one or more functions when a processor executes the software associated with the module. The memory can be a non-transitory computer-readable medium.

In some embodiments the computer-readable storage devices, mediums, and memories can include a cable or wireless signal containing a bit stream and the like. However, when mentioned, non-transitory computer-readable storage media expressly exclude media such as energy, carrier signals, electromagnetic waves, and signals per se.

Methods according to the above-described examples can be implemented using computer-executable instructions that are stored or otherwise available from computer readable media. Such instructions can comprise, for example, instructions and data which cause or otherwise configure a general purpose computer, special purpose computer, or special purpose processing device to perform a certain function or group of functions. Portions of computer resources used can be accessible over a network. The computer executable instructions may be, for example, binaries, intermediate format instructions such as assembly language, firmware, or source code. Examples of computer-readable media that may be used to store instructions, information used, and/or information created during methods according to described examples include magnetic or optical disks, flash memory, USB devices provided with non-volatile memory, networked storage devices, and so on.

Devices implementing methods according to these disclosures can comprise hardware, firmware and/or software, and can take any of a variety of form factors. Typical examples of such form factors include laptops, smart phones, small form factor personal computers, personal digital assistants, and so on. Functionality described herein also can be embodied in peripherals or add-in cards. Such functionality can also be implemented on a circuit board among different chips or different processes executing in a single device, by way of further example.

The instructions, media for conveying such instructions, computing resources for executing them, and other structures for supporting such computing resources are means for providing the functions described in these disclosures.

Although a variety of examples and other information was used to explain aspects within the scope of the appended claims, no limitation of the claims should be implied based on particular features or arrangements in such examples, as one of ordinary skill would be able to use these examples to derive a wide variety of implementations. Further and although some subject matter may have been described in language specific to examples of structural features and/or method steps, it is to be understood that the subject matter defined in the appended claims is not necessarily limited to these described features or acts. For example, such functionality can be distributed differently or performed in components other than those identified herein. Rather, the described features and steps are disclosed as examples of components of systems and methods within the scope of the appended claims.

What is claimed is:

1. A computer-implemented method comprising:

receiving, from a content provider, a request for at least one media stream for playback on a broadcast media channel, wherein the at least one media stream includes a plurality of multimedia items of different types;

obtaining content corresponding to the plurality of multimedia items from at least one source offering the content in at least one first format;

rendering a web page by a browser using the content;

generating a temporal sequence of screen captures of the rendered web page, where each screen capture defines all the content of the web page at a given time, and at least two adjacent screen captures illustrate a dynamic change of at least a portion of the content over time;

assembling the at least one media stream using the temporal sequence of screen captures; and

providing the at least one media stream to the content provider for broadcast on the broadcast media channel.

2. The method of claim **1**, wherein the obtaining comprises: retrieving, for each of the plurality of multimedia items, at least one audio file corresponding to an audio

component of the multimedia item and a plurality of screen captures corresponding to a video component of the multimedia item.

3. The method of claim **2**, wherein the generating comprises: combining the plurality of screen captures and the at least one audio file to create each of the plurality of multimedia items.

4. The method of claim **2**, wherein the retrieving of the plurality of screen captures comprises obtaining the plurality of screen captures from a playback of a video on the at least one webpage.

5. The method of claim **4**, wherein the combining of the plurality of screen captures comprises metadata corresponding to at least one of a song title, an artist, and a music genre.

6. The method of claim **1**, further comprising: identifying the at least one webpage based on a channel identifier associated with the broadcast media channel.

7. The method of claim **1**, further comprising: querying the content provider to determine the second format, wherein the second format corresponds to a Moving Picture Experts Group (MPEG) format.

8. The method of claim **3**, further comprising:

detecting a change at the at least one webpage corresponding to at least one of the plurality of multimedia items;

in response to detecting the change, retrieving a new plurality of screen captures from the at least one webpage for the at least one of the plurality of multimedia items; and

reassembling the at least one of the plurality of multimedia items using the new plurality of screen captures to yield an updated multimedia item.

9. The method of claim **1**, wherein the content provider is a cable television operator or a satellite television operator.

10. The method of claim **1**, wherein providing the at least one media stream to the content provider comprises streaming the at least one media stream to an MPEG multiplexer associated with the content provider.

11. The method of claim **1**, further comprising: provisioning, on at least one server, at least one virtual machine for performing the receiving, obtaining, generating, assembling, and providing.

12. A system comprising:

at least one processor;

a computer-readable storage medium having stored therein instructions which, when executed by the processor, cause the at least one processor to perform operations comprising:

receive, from a content provider, a request for at least one media stream for playback on a broadcast media channel, the at least one media stream including a plurality of multimedia items of different types;

retrieve, from a cloud based service, multimedia content corresponding to the plurality of multimedia items, the multimedia content in a first format;

render a web page by a browser using the multimedia content;

generate a temporal sequence of screen captures of the rendered web page, where each screen capture defines all the content of the web page at a given time, and at least two adjacent screen captures illustrate a dynamic change of at least a portion of the content over time;

merge the temporal sequence screen captures with the at least one audio file to create the media stream; and

send the media stream to the content provider.

13. The system of claim **12**, further comprising: retrieve a video from the cloud based service, wherein the screen captures correspond to a plurality of static images obtained from the video.

14. The system of claim **12**, further comprising: select the multimedia content from the cloud based service based on a music genre associated with the broadcast media channel.

15. The system of claim **12**, wherein the request comprises a request for a plurality of multimedia streams for playback on a plurality of broadcast media channels.

16. The system of claim **12**, wherein the media stream is sent to a broadcast internet protocol (IP) address associated with the content provider.

17. A non-transitory computer-readable storage medium having stored therein instructions which, when executed by a processor, cause the processor to perform operations comprising:

receiving, from a content provider, a request for at least one media stream for playback on a broadcast media channel, wherein the at least one media stream includes a plurality of multimedia items of different types;

obtaining content corresponding to the plurality of multimedia items from at least one source offering the content in at least one first format;

rendering a web page by a browser using the content;

generating a sequence of screen captures of the rendered web page, where each screen capture defines all of the content of the web page at a given time, and at least two adjacent screen captures illustrate a dynamic change of at least a portion of the content over time;

assembling the at least one media stream using the sequence of screen captures; and

providing the at least one media stream to the content provider for broadcast on the broadcast media channel.

18. The non-transitory computer-readable storage medium of claim **17**,

wherein the obtaining comprises retrieving, for each of the plurality of multimedia items, at least one audio file corresponding to an audio component of the multimedia item and a plurality of screen captures corresponding to a video component of the multimedia item; and

wherein the assembling comprises combining the plurality of screen captures and the at least one audio file.

19. The non-transitory computer-readable storage medium of claim **17**, wherein the at least one media stream corresponds to at least one of an HTTP live stream (HLS), an HTTP playlist, and a Real-time Streaming Transport (RTSP) stream.

20. The non-transitory computer-readable storage medium of claim **17**, storing additional instructions which, when executed by the processor, result in operations comprising:

detect a network failure affecting connectivity with the at least one website; and

in response, provide a previously recorded media stream to the content provider.

21. The non-transitory computer-readable storage medium of claim **17**, wherein assembling the at least one media stream comprises inserting at least one MPEG packet including metadata corresponding to the multimedia item.

* * * * *

EXHIBIT 2



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Hernandez-Mondragon

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(45) **Date of Patent: Dec. 31, 2019**

(54) **METHOD, SYSTEM, AND APPARATUS FOR MULTIMEDIA CONTENT DELIVERY TO CABLE TV AND SATELLITE OPERATORS**

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Related U.S. Application Data

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(Continued)

(51) **Int. Cl.**
H04N 21/4402 (2011.01)
H04N 21/2343 (2011.01)
(Continued)

(52) **U.S. Cl.**
CPC ... ***H04N 21/440218*** (2013.01); ***H04N 21/233*** (2013.01); ***H04N 21/2387*** (2013.01); ***H04N 21/234309*** (2013.01); ***H04N 21/4312*** (2013.01); ***H04N 21/47217*** (2013.01); ***H04N 21/6118*** (2013.01); ***H04N 21/6143*** (2013.01); ***H04N 21/8106*** (2013.01); ***H04N 21/8133*** (2013.01);
(Continued)

(58) **Field of Classification Search**
CPC H04N 21/440218; H04N 21/233; H04N 21/234309; H04N 21/2387; H04N 21/4312; H04N 21/47217; H04N 21/6118; H04N 21/6143; H04N 21/8106; H04N 21/8133; H04N 21/8153; H04N 21/84; H04N 21/8547; H04N 21/6405; H04N 21/64322; H04N 21/81; H04N 21/854
See application file for complete search history.

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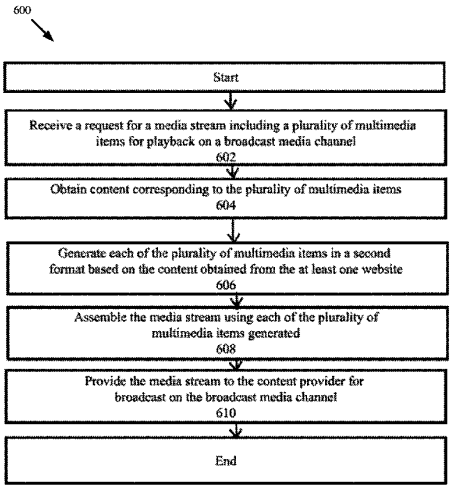
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Primary Examiner — Rong Le
(74) *Attorney, Agent, or Firm* — Fox Rothschild LLP

(57) **ABSTRACT**

Systems, methods, and computer-readable media for delivering multimedia content from the cloud to cable operators are disclosed. A device located at the cable headend or implemented in the cloud can receive a request for at least one media stream for playback on a broadcast media channel. Content corresponding to a plurality of multimedia files in the media stream can be obtained from the internet or a cloud based service. The content can be used to generate the multimedia files in a format that is compatible with the cable operator. The multimedia files can be used to assemble the at least one media stream which can be provided to the cable operator for broadcast on the broadcast media channel.

13 Claims, 12 Drawing Sheets



Related U.S. Application Data

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H04N 21/2387	(2011.01)
H04N 21/233	(2011.01)
H04N 21/61	(2011.01)
H04N 21/472	(2011.01)
H04N 21/431	(2011.01)
H04N 21/8547	(2011.01)
H04N 21/643	(2011.01)
H04N 21/6405	(2011.01)

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CPC ***H04N 21/8153*** (2013.01); ***H04N 21/84*** (2013.01); ***H04N 21/8547*** (2013.01); *H04N 21/6405* (2013.01); *H04N 21/64322* (2013.01)

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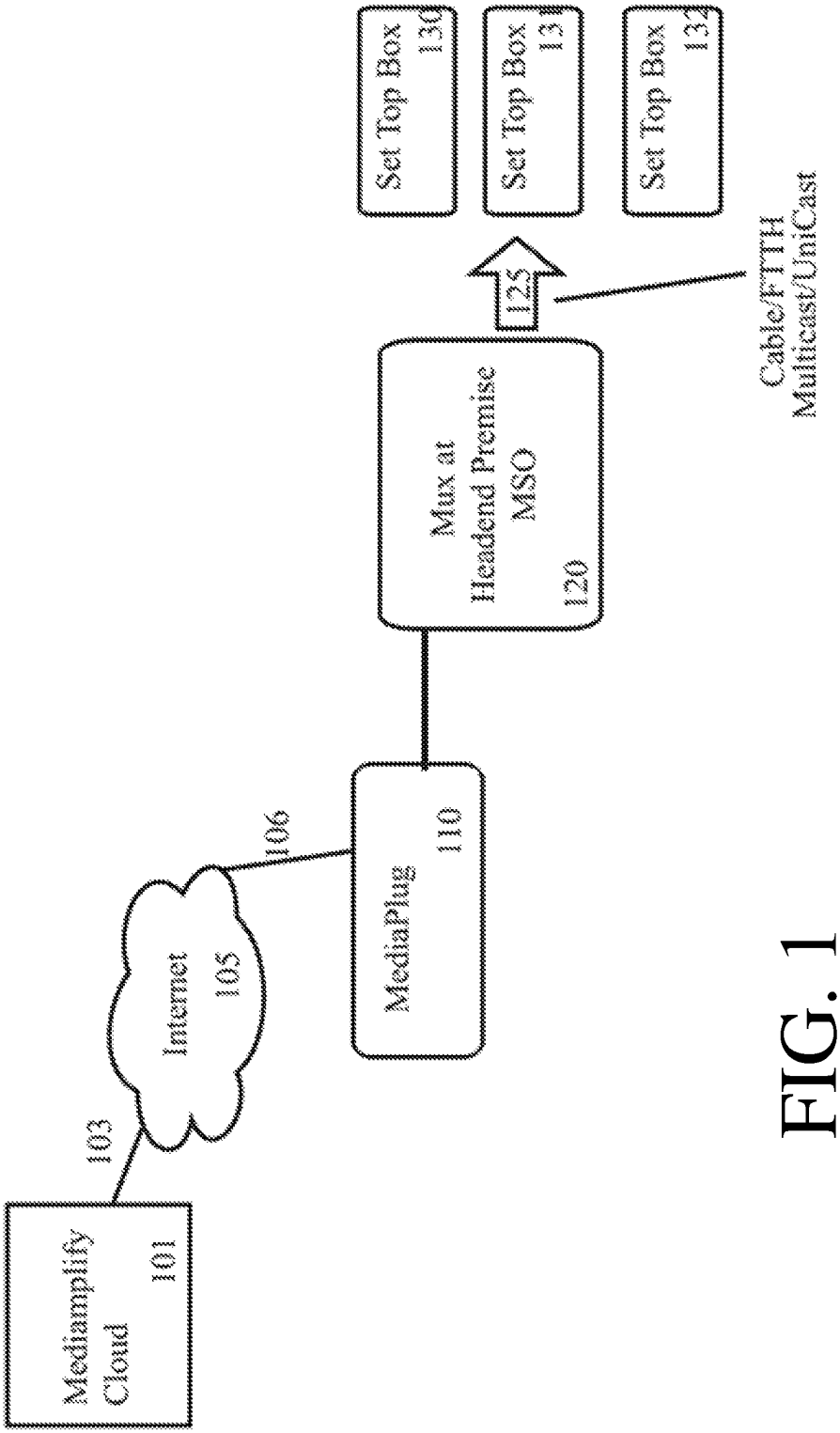

Mediamplify Cloud 101
103
Internet 105
106
MediaPlug 110
Mux at Headend Premise MSO 120
125
Cable/FTTH Multicast/UniCast
Set Top Box 130
Set Top Box 131
Set Top Box 132

FIG. 1

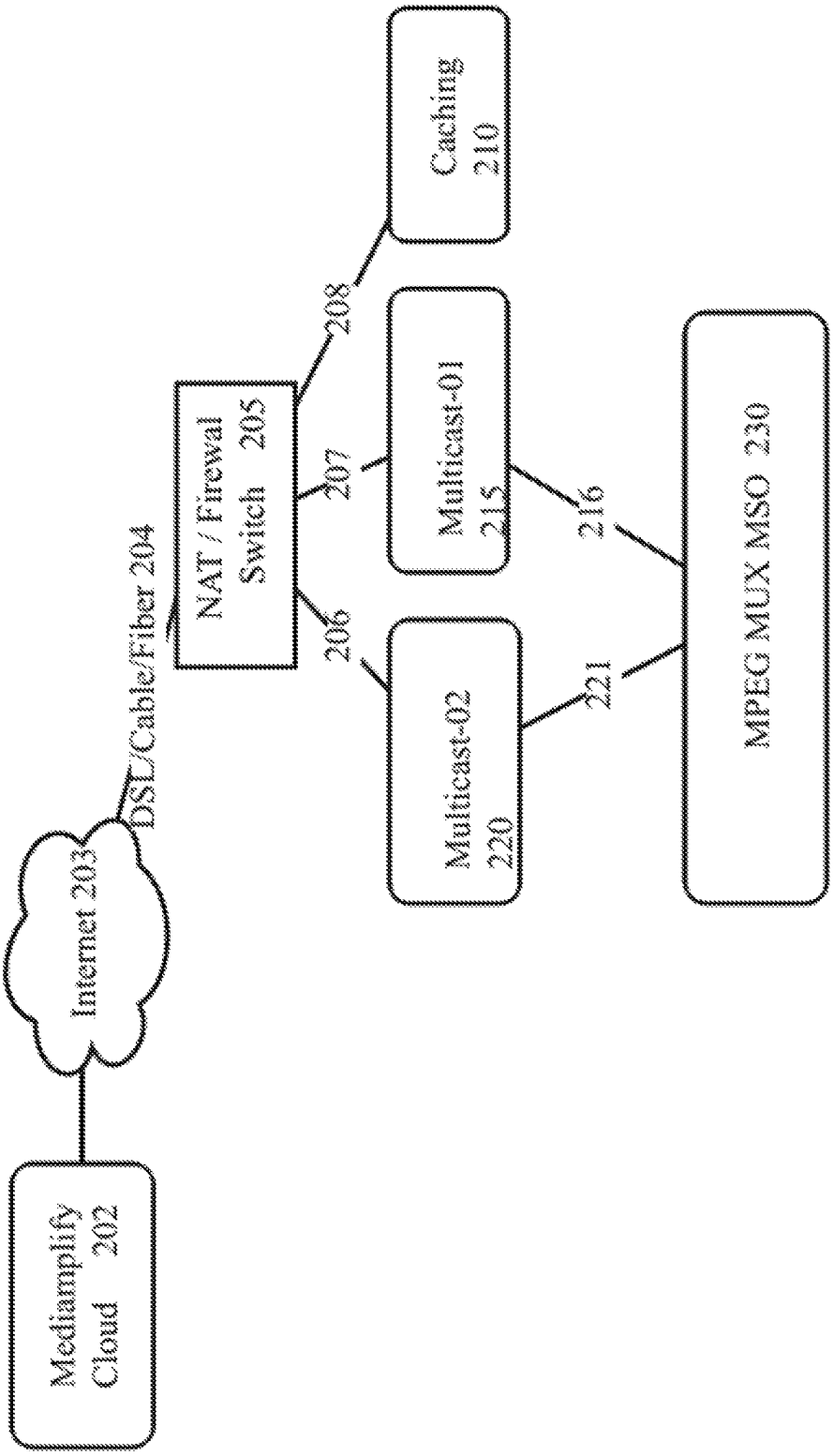

Mediamplify Cloud 202
Internet 203
DSL/Cable/Fiber 204
NAT / Firewal Switch 205
206
207
208
Caching 210
Multicast-01 215
Multicast-02 220
216
221
MPEG MUX MSO 230

FIG. 2

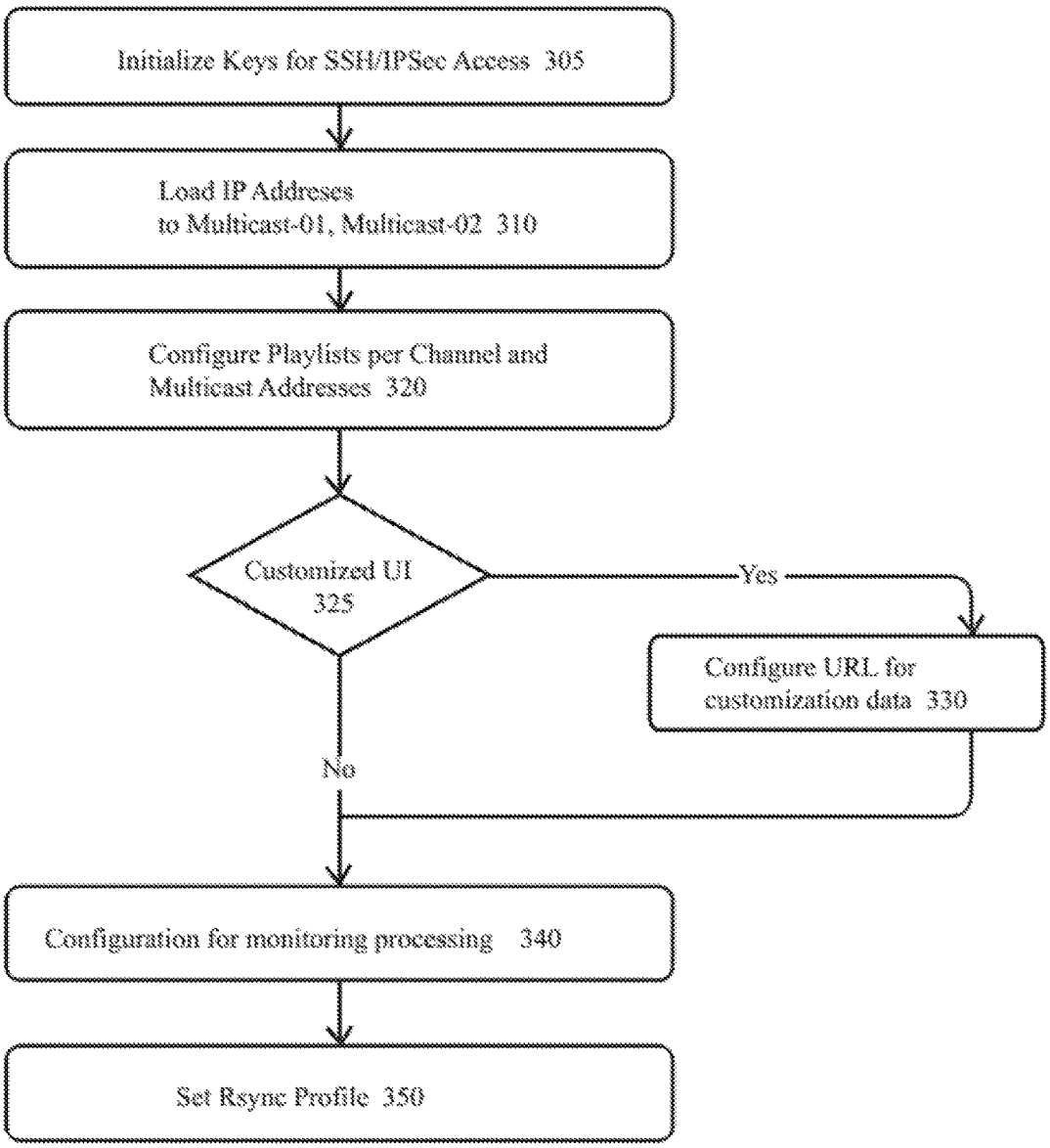

Initialize Keys for SSH/IPSec Access 305
Load IP Addreses to Multicast-01, Multicast-02 310
Configure Playlists per Channel and Multicast Addresses 320
Customized UI 325
Yes
Configure URL for customization data 330
No
Configuration for monitoring processing 340
Set Rsync Profile 350

FIG. 3

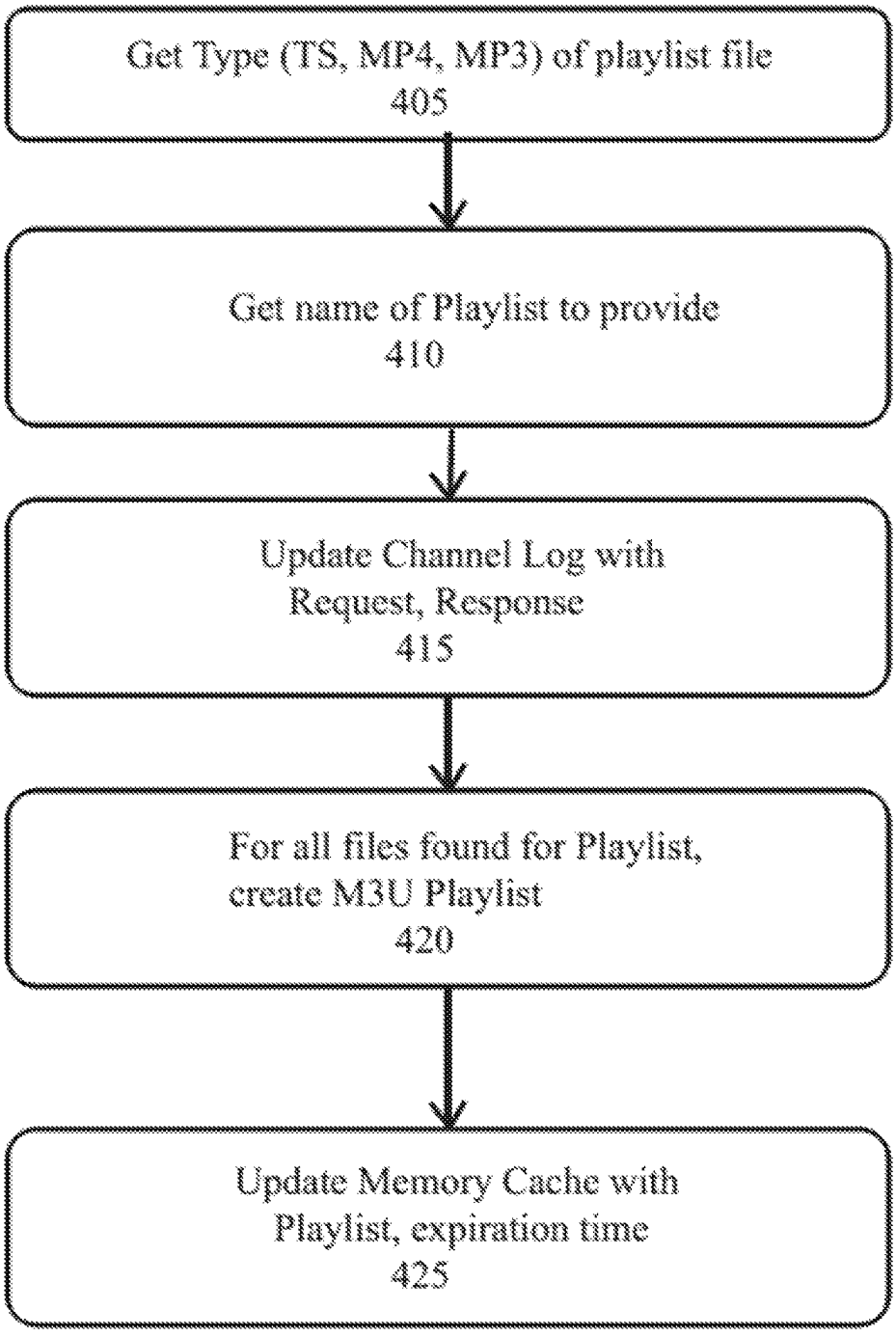

Get Type (TS, MP4, MP3) of playlist file
405
Get name of Playlist to provide
410
Update Channel Log with
Request, Response
415
For all files found for Playlist,
create M3U Playlist
420
Update Memory Cache with
Playlist, expiration time
425

FIG. 4

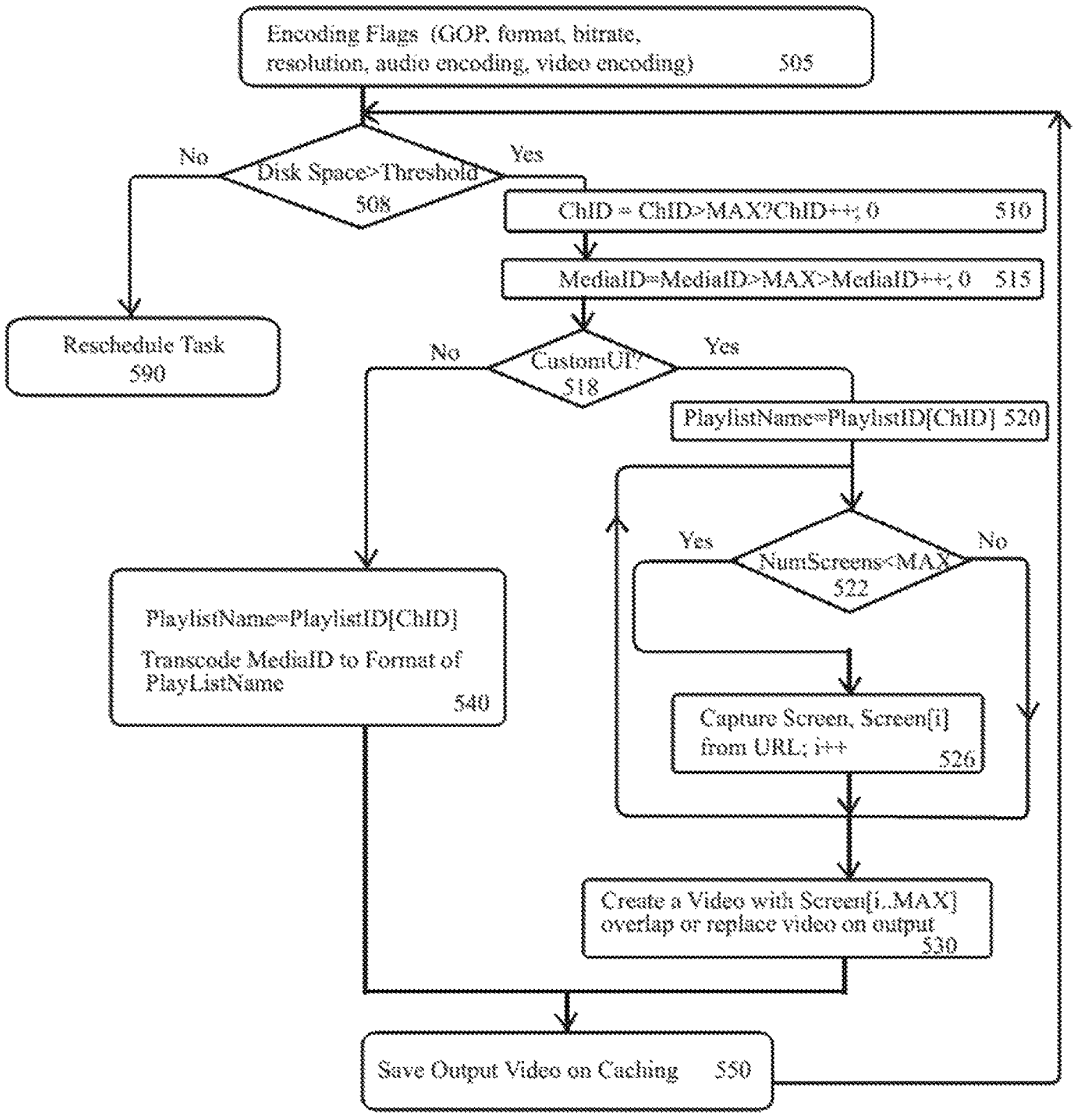

Encoding Flags (GOP, format, bitrate, resolution, audio encoding, video encoding) 505
No
Disk Space>Threshold 508
Yes
ChID = ChID>MAX?ChID++; 0 510
MediaID=MediaID>MAX>MediaID++; 0 515
Reschedule Task 590
No
CustomUI? 518
Yes
PlaylistName=PlaylistID[ChID] 520
Yes
NumScreens<MAX 522
No
PlaylistName=PlaylistID[ChID]
Transcode MediaID to Format of PlayListName 540
Capture Screen, Screen[i] from URL; i++ 526
Create a Video with Screen[i..MAX] overlap or replace video on output 530
Save Output Video on Caching 550

FIG. 5

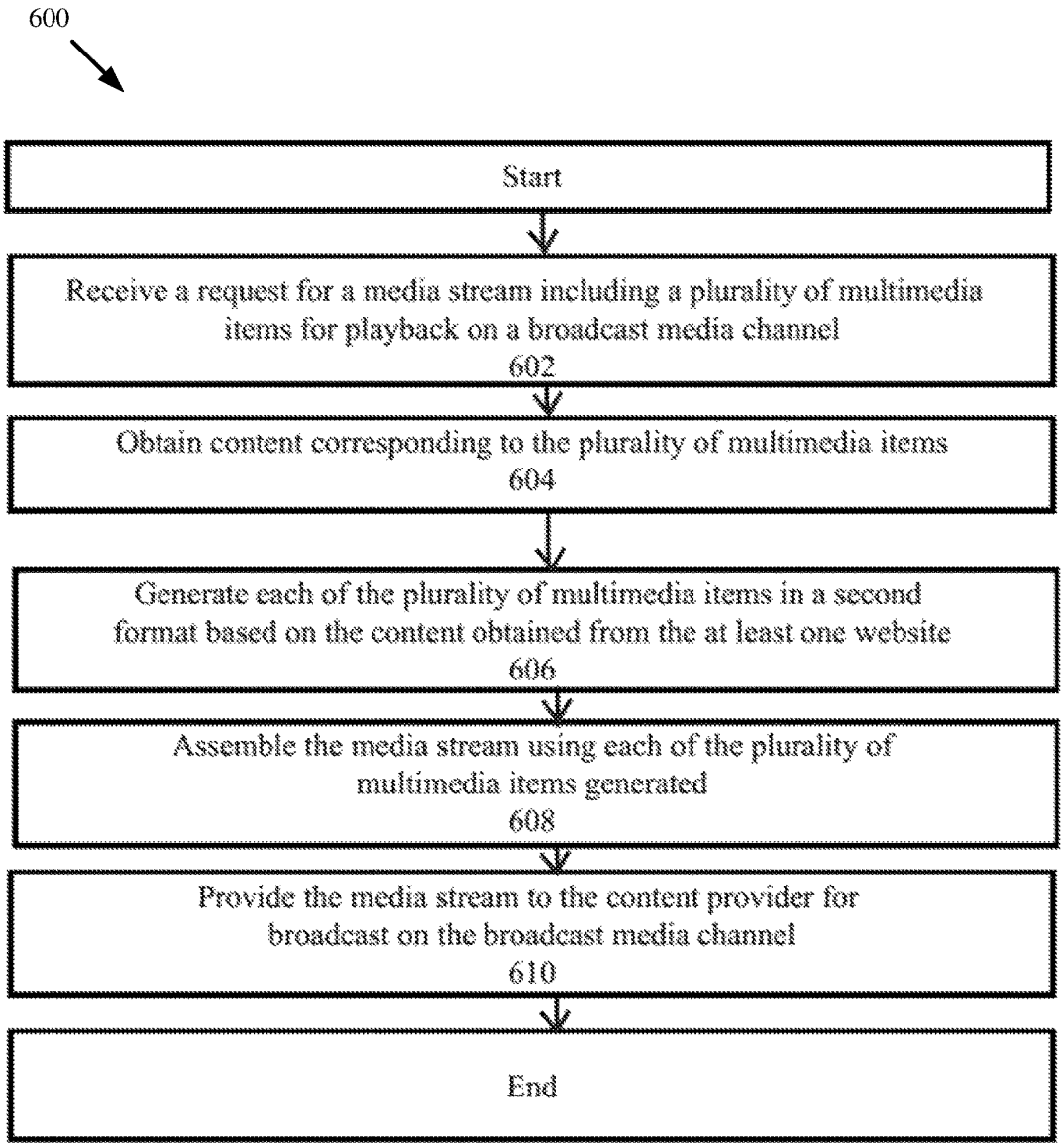

600
Start
Receive a request for a media stream including a plurality of multimedia items for playback on a broadcast media channel
602
Obtain content corresponding to the plurality of multimedia items
604
Generate each of the plurality of multimedia items in a second format based on the content obtained from the at least one website
606
Assemble the media stream using each of the plurality of multimedia items generated
608
Provide the media stream to the content provider for broadcast on the broadcast media channel
610
End

FIG. 6

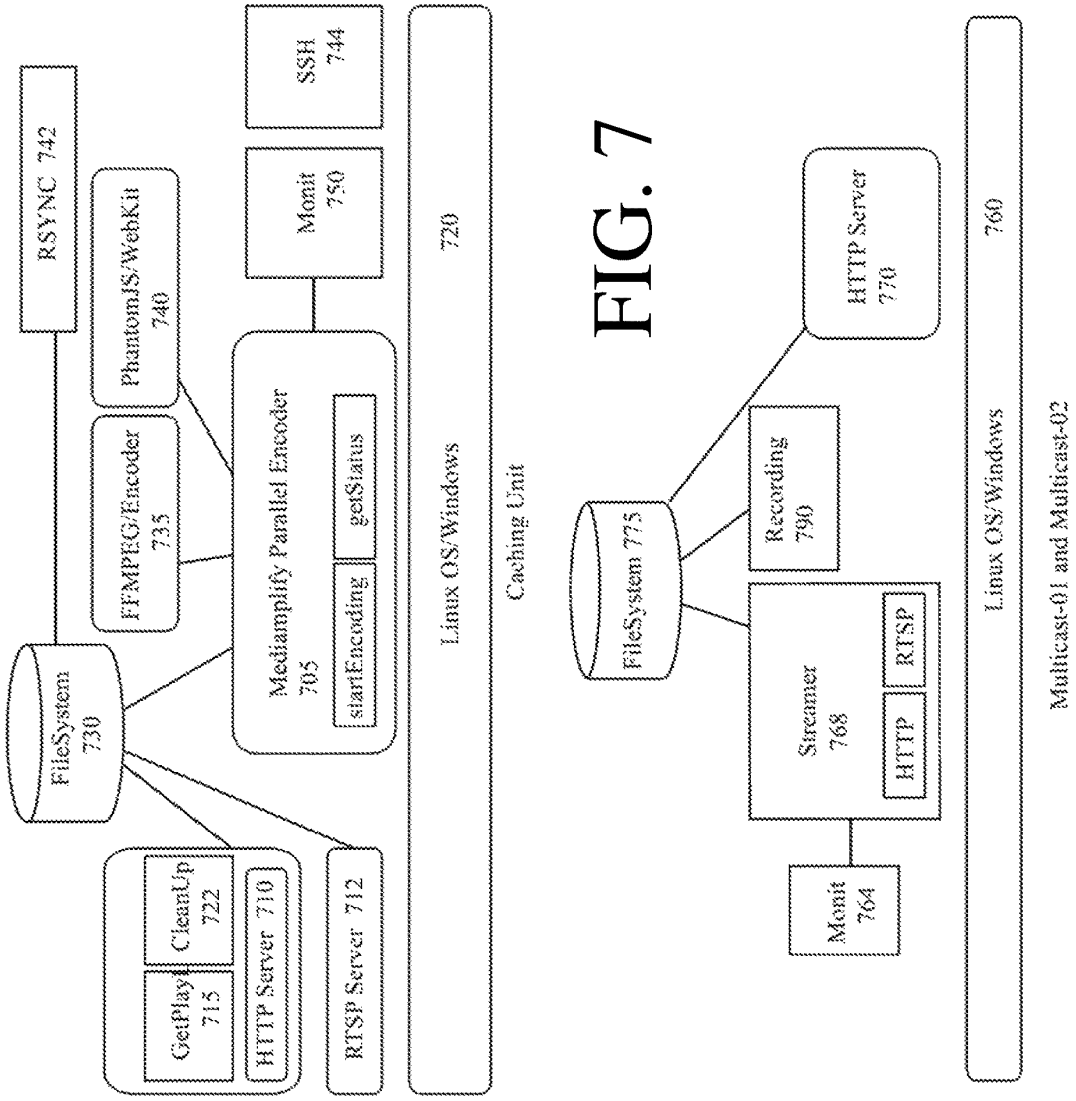

RSYNC 742
PhantomJS/WebKit 740
FFMPEG/Encoder 735
FileSystem 730
GetPlay 715
CleanUp 722
HTTP Server 710
RTSP Server 712
Mediamplify Parallel Encoder 705
startEncoding
getStatus
Monit 750
SSH 744
Linux OS/Windows
720
Caching Unit
FileSystem 775
Recording 790
Streamer 768
HTTP
RTSP
Monit 764
HTTP Server 770
Linux OS/Windows
760
Multicast-01 and Multicast-02

FIG. 7

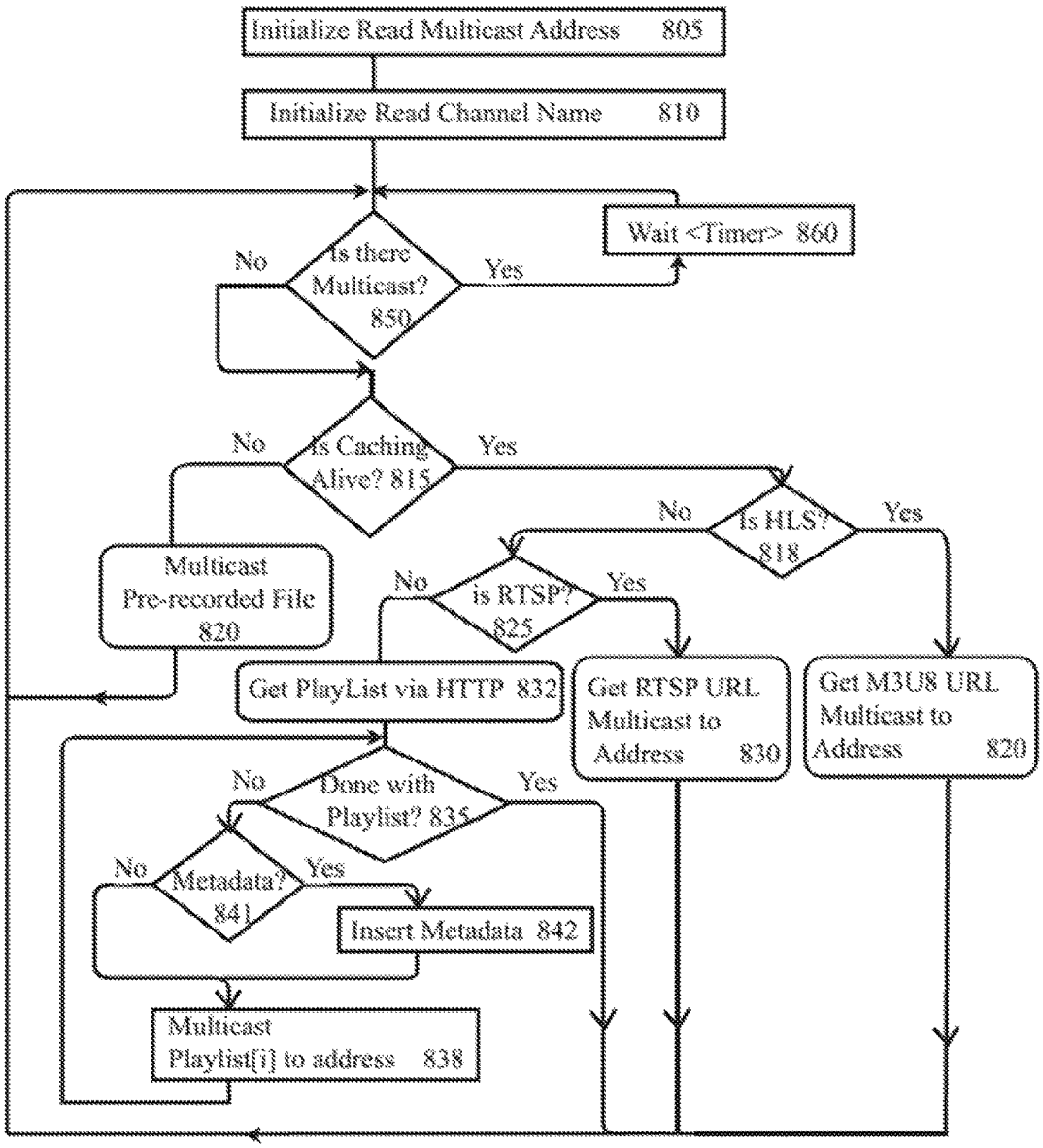

Initialize Read Multicast Address 805
Initialize Read Channel Name 810
Wait <Timer> 860
Is there Multicast? 850
No
Yes
Is Caching Alive? 815
No
Yes
Is HLS? 818
No
Yes
Multicast Pre-recorded File 820
is RTSP? 825
No
Yes
Get PlayList via HTTP 832
Get RTSP URL Multicast to Address 830
Get M3U8 URL Multicast to Address 820
Done with Playlist? 835
No
Yes
Metadata? 841
No
Yes
Insert Metadata 842
Multicast Playlist[i] to address 838

FIG. 8

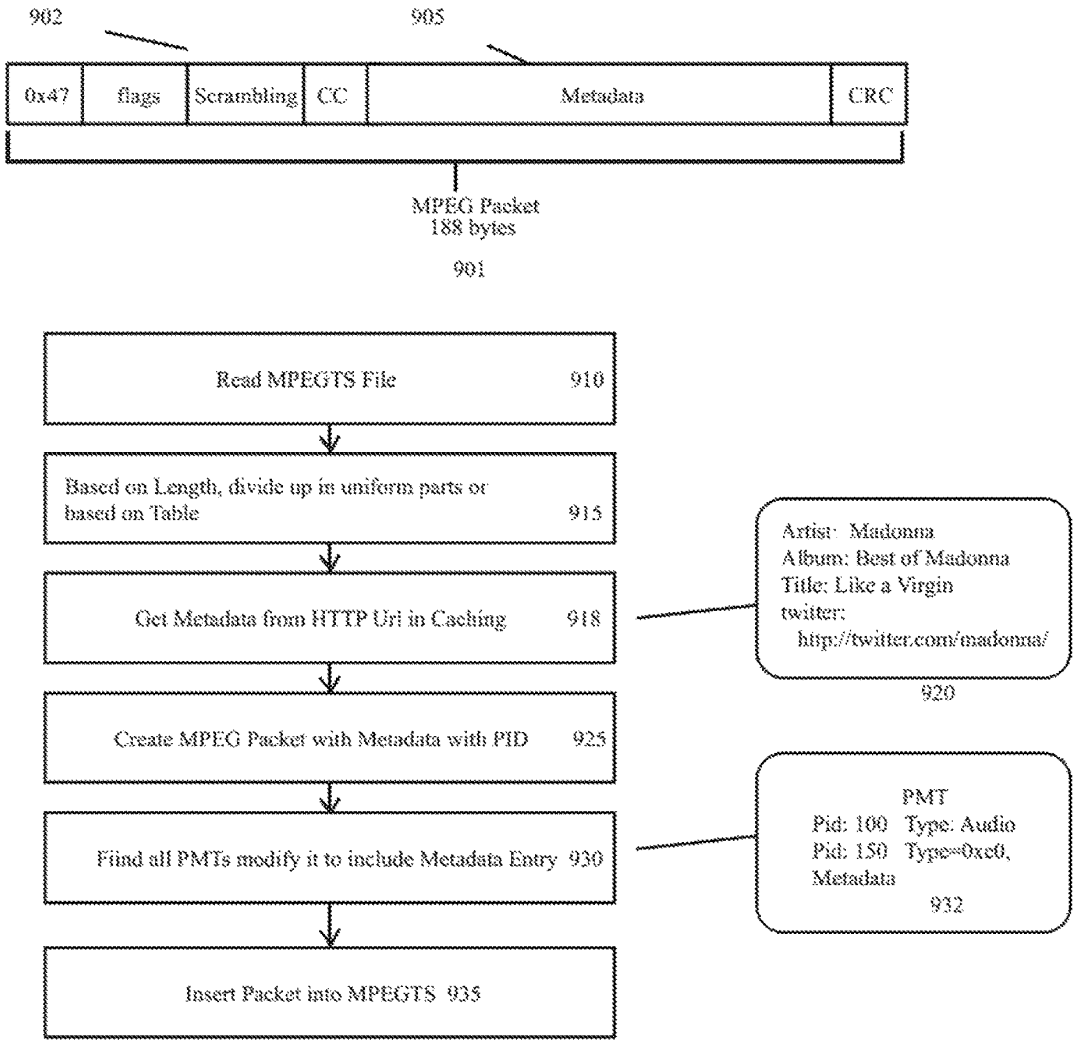

902
905
0x47
flags
Scrambling
CC
Metadata
CRC
MPEG Packet
188 bytes
901
Read MPEGTS File 910
Based on Length, divide up in uniform parts or based on Table 915
Get Metadata from HTTP Url in Caching 918
Create MPEG Packet with Metadata with PID 925
Find all PMTs modify it to include Metadata Entry 930
Insert Packet into MPEGTS 935
Artist: Madonna
Album: Best of Madonna
Title: Like a Virgin
twitter:
http://twitter.com/madonna/
920
PMT
Pid: 100 Type: Audio
Pid: 150 Type=0xc0,
Metadata
932

FIG. 9

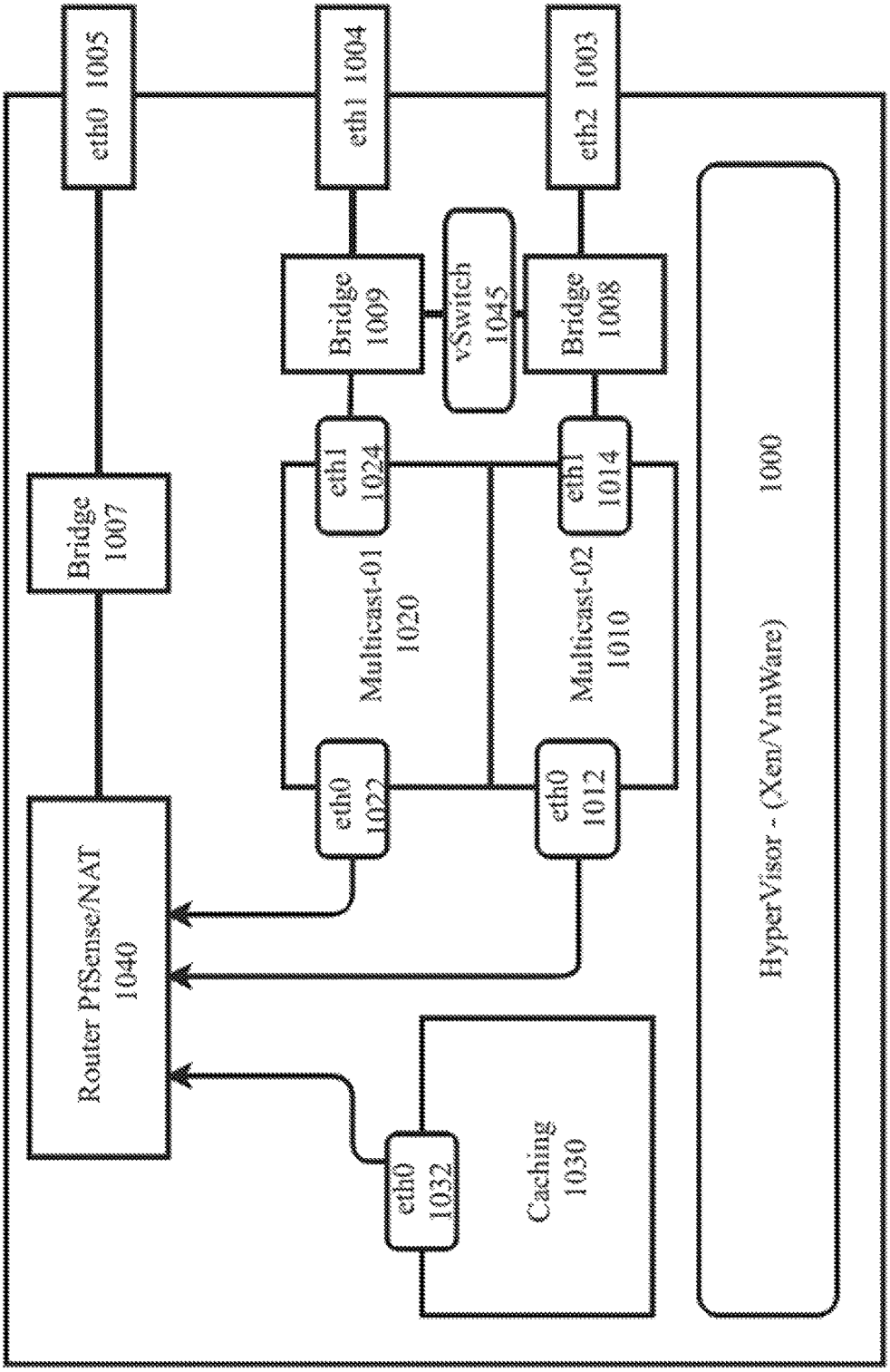

eth0 1005
eth1 1004
eth2 1003
Bridge 1009
vSwitch 1045
Bridge 1008
Bridge 1007
eth1 1024
eth1 1014
Multicast-01 1020
Multicast-02 1010
eth0 1022
eth0 1012
Router PfSense/NAT 1040
eth0 1032
Caching 1030
HyperVisor - (Xen/VmWare) 1000

FIG. 10

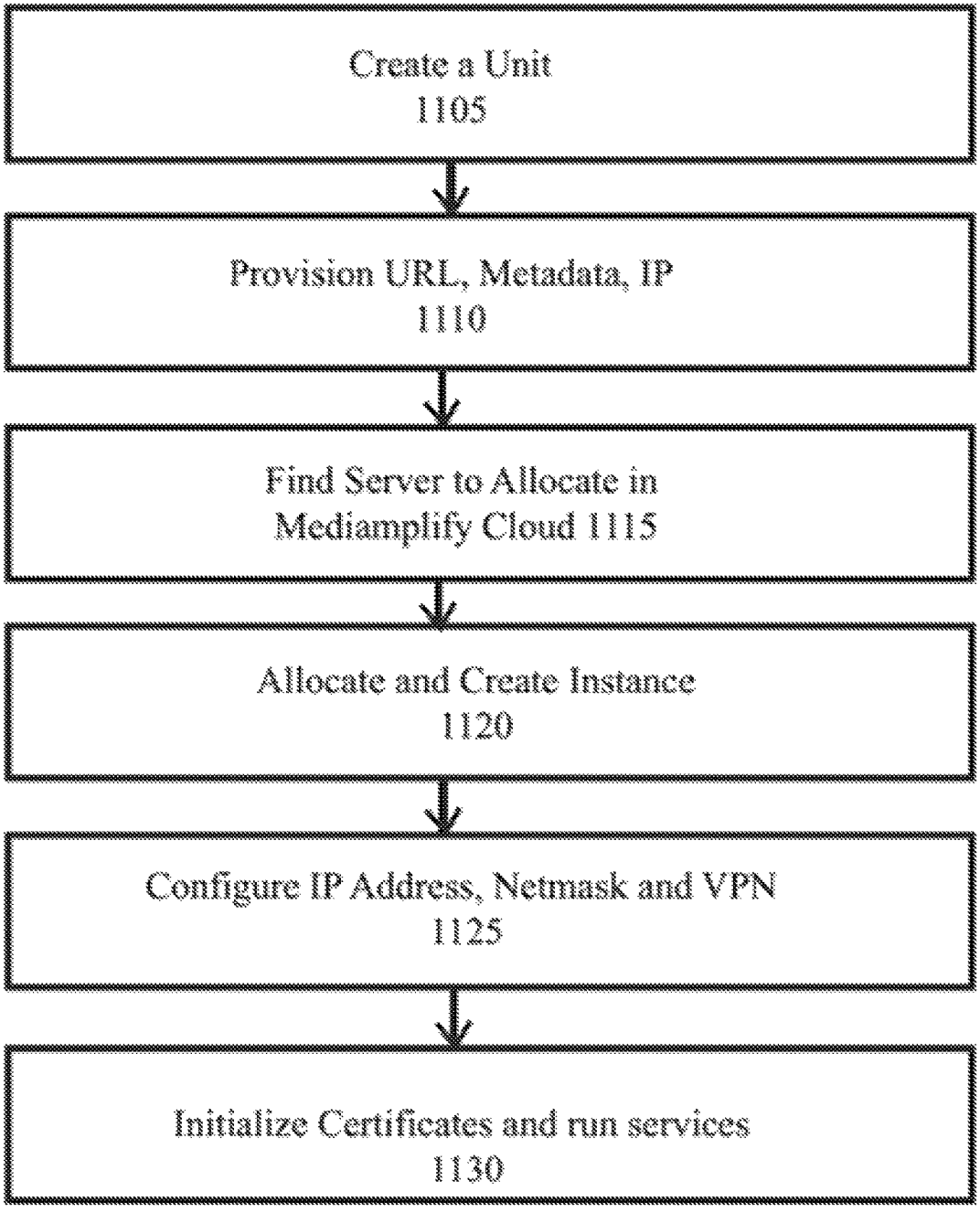

Create a Unit
1105
Provision URL, Metadata, IP
1110
Find Server to Allocate in
Mediamplify Cloud 1115
Allocate and Create Instance
1120
Configure IP Address, Netmask and VPN
1125
Initialize Certificates and run services
1130

FIG. 11

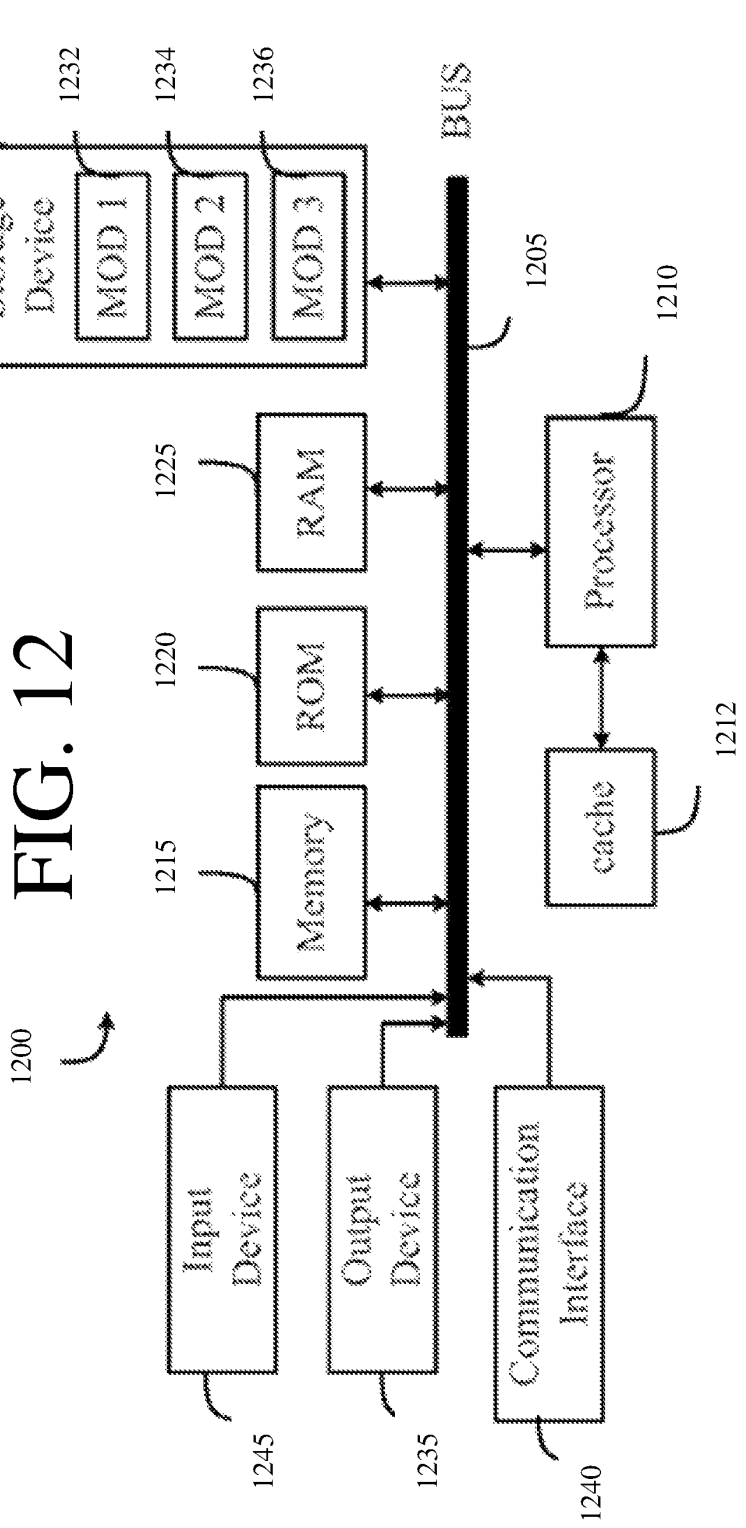

1200
1205
BUS
1210
Processor
1212
cache
1215
Memory
1220
ROM
1225
RAM
1230
Storage Device
1232
MOD 1
1234
MOD 2
1236
MOD 3
1235
Output Device
1240
Communication Interface
1245
Input Device

FIG. 12

METHOD, SYSTEM, AND APPARATUS FOR MULTIMEDIA CONTENT DELIVERY TO CABLE TV AND SATELLITE OPERATORS

CROSS-REFERENCE TO RELATED APPLICATION

This application is a continuation of U.S. patent application Ser. No. 15/538,911, which was filed Jun. 22, 2017, which is a National Stage Entry of International Patent Application No. PCT/US2015/067464, which was filed on Dec. 22, 2015, which claims priority to U.S. Provisional Application 62/095,504, which was filed on Dec. 22, 2014. The complete disclosures of which are incorporated herein by reference in their entirety.

FIELD OF THE DISCLOSURE

The present disclosure provides a mechanism for delivering multimedia content from a cloud-based system to cable or satellite content providers.

The disclosure describes a novel method and a system for continuous media delivery and secured synchronization of multimedia files that are broadcasted to set top boxes or subscriber units in the field that are connected to IPTV or Cable Systems. The present technology can securely connect to a cloud-based platform (e.g. OpenStack, Amazon EC2, Mediamplify Cloud, etc.), creates a set of multimedia files (e.g. MPEG4 movies) into a secured repository (e.g. Secured File System, Linux/Windows, etc.), modifies those files according to certain rules as defined by the method herein, and reproduces those signals via a multicast video stream (e.g. User Datagram Protocol (UDP) multicast, etc.) encapsulated in a Transport Stream (TS) frame that can be a multiple transport stream (several transports in one TS frame) or a single transport stream (one transport stream according to the MPEG-2 Part 1 Specification or similar multimedia streaming that is compatible with MPEG-TS at a predetermined rate or at a variable bit rate).

BACKGROUND

Cable operators, Multiple System Operators (MSO), and Digital Satellite Systems (DSS) deliver media content by utilizing satellite, Radio Frequency (RF) and Integrated Receiver and Decoder (IRD) technologies, which provide outputs that can include Asynchronous Serial Interface (ASI) signal formats. Additionally, MSOs and DSSs use dedicated hardware encoders and transcoding systems if the source video/audio is incompatible with the set top boxes of the cable or satellite operator. In general, the video/audio content delivered via the satellite to the cable or satellite operator arrives via wireless link or receiver, which is processed by an IRD that receives the stream from the satellite and can ultimately broadcast that signal to the cable operator head end in several formats. In addition, some systems may include multicast units connected with IRDs that tune to the right transponder system.

Satellite systems are used to deliver data (e.g. TV, radio, Video-on-Demand, multimedia streams) from a particular source (e.g. third-party content provider) to cable head end systems or other satellite systems. Satellite delivery is performed via a broadcast signal containing digital pictures and audio inside a transponder frequency. Transponders are radio frequency (RF) space allocated in a particular satellite.

For example, a third-party content provider can maintain multimedia files in CD/DVDs, pre-recorded storage, or as

pre-recorded files that are reproduced in a particular audio or video encoding format using a video or audio encoder (e.g. MP3, H.264, AC3, and others). The audio and video is then made part of an RF signal that is broadcasted to the satellite system. This signal is then received by the cable or satellite operator using an antenna receptor and is decoded to generate either an analog signal (e.g. RCA Cables or any other analog interface) or digital signal (e.g. ASI, Asynchronous Serial Interface). If an analog signal is received, modern DVB (Digital Video Broadcasting) Cable and Satellite systems will encode this signal to their particular video/audio encoding requirements such that it can be broadcasted in digital packets via a multicast MPEG Transport Stream. The same occurs if a receiver decodes the signal in ASI. As such, this signal is converted from ASI to Ethernet, or simply redirected to a multicast MPEG Transport stream if arriving in a compatible encoding format for the receiving head end cable system.

When no satellite is being used, video, pictures and music, are read out from the DVD or a hard-drive containing MPEG-layer 3 or MPEG-layer 2 files that were encoded at a pre-determined bit rate according. Those video feeds can be reproduced at a synchronized timing using a multicast MPEG Transport Stream using RTP (Real-time Transport Protocol)-based multicast communication and RTCP (RTP Control Protocol)-based mechanisms, as well as standard UDP (User Datagram Protocol) multicast streams with proprietary timing.

Additionally, IPTV systems can provide mechanisms to broadcast a signal using the multicast protocol in MPEG transport streams to a customer premises with compatible set top boxes (same encoder, same streams, encryption keys, etc). A compatible set top box is such that when connected to the cable TV system it can properly decode video/audio from the cable operator's head end system. Some of these IPTV systems rely on CDN (Content Delivery Networks) that enable distribution of multimedia files to IP-enabled devices. For example, a mechanism can be provided whereby a head end content (MSO) that is being broadcasted to a cable subscriber is also available to an IP-enabled device such as a smartphone, PC, or tablet computer.

SUMMARY

Disclosed are systems, devices, methods, and non-transitory computer-readable media for media delivery from a cloud or IP-based distribution network, or CDN (Content Delivery Network) to MSO (Multiple System Operators) or head-ends that include cable and satellite delivery mechanisms. The present technology unifies cloud-based delivery (Mediamplify cloud) with the cable-based mechanism (e.g. Comcast, Verizon FiOS).

An example computer-implemented method can receive, from a content provider such as a cable or satellite operator, a request for at least one media stream for playback on a broadcast media channel. The request for the at least one media stream can include a request for a plurality of multimedia items. Content corresponding to the plurality of multimedia items can be obtained from at least one website or cloud service that offers the content in at least one first format. Based on the obtained content, the plurality of multimedia files can be generated in a second format that is compatible with the content provider. The media stream can assembled using each of the multimedia items generated in the second format. The media stream can be provided to the content provider for broadcast on the broadcast media channel.

In some aspects of the present technology, obtaining the content can include retrieving at least one audio file corresponding to an audio component of the multimedia item and retrieving a plurality of images as screen captures that can correspond to a video component of the multimedia item. Generating the multimedia files in the second format can include combining the plurality of images and the at least one audio file to create each of the multimedia items.

BRIEF DESCRIPTION OF THE DRAWING

There are shown in the drawings, embodiments which are presently preferred, it being understood, however, that the disclosure is not limited to the precise arrangements and instrumentalities shown

FIG. **1** shows an example block diagram illustrating an exemplary head end (MSO);

FIG. **2** shows an example block diagram of the apparatus located at the MSO facility (mediaplug);

FIG. **3** shows an example method for initialization of Mediaplug components;

FIG. **4** shows an example method to obtain list of files to multicast to a cable operator MSO;

FIG. **5** shows an example method for encoding video and audio files;

FIG. **6** shows an example method for providing multimedia content to a cable operator;

FIG. **7** shows an example block diagram of example software components of the Mediaplug;

FIG. **8** shows an example method to multicast from a component in the Mediaplug;

FIG. **9** shows an example method to insert metadata into in an MPEG Transport Stream;

FIG. **10** shows an example block diagram for a Virtualized Mediaplug

FIG. **11** shows an example method to initialize virtual mediaplug components; and

FIG. **12** shows an example possible system embodiment for implementing various embodiments of the present technology

While the present technology is amenable to various modifications and alternative forms, specifics thereof have been shown by way of example in the drawings and will be described in detail. It should be understood, however, that the intention is not to limit the present technology to the particular embodiments described. On the contrary, the intention is to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the present technology.

DETAILED DESCRIPTION

The following description should be read with reference of the drawings, in which like elements are numbered in similar fashion. The drawings are not necessarily at scale and are not intended to limit the scope of the disclosure. Those skilled in the art understand that there are alternatives that may be used as well which are also considered to be within the scope of the disclosure.

Generally, the disclosed technology pertains to a delivery mechanism for providing multimedia content to cable systems without the use of a satellite system in a fault-tolerant and reliable fashion. FIG. **1** illustrates a block diagram that includes a Mediamplify Cloud **101**. The cloud **101** can refer to a set of virtualized instances or non-virtualized instances of one or more servers that provide access to archives and digital files with media content stored in them. For example, the cloud **101** can be implemented using VMWave or Xen and OpenStack, or simply reside in Amazon Web Services or Rackspace. In addition, special provisioning can be provided in cloud **101** for secured access.

The cloud **101** service files can be accessible via the internet **105** and can be stored in a cloud-based file system or cluster file system (e.g. GlusterFS or Hadoop, Amazon S3). These files can be multimedia files that include, as non-limiting examples, MPEG-4 Video files with H.264 encoded video and AAC encoded audio or MPEG-layer 3 audio as well (MPEG2 Video could also be used). These files can be accessed using a secured transport protocol such as, but not limited to, SSL or a synchronization tool as "rsync," commonly found in Linux/MacOS environments. The communication link **106** can be a DSL, Cable Modem, Wireless WAN, Fiber, Metro Ethernet, etc. and can be linked with the MediaPlug **110** unit. The Mediaplug **110** can reside at the "MSO" facility and can be collocated with all the cable or satellite operator equipment. The MSO is a facility used by the Cable Operator to receive all TV and Radio Programming that the cable operator will then multiplex, re-encode, and distribute from the MSO to a set of subscriber units with set top boxes, or modulate the signal in TV analog channels (2-60+).

One function of the MediaPlug **110** is to provide multimedia content, e.g., video and audio, to an MPEG multiplexer at the headend **120**. The content can be pre-formatted in MPEG Transport Streams that the multiplexer **120** (e.g. Arris TMX-2010) will then be able to capture, reformat in any way the operator requires, and deliver to the cable operator's subscribers via Coaxial Cable **125** or any other means suitable for a multicast or unicast delivery to its customers with "Set Top boxes" **130**, **131**, **132**. A "Set Top Box" is customer premise equipment that will be able to decode and display in a TV set or other screen display, via a signal received by its HDMI or analog input, the contents of the TV programming the cable operator offers.

The Mediaplug **110** can be a computer or server or set of computers of servers that can communicate with the Cloud **101** using a standard Local Area Network (e.g. Gigabit Ethernet). The Mediaplug **110** can store, encode, and transmit multimedia files in the format that the cable operator at its MSO requires. This cable format may include audio, video, and metadata (subtitles, control data, and any additional component that can be packaged in an MPEG Packet that is part of the MPEG Transport Stream). In one embodiment, Mediaplug **110** can include components such as a caching unit, and one or more multicasting servers.

FIG. **2** illustrates an example configuration of the hardware components of Mediaplug **110** which includes three servers. A server is a computer device, usually rack mountable unit with volatile memory such as RAM, one or more micro-processors, and non-volatile memory such as a hard disk. However, one skilled in the art will recognize that the present technology is not limited to a particular configuration and can be varied according to different specifications. FIG. **2** illustrates Mediamplify Cloud **202** which is connected to the Internet backbone **203**. Link **204** (e.g. DSL, Cable Modem, Fiber) provides connectivity between cloud **202** and a Network Address Translator unit **205** (e.g. Cisco RVS4000, or any other NAT device) which can provide Gigabit Ethernet switching capabilities. The lines **206**, **207**, and **208** show Gigabit Ethernet links, however one skilled in the art will understand that Gigabit Ethernet or a Wireless LAN using 802.11g/n would be also a suitable interface to be used in a Mediaplug configuration. The Caching unit **210** can be the main storage component in the system and it can

contain all of the multimedia files in the format required by the cable operators, such as the Transport Stream format. The caching unit can communicate with Multicast-01 **215** and Multicast-02 **220**. The two Multicast units **215**, **220** can pull or obtain information from the caching unit via TCP/IP or UDP, using protocols such as HTTP (Hypertext Transport Protocol) or RTSP (Real-time Streaming Transport). The caching unit can also encode and transcode the multimedia files it downloads from the Cloud **202**. The caching unit can also keep updated information of all the metadata and create customizable screens that can be converted into video formats compatible with the Transport Stream content that will be provided to the cable operator at its MSO. MPEG MUX MSO **230** can correspond to a program residing in a computer system that processes and handles the MPEG streams from multiple sources. The MUX **230** can also function as the bridge between the source of the signal and the customer's set top box units. A non-limiting example program would be the CherryPicker DM6400 by MOTOROLA. Each of the components or modules of the Mediaplug can include software for performing functions and/or methods according to the present technology.

FIG. **3** illustrates an example method that can be used to configure and provision the units at boot-time. Each unit can initialize keys for SSH/IP Sec access at **305**. For example, the units can use IPSec and SSH Tunnel keys that can be stored in the administrator user account. The keys can be generated by the Mediamplify Cloud that are private keys or certificates, shared secrets or similar components by which the Mediaplug can connect securely with the Mediamplify cloud. Each cable operator can provide custom-based IP addressing at **310** for the Gigabit Ethernet ports that connect to the operators' network. Changing the IP addresses of the Multicast-01 and/or Multicast-02 refers to the IP address by which the links **221** and **216** in FIG. **2** are linked to the MPEG MUX MSO unit. A change of the IP address can refer to the 'ifconfig' command which is used in Linux-based systems and that can be changed in an Ubuntu box at/etc/network/interfaces file. Similarly, the network routing can be changed if the multicast address cannot be routed to the default gateway which points to the **205** NAT, but to **221** and **216** respectively for Multicast-02 and Multicast-01. In general, the **239**.*.*.* network address may be routed to those interfaces.

At step **320**, the Mediaplug can configure playlists per channel and multicast address. The playlist and channel configuration can be obtained from the cable/satellite operator and can include any number of channels for broadcasting multimedia content to end customers. As an example, the channels may include music channels corresponding to different music genres, e.g. rock, alternative, classical, jazz, hip hop, etc. Based on the particular genre, a corresponding playlist can be selected and/or configured. The Mediaplug can also determine the multicast address for each of the channels.

In some configurations a customizable user interface (UI) can be added to the output video MPEG Transport stream. As such, if the "Custom UI" variable is then true and valid, **325**, a link or URL **330** is loaded into the Mediaplug configuration that can be used when the video interface is created. The custom video interface can be created and fetched as needed or it can be created in real-time for a particular channel or for all the channels. The custom user interface variable can be uniquely configured per channel in the Mediaplug. The mediaplug can also monitor **340** all of the processes to ensure stability and continuous, uninterrupted operation. The initialization of the Mediaplug can also include setting the RSYNC profile **350**. The RSYNC profile can be used to update and synchronize media content with the cloud when the Mediaplug determines that the content has changed or been modified.

As described above, the Mediaplug can broadcast the multimedia MPEG stream using the programmed IP Address in multicast-01 and multicast-02 according to the method illustrated in FIG. **3**. In FIG. **4**, an example method is shown for obtaining the list of files to playback or broadcast to the MSO system. The file type or format requested by the multicasting embodiment, e.g. multicast-01 or multicast-02, can include Transport Stream (e.g. TS) and/or MPEG-4 Part 14 (e.g. MP4) values **405**. This request is executed from any of the multicasting embodiments, usually making use of the HTTP GET Request. The multicasting unit can connect to an HTTP Server and retrieve the list of files based on the type identified by the request. As the caching unit may handle multiple channels of different types and name, each channel can have a unique identifier corresponding to the name of the playlist. For example channel name "Cool" or "Rock," **410** are names that can identify the channel to be retrieved from the caching server. The activity log in the request can also be updated keeping track what step of the process is being completed **415**. At **420**, the caching server can generate a "playlist file" of mime type "audio/x-mpegurl" which will be interpreted as a multimedia playlist file when requested. Finally, as the playlist usually may not vary for a period of time until a new request is received, the playlist can be kept in the local memory caching service **425**.

As the requests arrive at the "Caching" unit from the multicasting units, the "Caching" unit can be configured to perform parallel encoding for all the different channels available from the unit. FIG. **5** illustrates an example method that can be implemented by the Mediaplug, and in particular, by the "Caching" unit. At step **505**, encoding flags or input parameters can be received which may include GOP (Group of Pictures) which is used by certain video encoders, resolution (e.g. 640×480) in pixels, bit rate in Kilobits per second, any encoding type of video (e.g. H.264), encoding type of audio (e.g. AC-3), duration of the video feed, etc. In addition, a "format" parameter can be received which refers to the output format or encapsulation, MPEG TS or MPEG4. The caching unit encodes audio and video, and can use the disk space in the Mediaplug. Hence in **508** the method checks for sufficient space left in the memory or hard drive. This task can be run on a thread together with all the other tasks that are working in parallel in order to speed up the processes of encoding and transcoding.

Several indexes or identifiers by the name "ChID," (these integers preferably no more than an integer value from **1** to the maximum number of channels) begin (e.g. MAX could be 50) to be generated by the caching unit **510**. This method can be performed for all the channels and all media linked to that particular channel identified by "MediaID" **515**, in this particular case the "MediaID." The variable "MAX" in this context can refer to the maximum number of media files read (e.g. **500**). The data captured from the media could be "Artist," "Author," or any other variable from an audio file. If a video file is used this could be "program name," "movie name," or any associated metadata information tied to the multimedia file and the Channel Identifier (ChID) associated with it "MediaID" file.

The caching unit can add a "Custom UI," or a customizable User Interface that is designed using Hypertext Markup Language (e.g. HTML) or a web service. A web service that matches a REST interface (Representation State Transfer) and uses Javascript Object Notation (JSON) or

XML (Extensible Markup Language) to respond to a custom UI request can be used. Moreover, this custom UI can include JavaScript, CSS, and HTML content files that can be rendered using a browser using WebKit (e.g. PhantomJS or Safari) or any other browser-rendering engine compatible with HTML4/5 or any future HTML version. If a customizable UT is part of the configuration **518**, rendered images from a web service can be used to create overlapping video or replace any video in the video feed file. Likewise, this video or customized screen can be used when no video at all is defined in the multimedia file, e.g. Audio-only file. The web-service to be contacted may use the "PlayListName" to be used for the Channel identified by the channel ID "ChID," retrieved using the "PlaylistID" function **520**. Each new PlayListName may contain different identifies to retrieve new images. Therefore one or more screens will be retrieved from the rendering engine as such **522** can be used to retrieve a set of screens from the web-service being contacted.

Capturing screens **526** can be done using a tool similar to PhantomJS (Webkit-based headless engine for rendering images) or QtCapture, or simply capturing screen frame buffers from a machine running any software tool. Alternatively, the method can capture a video file from another rendering function, which can create a sequence of screens that can be used to generate a video file. Once all screens and video are captured, **530** the resulting output created can be a video file that then is either replaced or merged (multiplexed) with the original file. As an example, if an audio content file is used such as an MP3 file, this function can create a video file from all the screens captured by **526**. Those screens are generated by calling a URL where the web-service is associated and creating a video file with the input audio and the captured screens. The output format can be an MPEG Transport Stream file that can be retrievable or streamed to the multicasting embodiment.

Once the output file containing the screen shoot sequence of videos encoded in H.264 (for example, or MPEG2Video) is created, the audio can be multiplexed and added to one of the encoding channels of the resulting video output and saved into the caching unit storage disk **550**. The multiplexing can be done using tools such as FFMPEG or VLC or any proprietary tool that can multiplex audio and video files into a resulting MPEG Transport Stream (or MPEG-4 output, or any similar output).

FIG. **6** illustrates an example method **600** for providing multimedia content to a cable operator. At **602**, a device such as the Mediaplug device receives a request from a cable/satellite operator for a media stream. A media stream can be formatted according to HTTP Live Streaming (HLS), an HTTP/RTSP playlist, or an RTSP stream. The media stream can include any number of multimedia items such as audio/video multimedia items. In some instances, the request can include a channel identifier that is associated with a particular category of multimedia items, such as a music genre corresponding to rock, classical, jazz, etc.

At **604**, contents corresponding to the multimedia items can be retrieved, downloaded, or otherwise obtained from one or more websites or cloud based servers. The contents can include data corresponding to either or both of the audio and video components of the multimedia items. For example, the data corresponding to the audio portion can include a music file in an MP3 format. Similarly, the data corresponding to the video portion can include a video that is obtained directly from the cloud. Alternatively, the video component can be assembled by using one or more screen captures from a website. The screen captures can include captures of still images presented by the website as well as captures of images from videos that are available on the website. As illustrated in FIG. **5**, the screen capture process can be repeated any number of times.

The Mediaplug can then generate **606** multimedia items in a second format based on the content obtained from the web server or cloud. That is, the Mediaplug can convert/encode the audio file into a format that is suitable for the cable operator and it can also assemble the various screen captures to generate the video component of the media item. Once the audio and video files are created, they can be combined, multiplexed, or encoded to a format that can be utilized by the multimedia stream. For example, the audio can be multiplexed and added to one of the encoding channels of the video output. The various multimedia items can be used **608** to assemble the media stream in a format corresponding with the request (e.g. HLS, HTTP/RTSP, RTSP stream). The media stream can be provided **610** to the content provider for broadcast on the broadcast media channel.

FIG. **7** illustrates a block diagram of an example architecture of the Caching Unit components. The figure shows **720** as the main operating system, which can be Linux, Windows, or any other operating system in use. The caching unit can contain two types of operating system services HTTP **710** and RTSP **712**. The RTSP service provides access so the media saved or created in the repository of the caching unit file system **730**. The RTSP server can be implemented using the Live555 RTSP server or similar. Alternatively, the HTTP Server can be implemented using "nginx" or "apache" web browsers, and the RTSP Servers can be implemented using Live555 services. In the case of the HTTP Server, this can also be used to get the Playlist of files generated from the method on FIG. **5 715**.

The GetPlayList **715** command can be implemented as follows:

- Receive and process a request for the name of the channel or playlist to be used,
- Retrieve all the filenames ordered by date of creation of all the files in a particular directory,
- Cache all the files into cache memory (e.g. Memcache or similar tool),
- Add type of HTTP header as M3U or PLS (e.g. a text file with a list of files or URLs to play),
- Return a list of HTTP or RTSP URLs to access each video generated or stored in the caching unit.

In some embodiments, the HTTP Server can also be used to clean up, update, and delete operations. The block unit called "CleanUp" **722** is in charge of keeping up to date caching information data and/or deleting files already used or that are not required to be used anymore by the multicast unit(s). Also the HTTP Server functions can include servicing M3U8 files corresponding to the HTTP Live Streaming format and all the segments created by the HTTP Live Streaming function. As such, a HTTP Live Streaming (HLS) generation program will produce the files and segment them as needed by the encoder and can then be serviced by the HTTP Server **710**. The Mediamplify Parallel Encoder **705** corresponds to a block that can implement the method shown in FIG. **5**. The resulting outputs from the Media Parallel Encoder **605** are stored in the file system **730**. The Mediamplify Parallel encoder **605** can be implemented in Python and can rely on web services (such as Twisted or Django), PhantomJS, and FFMPEG. Monit **750** corresponds to a monitoring block that can ensure that the process running the "Media Parallel encoder" keeps running at all times and does not stop upon failure. Additional blocks that can be included in Mediaplug are RSYNC **742** and SSH **744**.

These blocks can be used to ensure synchronization and updates of new media files coming from the cloud. The RSYNC block uses the "rsync" protocol and program over ssh (Secured Socket Layer Shell) to download media from the "Mediamplify Cloud" and synchronize multimedia files that are newly updated and could be part of particular Channel ID and a Playlist Name. Each new file synchronized with the Mediamplify cloud has a Media ID value which the cloud can assign, and include additional metadata information such as "Artist" and "Author." The "Mediamplify Parallel Encoder" also may receive requests from other components such as getStatus or StartEncoding, indicating what file is being encoded, its progress, and what other files are in the queue for encoding.

In some embodiments, the information from getStatus or StartEncoding can be generated using a JSON message retrieved upon a request via HTTP GET to the Mediamplify Parallel Encoder. A graphical user interface can then be used to plot the status of each song being encoded or provide previews of the videos being generated. Below is one non-limiting example of a JSON response made by the "Mediamplify Parallel Encoder" service:

{"song_encoded": "ts", "artist": "Madonna", "duration": 0, "exists_on_disk": True, "genre": "Pop", "title": "Like a Virgin", "music_id": "1082863"}

Response regarding the tatus for a song being encoded or a list of songs being encoded, as follows:

{"music_id": "109281", "encoding": "78%", "output_file": "/var/www/eglacast/pop/109281-abcdef-uuuid.ts", "thumbnail": http://mediamplify.com/images/abcdef-uuid.png"}

In some embodiments, there are two possible TCP/IP sockets open for listening used by the Caching component of the Mediaplug. A) Port 80 (as an example), or the standard HTTP port, used to retrieve content, view video content generated, update/delete cached files, and access the playlists, and B) Port 9553 (as an example), or the standard Mediamplify Parallel encoder port, used to monitor and review status of the songs being encoded, the data being collected, and all other related activities with encoding. Via this port, encoding/transcoding can be started or stopped.

Similarly, the "Mediaplug" components labeled "Multicast-01" and "Multicast-02" can also provide an HTTP interface to access the current song being played or being multicast via the HTTP Server **770**. For example, the HTTP Server may run a PHP or Python script that will return the current song being played by the streamer. The streamer block **768** can connect to the caching server via HTTP or RTSP protocols. The implementation of this block can be done using a combination of FIG. **8** instructions and using multicasting services available in VLC or FFMPEG (e.g. multicast, or tstools/tsplay).

One function of the streamer **768** is to read the files encoded by the caching unit, process those for multicasting and creating the MPEG Transport Stream multicast packets sent via the Ethernet port. Additionally, the multicast-01 and multicast-02 blocks contain a "Recording" function **790**, which is in charge or recording the multicasting streams and recording for later use in case of failure on the system. This operates by listening into the UDP (User Datagram Protocol) multicast address of each individual channels being broadcasted, and recording the output into a file. This file is then stored and made accessible for future use. Monit **764** can maintain the streamer process running at all times throughout a regular broadcasting cycle.

FIG. **8** illustrates an example method that can be performed by the streamer module in the Mediaplug. In one embodiment, the streamer can perform functions that include: connect to the caching unit; retrieve generated videos per playlist; determine if unit is working in fault-tolerant mode; playback pre-recorded audio if a failure is detected; and record units own output or any other streamer output if connected to switch or hub.

Turning to the method from FIG. **8**, at step **805**, the streamer reads the multicast address associated to the channel being broadcasted, in order to generate IGMP (Internet Group Management Protocol) messages and establish a multicast group (e.g. 239.0.0.1:8001). The channel name is also initialized at **810**. This value can be used to retrieve the proper content from the Caching server. In one embodiment, a configuration table can be created with tuples: <ChID>, <Channel Name>, <Multicast Address>, <Multicast Port>, such that no duplicates are used or created. Automation software can create these configuration tables and automate the process of creating all streamer calls. A streamer method can be called (e.g. from /etc/init.d/) at boot time and monitored with a tool such as Monit. Once the configuration is known, the streamer will check **850** if there are already multicasting transport streams generated by any other multicast component and avoid collisions. If such multicast data is detected, a delay can be used to delay a new attempt to check on that particular multicast group **860**. Hence this block indicates "Wait <Time>" or stop all processing for the amount of <Time> recommended by the specification. For example, the time for delay can be the "Main source" of input less the amount of time for receiving input from a backup server. During initialization, if the same multicast address is used to broadcast main and backup, the one with less amount of time delay will be first, followed by the "Backup." In cases were a hot spare is used, or two different multicast addresses can be in use, one for main and the other one for backup, then this step may be optional.

Once it is determined that there are no elements multicasting at the same address, the streamer will check if the Caching server is "alive" **815**. This can be performed in multiple ways, for example an HTTP Request must not generate a **404** or **403** error, but instead a successful **202** value. Likewise, ping requests can also be used before making an HTTP GET call to identify if the caching server is present and available. In the case that there are no ping responses, a timeout will trigger a failure and a pre-recorded content **820** will be played or sent to the multicast address and port of record. Recordings can be scheduled daily for an extended period of time (e.g. 8 hours or more). These recordings can store the recorded file in a temporary folder and then move that file over to the playback folder where streamer can read it.

If it is determined that the caching server is functioning properly, then there are three types of streams that can be sent to the multicast address and port:

HTTP Live Streaming (HLS) a multi-segment stream usually defined by extension M3U8, containing a set number of segments for a real-time stream source (Video/audio)

HTTP/RTSP file playlist, this means that one or many files are read from the caching server, usually defined by extension M3U or PLS

RTSP stream, this could be constant stream similar to HTTP Live Streaming (HLS) but using an RTSP protocol instead of HLS stream.

When multiple files are part of a playlist, the bit-rate may vary between playlist files. Different bit-rates among files in a playlist could cause problems in non-CBR (Constant Bit Rate) systems. To avoid such problems, the Mediaplug can maintain the stream at the bit rate of the previous stream by adding null MPEG TS packets at the same rate as the

previous media file was being sent over the multicast port. This will maintain appropriate bit-rate for playlists.

In RTSP service, streaming occurs by writing the media content to a named pipe or a FIFO file and allowing the RTSP service to read from that file and generate an RTSP stream. As such, in HLS and RTSP Streaming, the caching server knows the filename of the file being streamed. When the file is streamed from via playlist, both the caching and multicast unit know the name of the file being streamed, as the multicast server can then request from the caching server the metadata associated with the file name being streamed.

Accordingly the present technology can accommodate both cases and retrieve the current file name being streamed as a JSON response. The response can identify the content displayed or played hack at the end-user's set top box.

If HLS is used for streaming **818**, the streamer will connect to the proper M3U8 file **820** to pull all the segments corresponding to the live playlist file on the M3U8 stream. Programs and libraries such as FFMPEG or VLC can then be used to encapsulate the stream feed to an MPEG TS and multicast it to the pre-programmed multicast address and port. Similarly, if an RTSP stream **825** is used, the same process takes place at **830** using the RTSP as a protocol instead of HTTP.

If a list of files in a playlist **832** is in use "M3U," the list can be obtained using an HTTP GET request made to the caching server. Each file can then be streamed to the multicast address and port of record **838** until all elements of the playlist are completed and played back **835**.

In some instances, metadata can be added to the stream as an additional PID (Program Identifier) in the MPEG Transport Stream. If metadata is needed **841** then it will be inserted **842** here in accordance with FIG. **9**.

For example, the metadata added could be as simple as a string containing Artist, Name, or other information, or as complex as DCII Text (DigiCipher version 2, as specified by Motorola), MPEG TS Control messages (Two-way), or any other metadata or PID that can be inserted into the stream being sent to the multicast address and port.

FIG. **9** illustrates an example method used to insert a special data packet into the stream being written to the multicast address, without making use of timing information. Therefore, the metadata can be inserted such that it does not have timing dependency. Alternatively, certain type of metadata such as subtitles or lyrics may need to be inserted only at certain times so that it is synchronized with the video data.

The sample MPEG TS packet shown in **902** and **905** corresponds to the metadata inside the packet. This matches standard MPEG TS packet structure and may vary depending on the type of metadata being added to the stream.

The method to insert the packet starts by reading the MPEG TS file retrieved from the caching server **910**. If metadata corresponds to only song information, this information can be added at uniform times. Non-uniform timing inclusions can also be done by adding a table that includes the time and the metadata content added to the stream **915**. This metadata can be retrieved from the Caching unit using an HTTP Get request directed to the caching server **918** and may include artist name, title of song, or any other information **920**.

Creation of the MPEG Packet(s) **925** to be inserted at the appropriate times, which will set the places with those packets, will be inserted in the MPEG TS. Modify the PMT (Program Management Table) of the generated file and include the PID being inserted into the MPEG TS **930**. At step **932**, an audio PID may include a metadata PID of type DCII Text, which is added to the stream.

For each timing or location where the PID needs to be inserted **935**, the method can insert those packets and generate a buffer that can be sent to the multicast address as in illustrated in FIG. **8**.

As described above, the disclosed technology can be implemented using a set of modules included in the Mediaplug apparatus, which can be implemented using one or more servers accordingly. Alternatively, virtualization environments such as VMWare or Xen (FIG. **9**) can include a system and architecture that can be used to host all the Mediaplug functionality in a virtualized environment using a single server with multiple GbE ports.

The illustration in FIG. **10** shows a configuration of three virtual machines used for implementing the Mediaplug. Caching **1030** and its respective Ethernet port **1032**, Multicast-01 **1020** with two virtual Ethernet ports **1022** and **1024**, and Multicast-02 **1010**, with two Ethernet ports **1012** and **1014**. There are three bridges that include **1007**, **1008**, and **1009**. The multicast Ethernet ports **1024** and **1014** are bridged with eth1 **1004** and eth2 **1003** respectively via bridge **1009** and bridge **1008**, respectively. That is, the same content generated at **1024** can be forwarded via the bridge **1009** to the physical interface eth1 **1004** in the hardware. The vSwitch **1045** or the virtual switch between the two bridged interfaces **1008** and **1009** permits the two virtual machines of Multicast-01 **1010** and Multicast-02 **1020** to record each other and monitor their activity.

To achieve concurrency and proper execution in a cloud environment, the Mediaplug can use the example method shown in FIG. **11**. Once a create unit command is issued **1105**, provisioning of the metadata information and proper IP Address is provided for that particular instance **1110**. Once an IP Address and metadata has been chosen for the unit, the server can be allocated in the cloud and the instance can be created using CloudStack or OpenStack tools and services **1115**. The instance is then allocated and runs in the proper node in the cloud **1120**. Configuration of the assigned IP, Netmask, and VPN credentials are loaded at **1125**. Finally, certificate information is uploaded **1130** as well as all services run to enable the unit for execution of its caching functions, multicasting functions, or both.

FIG. **12** illustrates a conventional system bus computing system architecture **1200** such as can be used in Mediaplug **110**. Those of ordinary skill in the art will appreciate that other system architectures are also possible.

In computing system architecture **1200** the components of the system are in electrical communication with each other using a bus **1205**. Example system **1200** includes a processing unit (CPU or processor) **1210** and a system bus **1205** that couples various system components including the system memory **1215**, such as read only memory (ROM) **1220** and random access memory (RAM) **1225**, to the processor **1210**. The system **1200** can include a cache of high-speed memory connected directly with, in close proximity to, or integrated as part of the processor **1210**. The system **1200** can copy data from the memory **1215** and/or the storage device **1230** to the cache **1212** for quick access by the processor **1210**. In this way, the cache can provide a performance boost that avoids processor **1210** delays while waiting for data. These and other modules can control or be configured to control the processor **1210** to perform various actions. Other system memory **1215** may be available for use as well. The memory **1215** can include multiple different types of memory with different performance characteristics. The processor **1210** can include any general purpose processor and a hardware

module or software module, such as module 1 **1232**, module 2 **1234**, and module 3 **1236** stored in storage device **1230**, configured to control the processor **1210** as well as a special-purpose processor where software instructions are incorporated into the actual processor design. The processor **1210** may essentially be a completely self-contained computing system, containing multiple cores or processors, a bus, memory controller, cache, etc. A multi-core processor may be symmetric or asymmetric.

To enable user interaction with the computing device **1200**, an input device **1245** can represent any number of input mechanisms, such as a microphone for speech, a touch-sensitive screen for gesture or graphical input, keyboard, mouse, motion input, speech and so forth. An output device **1235** can also be one or more of a number of output mechanisms known to those of skill in the art. In some instances, multimodal systems can enable a user to provide multiple types of input to communicate with the computing device **1200**. The communications interface **1240** can generally govern and manage the user input and system output. There is no restriction on operating on any particular hardware arrangement and therefore the basic features here may easily be substituted for improved hardware or firmware arrangements as they are developed.

Storage device **1230** is a non-volatile memory and can be a hard disk or other types of computer readable media which can store data that are accessible by a computer, such as magnetic cassettes, flash memory cards, solid state memory devices, digital versatile disks, cartridges, random access memories (RAMs) **1225**, read only memory (ROM) **1220**, and hybrids thereof.

The storage device **1230** can include software modules **1232**, **1234**, **1236** for controlling the processor **1210**. Other hardware or software modules are contemplated. The storage device **1230** can be connected to the system bus **1205**. In one aspect, a hardware module that performs a particular function can include the software component stored in a computer-readable medium in connection with the necessary hardware components, such as the processor **1210**, bus **1205**, display **1235**, and so forth, to carry out the function.

It can be appreciated that example system **1200** can have more than one processor **1210** or be part of a group or cluster of computing devices networked together to provide greater processing capability.

For clarity of explanation, in some instances the present technology may be presented as including individual functional blocks including functional blocks comprising devices, device components, steps or routines in a method embodied in software, or combinations of hardware and software.

Any of the steps, operations, functions, or processes described herein may be performed or implemented by a combination of hardware and software modules, alone or in combination with other devices. In an embodiment, a software module can be software that resides in memory of a client device and/or one or more servers of a content management system and perform one or more functions when a processor executes the software associated with the module. The memory can be a non-transitory computer-readable medium.

In some embodiments the computer-readable storage devices, mediums, and memories can include a cable or wireless signal containing a bit stream and the like. However, when mentioned, non-transitory computer-readable storage media expressly exclude media such as energy, carrier signals, electromagnetic waves, and signals per se.

Methods according to the above-described examples can be implemented using computer-executable instructions that are stored or otherwise available from computer readable media. Such instructions can comprise, for example, instructions and data which cause or otherwise configure a general purpose computer, special purpose computer, or special purpose processing device to perform a certain function or group of functions. Portions of computer resources used can be accessible over a network. The computer executable instructions may be, for example, binaries, intermediate format instructions such as assembly language, firmware, or source code. Examples of computer-readable media that may be used to store instructions, information used, and/or information created during methods according to described examples include magnetic or optical disks, flash memory, USB devices provided with non-volatile memory, networked storage devices, and so on.

Devices implementing methods according to these disclosures can comprise hardware, firmware and/or software, and can take any of a variety of form factors. Typical examples of such form factors include laptops, smart phones, small form factor personal computers, personal digital assistants, and so on. Functionality described herein also can be embodied in peripherals or add-in cards. Such functionality can also be implemented on a circuit board among different chips or different processes executing in a single device, by way of further example.

The instructions, media for conveying such instructions, computing resources for executing them, and other structures for supporting such computing resources are means for providing the functions described in these disclosures.

Although a variety of examples and other information was used to explain aspects within the scope of the appended claims, no limitation of the claims should be implied based on particular features or arrangements in such examples, as one of ordinary skill would be able to use these examples to derive a wide variety of implementations. Further and although some subject matter may have been described in language specific to examples of structural features and/or method steps, it is to be understood that the subject matter defined in the appended claims is not necessarily limited to these described features or acts. For example, such functionality can be distributed differently or performed in components other than those identified herein. Rather, the described features and steps are disclosed as examples of components of systems and methods within the scope of the appended claims.

What is claimed is:

1. A computer-implemented method, comprising:

receiving, from a content provider, a request for at least one media stream for playback on a broadcast media channel, wherein the at least one media stream includes a plurality of multimedia items of different types;

obtaining content corresponding to the plurality of multimedia items from at least one source offering the content in at least one first format;

rendering a web page by a browser using the content;

generating a temporal sequence of screen captures of the rendered web page, where each screen capture defines all the content of the web page at a given time, and at least two adjacent screen captures illustrate a dynamic change of at least a portion of the content over time;

assembling the at least one media stream using the temporal sequence of screen captures; and

providing the at least one media stream to the content provider for broadcast on the broadcast media channel;

wherein the at least one media stream corresponds to at least one of an HTTP live stream (HLS), an HTTP playlist, and a Real-time Streaming Transport (RTSP) stream; and

wherein the web page is rendered in parallel in multiple threads.

2. The method according to claim **1**, wherein the at least one media stream is interacted with MPEG two way control messages.

3. The method according to claim **1**, wherein MPEG messages are sent to a service provider via a unicast address.

4. A computer-implemented method, comprising:

receiving, from a content provider, a request for at least one media stream for playback on a broadcast media channel, wherein the at least one media stream includes a plurality of multimedia items of different types;

obtaining content corresponding to the plurality of multimedia items from at least one source offering the content in at least one first format;

rendering a web page by a browser using the content;

generating a temporal sequence of screen captures of the rendered web page, where each screen capture defines all the content of the web page at a given time, and at least two adjacent screen captures illustrate a dynamic change of at least a portion of the content over time;

assembling the at least one media stream using the temporal sequence of screen captures; and

providing the at least one media stream to the content provider for broadcast on the broadcast media channel;

wherein assembling the at least one media stream comprises inserting at least one MPEG packet including metadata corresponding to the multimedia item; and

wherein the web page is rendered in parallel in multiple threads.

5. The computer-implemented method of claim **4**, wherein the at least one media stream is interacted with MPEG two way control messages.

6. The computer-implemented method of claim **4**, wherein MPEG messages are sent to a service provider via a unicast address.

7. A system, comprising:

a multicast server configured to generate parameters relating to at least one of video content, image content and audio content, and configured to output the parameters via MPEG outputs;

a caching server communicatively coupled to the multicast server, and configured to

receive and store the parameters,

create a temporal sequence of screen captures of a rendered web page, where each said screen capture defines content of the rendered web page at a given time, and at least two adjacent screen captures in the temporal sequence illustrate a dynamic change of at least a portion of the video content, image content or audio content over time,

assemble the temporal sequence of screen captures, and

provide at least one of the video content, image content and audio content to the multicast server for generating a multicast stream with MPEG encoded video and audio; and

a monitoring system configured to maintain generation of video and audio files, even in failure cases.

8. The system according to claim **7**, further comprising multiple servers for load balancing and fault-tolerance.

9. The system according to claim **7**, wherein the multicast server is selected to communicate a multicast stream available for a broadband network.

10. The system according to claim **7**, wherein the video content is encoded in a video streaming format so as to generate a unicast stream.

11. The system according to claim **7**, wherein the system generates audio MPEG files and add metadata in an MPEG frame.

12. The system according to claim **7**, wherein the system generates MPEG metadata that is interacted with two way broadcast TV systems.

13. A computer-implemented method, comprising:

receiving, from a content provider, a request for at least one media stream for playback on a broadcast media channel, wherein the at least one media stream includes a plurality of multimedia items of different types;

obtaining content corresponding to the plurality of multimedia items from at least one source offering the content in at least one first format;

rendering a web page by a browser using the content;

generating a temporal sequence of screen captures of the rendered web page, where each screen capture defines all the content of the web page at a given time, and at least two adjacent screen captures illustrate a dynamic change of at least a portion of the content over time;

assembling the at least one media stream using the temporal sequence of screen captures; and

providing the at least one media stream to the content provider for broadcast on the broadcast media channel;

wherein the at least one media stream corresponds to at least one of an HTTP live stream (HLS), an HTTP playlist, and a Real-time Streaming Transport (RTSP) stream; and

wherein the web page is rendered in parallel in virtual instances or virtual machines.

* * * * *

EXHIBIT 3

US011140441B2

(12) **United States Patent**
Hernandez-Mondragon

(10) **Patent No.: US 11,140,441 B2**
(45) **Date of Patent: *Oct. 5, 2021**

(54) **METHOD, SYSTEM, AND APPARATUS FOR MULTIMEDIA CONTENT DELIVERY TO CABLE TV AND SATELLITE OPERATORS**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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US 2020/0322679 A1 Oct. 8, 2020

Related U.S. Application Data

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(60) Provisional application No. 62/095,504, filed on Dec. 22, 2014.

(51) **Int. Cl.**

H04N 21/4402	(2011.01)
H04N 21/84	(2011.01)
H04N 21/2343	(2011.01)
H04N 21/81	(2011.01)
H04N 21/8547	(2011.01)
H04N 21/233	(2011.01)
H04N 21/2387	(2011.01)
H04N 21/431	(2011.01)
H04N 21/472	(2011.01)
H04N 21/61	(2011.01)
H04N 21/6405	(2011.01)
H04N 21/643	(2011.01)

(52) **U.S. Cl.**

CPC ... ***H04N 21/440218*** (2013.01); ***H04N 21/233*** (2013.01); ***H04N 21/2387*** (2013.01); ***H04N 21/234309*** (2013.01); ***H04N 21/4312*** (2013.01); ***H04N 21/47217*** (2013.01); ***H04N 21/6118*** (2013.01); ***H04N 21/6143*** (2013.01); ***H04N 21/8106*** (2013.01); ***H04N 21/8133*** (2013.01); ***H04N 21/8153*** (2013.01); ***H04N 21/84*** (2013.01); ***H04N 21/8547*** (2013.01); *H04N 21/6405* (2013.01); *H04N 21/64322* (2013.01)

(58) **Field of Classification Search**

CPC H04N 21/233; H04N 21/234309; H04N 21/2387; H04N 21/4312; H04N 21/440218; H04N 21/47217; H04N 21/6118; H04N 21/6143; H04N 21/6405; H04N 21/64322; H04N 21/8106; H04N 21/8133; H04N 21/8153; H04N 21/84; H04N 21/8547

See application file for complete search history.

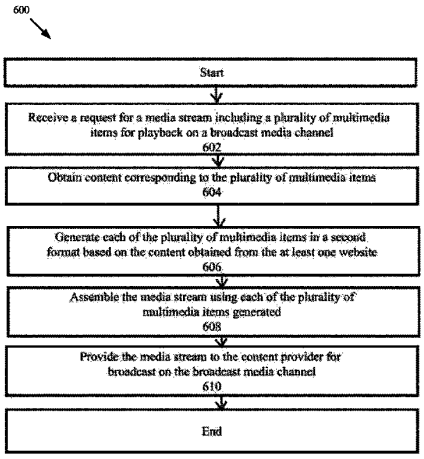
Primary Examiner — Rong Le

(74) *Attorney, Agent, or Firm* — The Concept Law Group, PA; Scott D. Smiley; Scott M. Garrett

(57) **ABSTRACT**

Systems, methods, and computer-readable media for delivering multimedia content from the cloud to cable operators are disclosed. A device located at the cable headend or implemented in the cloud can receive a request for at least one media stream for playback on a broadcast media channel. Content corresponding to a plurality of multimedia files in the media stream can be obtained from the internet or a cloud based service. The content can be used to generate the multimedia files in a format that is compatible with the cable operator. The multimedia files can be used to assemble the at least one media stream which can be provided to the cable operator for broadcast on the broadcast media channel.

26 Claims, 12 Drawing Sheets



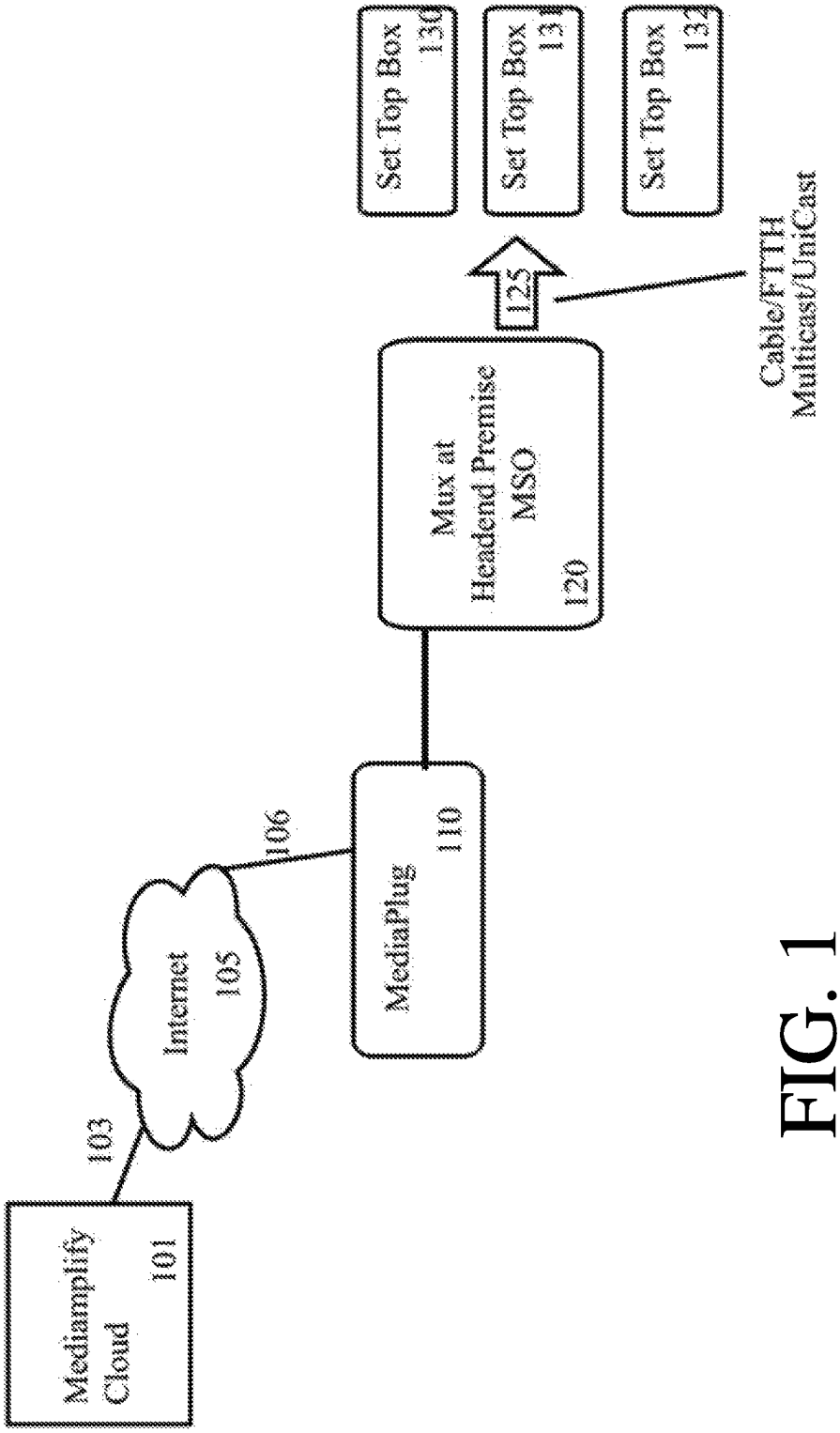

Mediamplify Cloud 101
103
Internet 105
106
MediaPlug 110
Mux at Headend Premise MSO 120
125
Cable/FTTH Multicast/UniCast
Set Top Box 130
Set Top Box 131
Set Top Box 132

FIG. 1

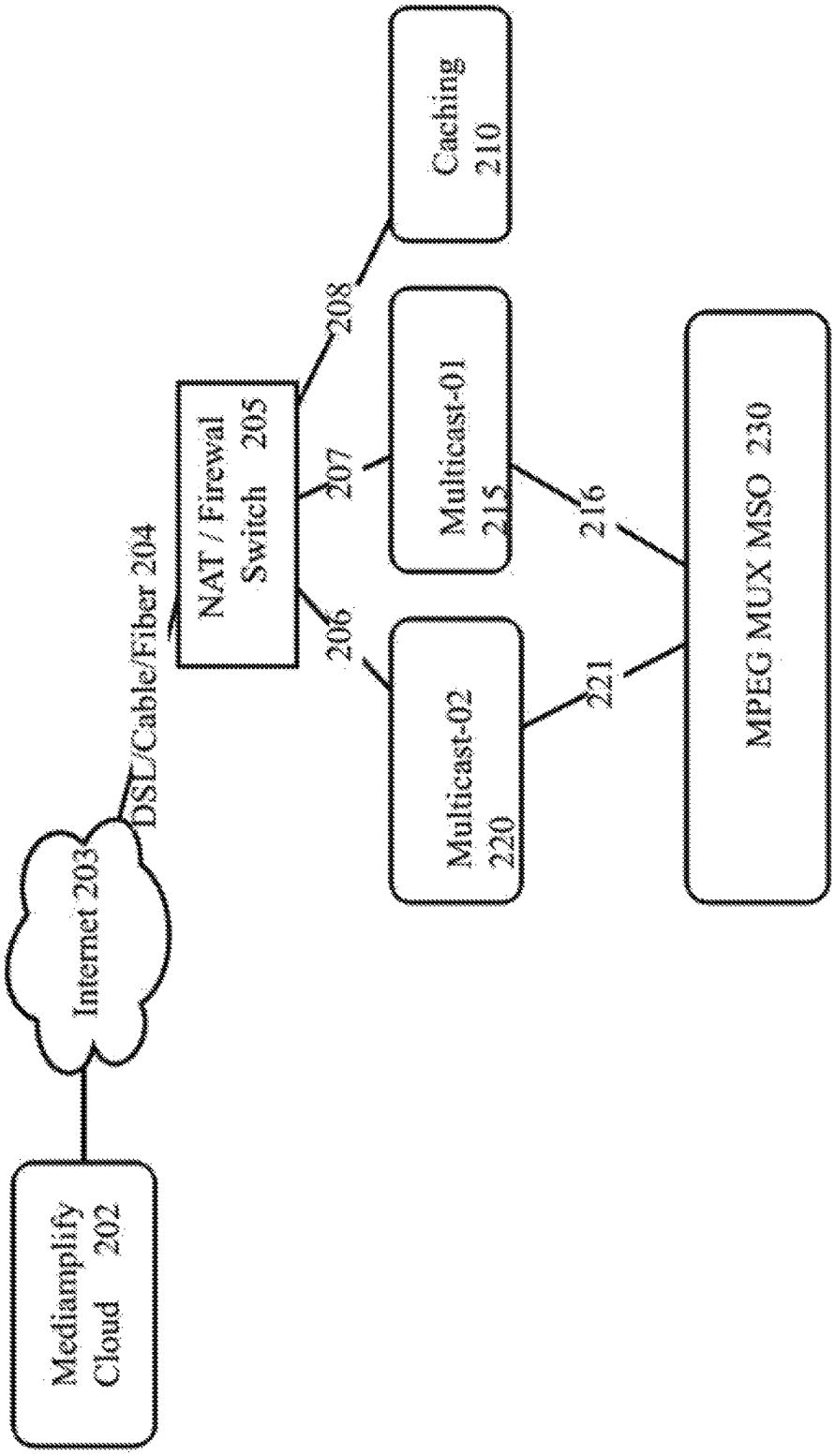

Mediamplify Cloud 202
Internet 203
DSL/Cable/Fiber 204
NAT / Firewal Switch 205
208
207
206
Caching 210
Multicast-01 215
Multicast-02 220
216
221
MPEG MUX MSO 230

FIG. 2

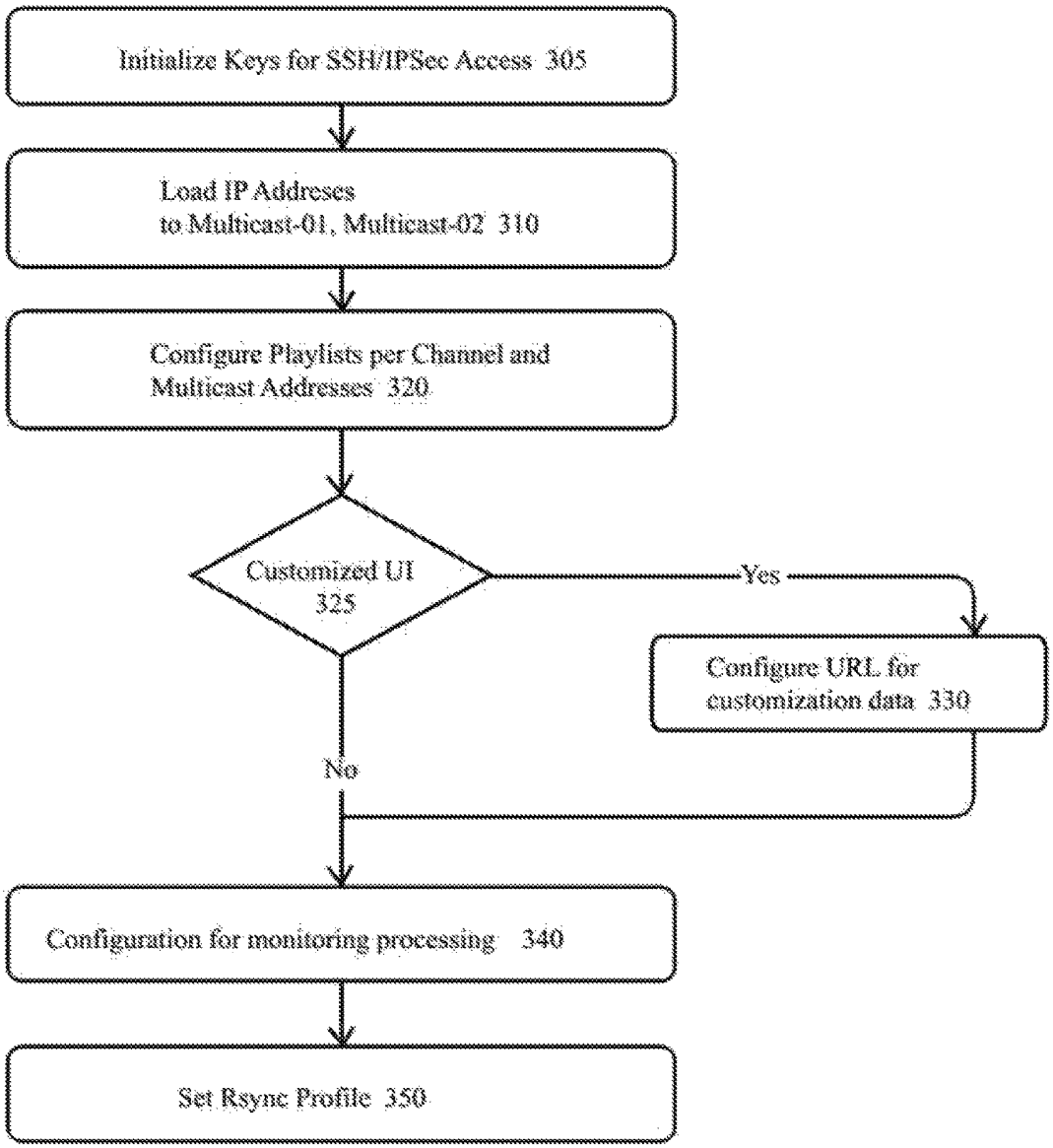

Initialize Keys for SSH/IPSec Access 305
Load IP Addreses to Multicast-01, Multicast-02 310
Configure Playlists per Channel and Multicast Addresses 320
Customized UI 325
Yes
Configure URL for customization data 330
No
Configuration for monitoring processing 340
Set Rsync Profile 350

FIG. 3

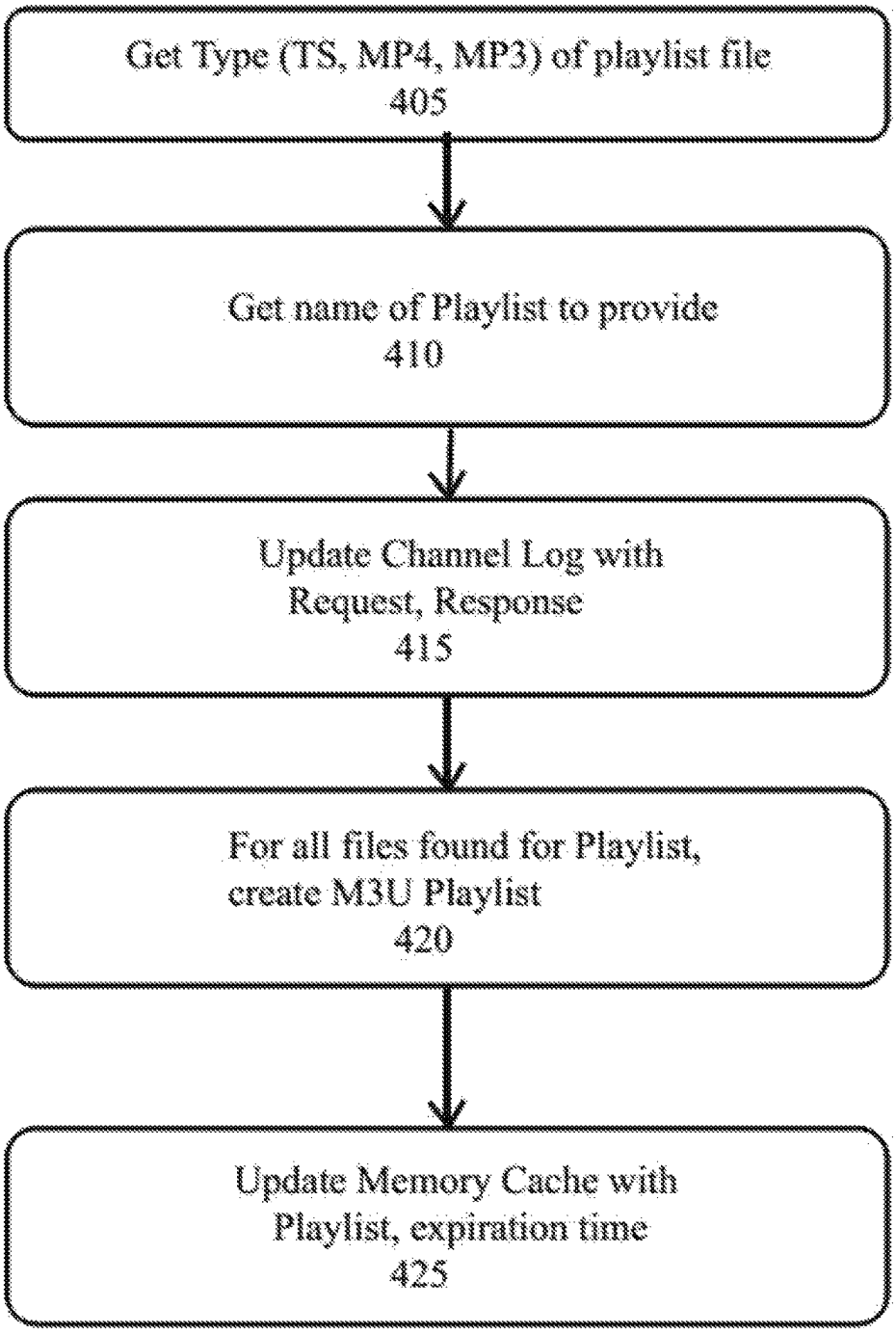

Get Type (TS, MP4, MP3) of playlist file
405
Get name of Playlist to provide
410
Update Channel Log with
Request, Response
415
For all files found for Playlist,
create M3U Playlist
420
Update Memory Cache with
Playlist, expiration time
425

FIG. 4

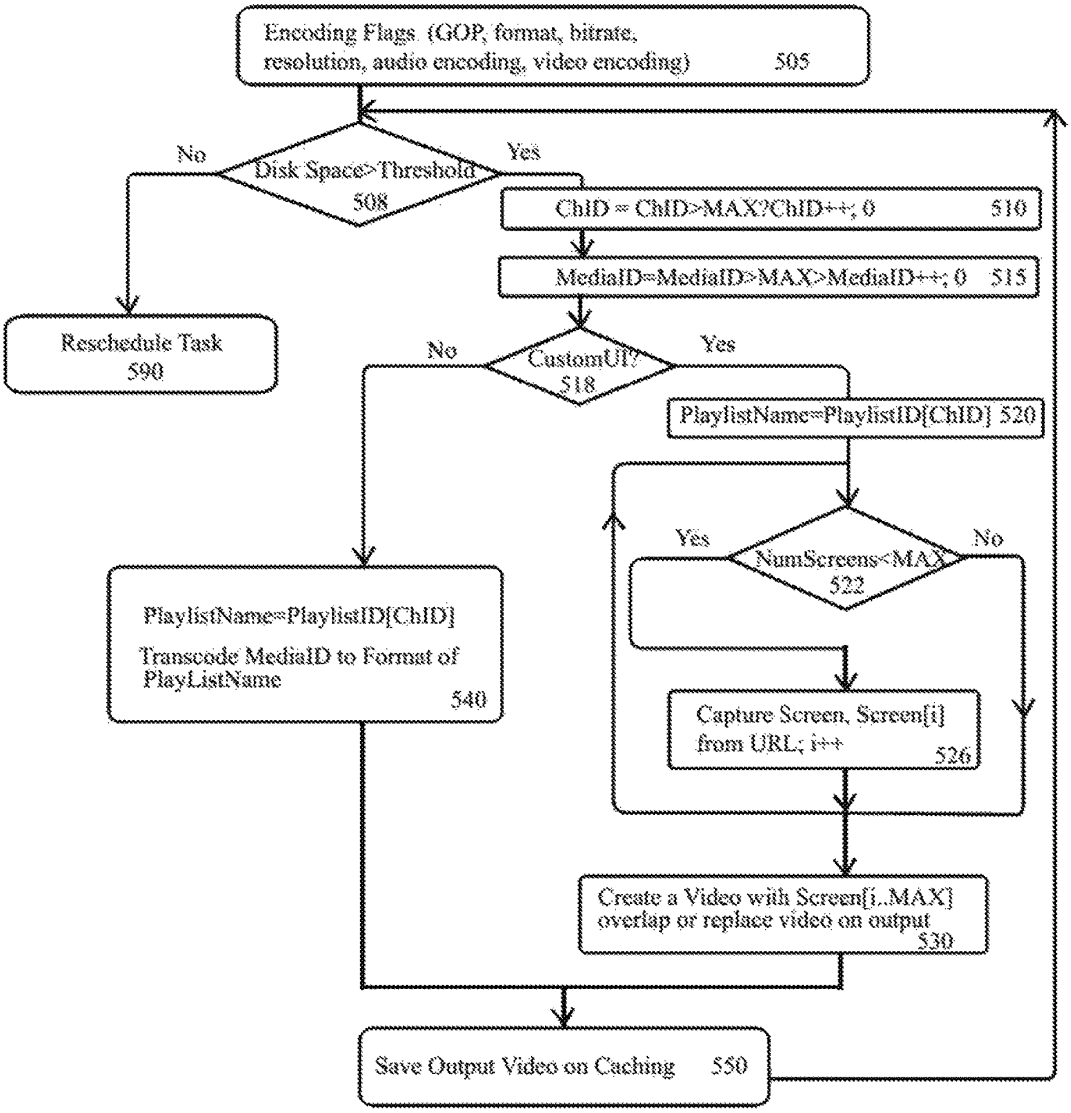

Encoding Flags (GOP, format, bitrate, resolution, audio encoding, video encoding) 505
No
Disk Space>Threshold 508
Yes
ChID = ChID>MAX?ChID++; 0 510
MediaID=MediaID>MAX>MediaID++; 0 515
Reschedule Task 590
No
CustomUI? 518
Yes
PlaylistName=PlaylistID[ChID] 520
Yes
NumScreens<MAX 522
No
PlaylistName=PlaylistID[ChID]
Transcode MediaID to Format of PlayListName 540
Capture Screen, Screen[i] from URL; i++ 526
Create a Video with Screen[i..MAX] overlap or replace video on output 530
Save Output Video on Caching 550

FIG. 5

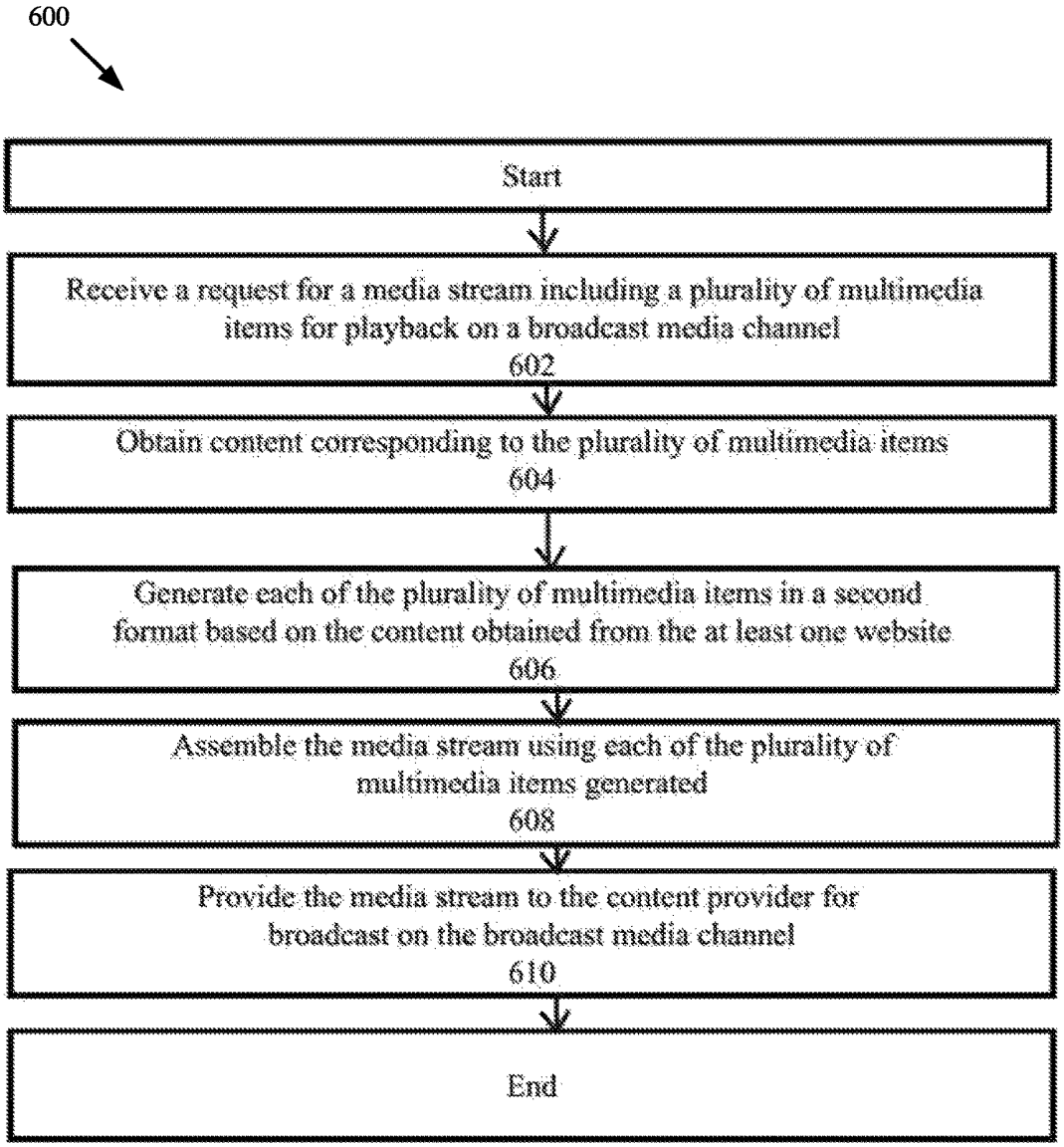

600
Start
Receive a request for a media stream including a plurality of multimedia items for playback on a broadcast media channel
602
Obtain content corresponding to the plurality of multimedia items
604
Generate each of the plurality of multimedia items in a second format based on the content obtained from the at least one website
606
Assemble the media stream using each of the plurality of multimedia items generated
608
Provide the media stream to the content provider for broadcast on the broadcast media channel
610
End

FIG. 6

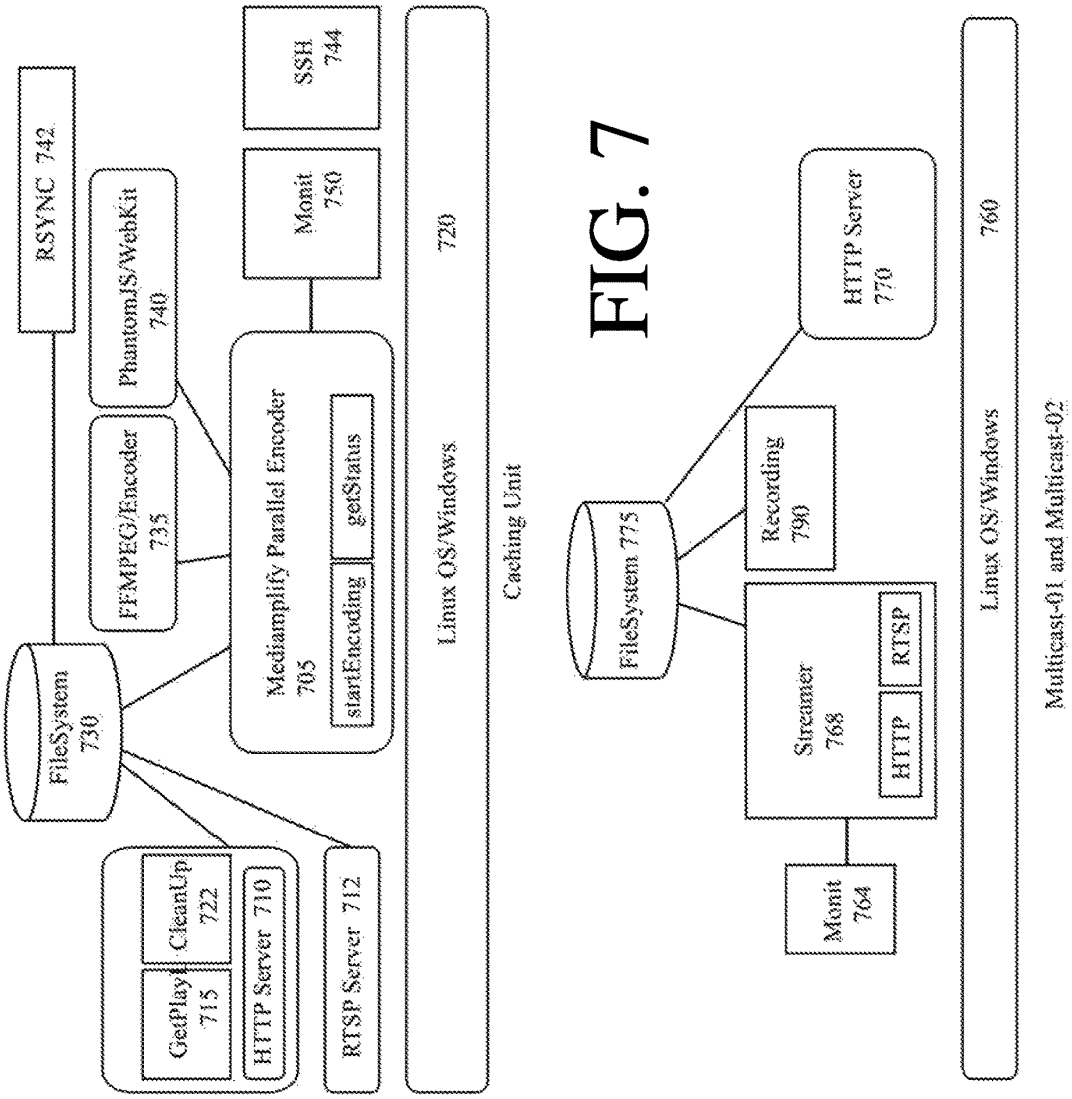

RSYNC 742
PhantomJS/WebKit 740
FFMPEG/Encoder 735
FileSystem 730
GetPlay 715
CleanUp 722
HTTP Server 710
RTSP Server 712
Mediamplify Parallel Encoder 705
startEncoding
getStatus
Monit 750
SSH 744
Linux OS/Windows
720
Caching Unit
FileSystem 775
Recording 790
Streamer 768
HTTP
RTSP
Monit 764
HTTP Server 770
Linux OS/Windows
760
Multicast-01 and Multicast-02

FIG. 7

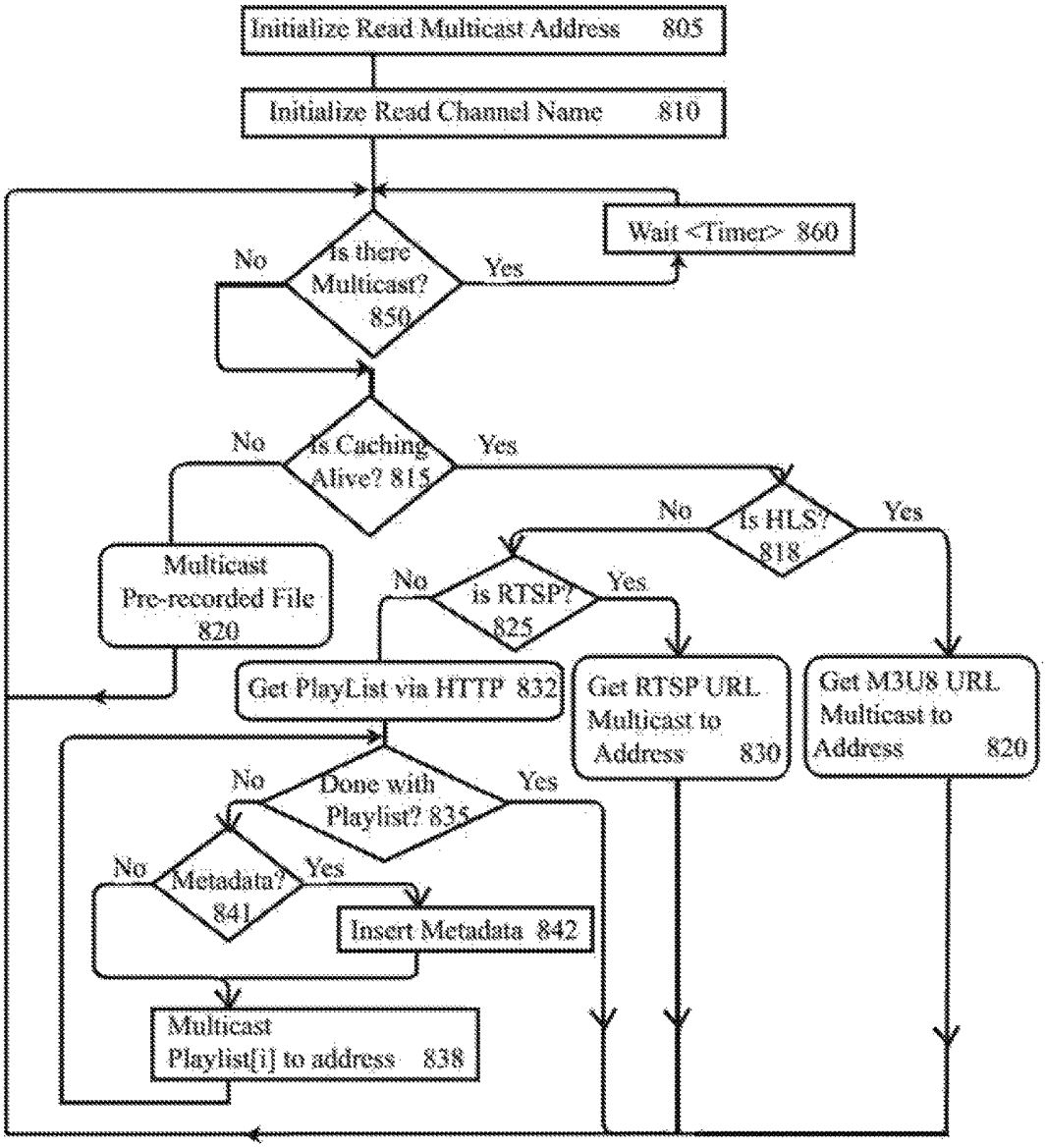

Initialize Read Multicast Address 805
Initialize Read Channel Name 810
Wait <Timer> 860
No
Is there Multicast? 850
Yes
No
Is Caching Alive? 815
Yes
No
Is HLS? 818
Yes
Multicast Pre-recorded File 820
No
is RTSP? 825
Yes
Get PlayList via HTTP 832
Get RTSP URL Multicast to Address 830
Get M3U8 URL Multicast to Address 820
No
Done with Playlist? 835
Yes
No
Metadata? 841
Yes
Insert Metadata 842
Multicast Playlist[i] to address 838

FIG. 8

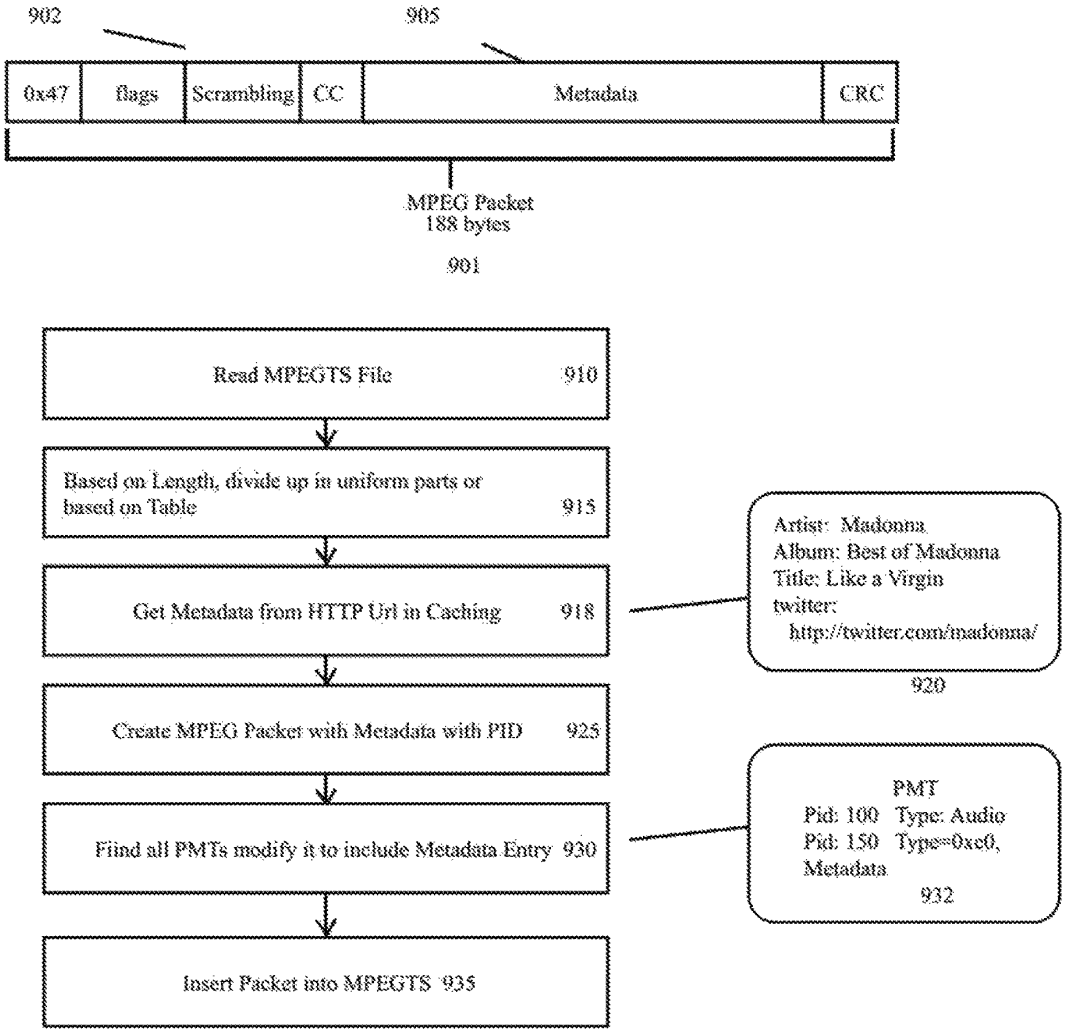

902
905
0x47
flags
Scrambling
CC
Metadata
CRC
MPEG Packet
188 bytes
901
Read MPEGTS File 910
Based on Length, divide up in uniform parts or based on Table 915
Get Metadata from HTTP Url in Caching 918
Create MPEG Packet with Metadata with PID 925
Fiind all PMTs modify it to include Metadata Entry 930
Insert Packet into MPEGTS 935
Artist: Madonna
Album: Best of Madonna
Title: Like a Virgin
twitter:
http://twitter.com/madonna/
920
PMT
Pid: 100 Type: Audio
Pid: 150 Type=0xc0,
Metadata
932

FIG. 9

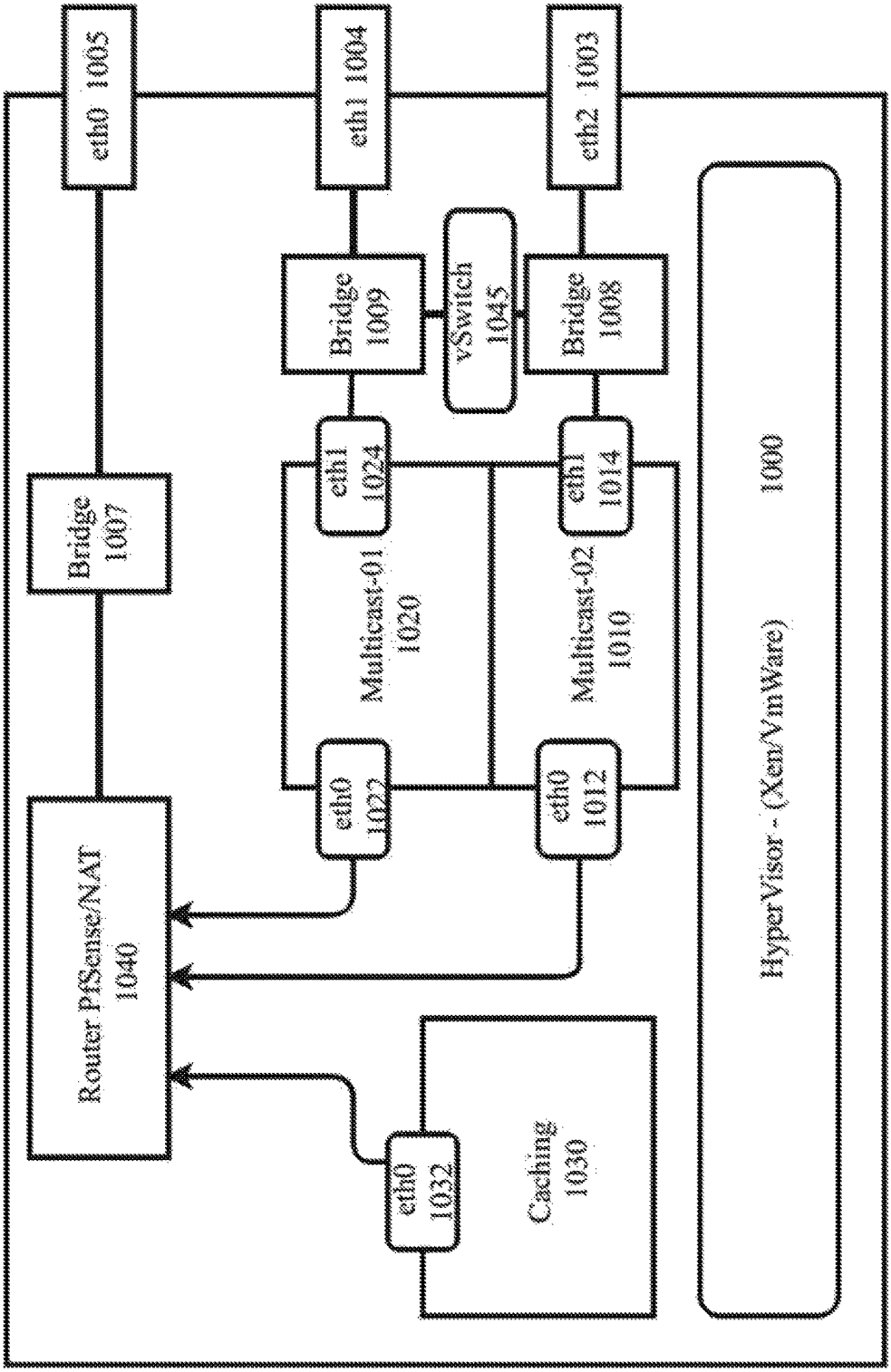

eth0 1005
eth1 1004
eth2 1003
Bridge 1009
vSwitch 1045
Bridge 1008
Bridge 1007
eth1 1024
eth1 1014
Multicast-01 1020
Multicast-02 1010
eth0 1022
eth0 1012
Router PfSense/NAT 1040
eth0 1032
Caching 1030
HyperVisor - (Xen/VmWare) 1000

FIG. 10

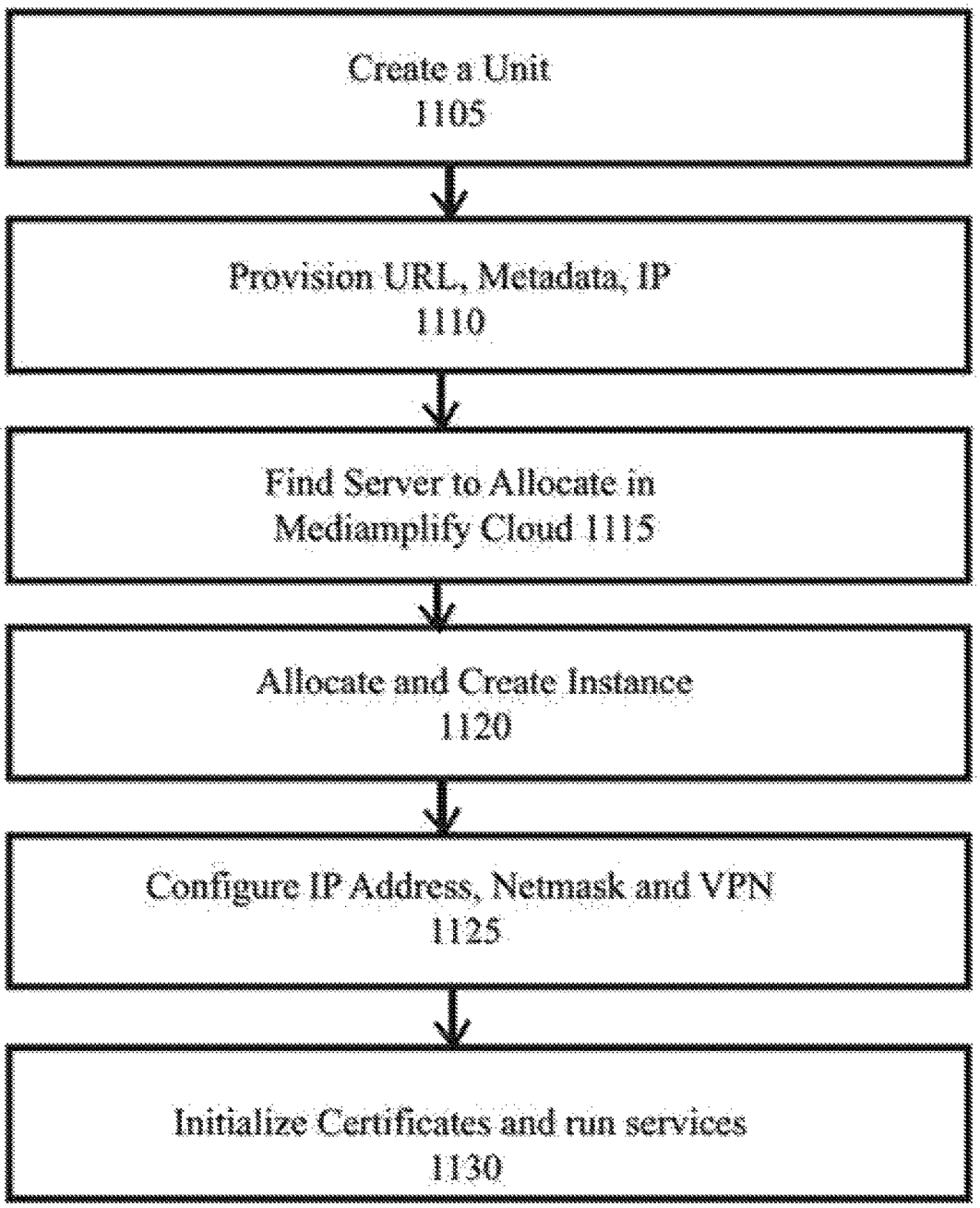

Create a Unit
1105
Provision URL, Metadata, IP
1110
Find Server to Allocate in
Mediamplify Cloud 1115
Allocate and Create Instance
1120
Configure IP Address, Netmask and VPN
1125
Initialize Certificates and run services
1130

FIG. 11

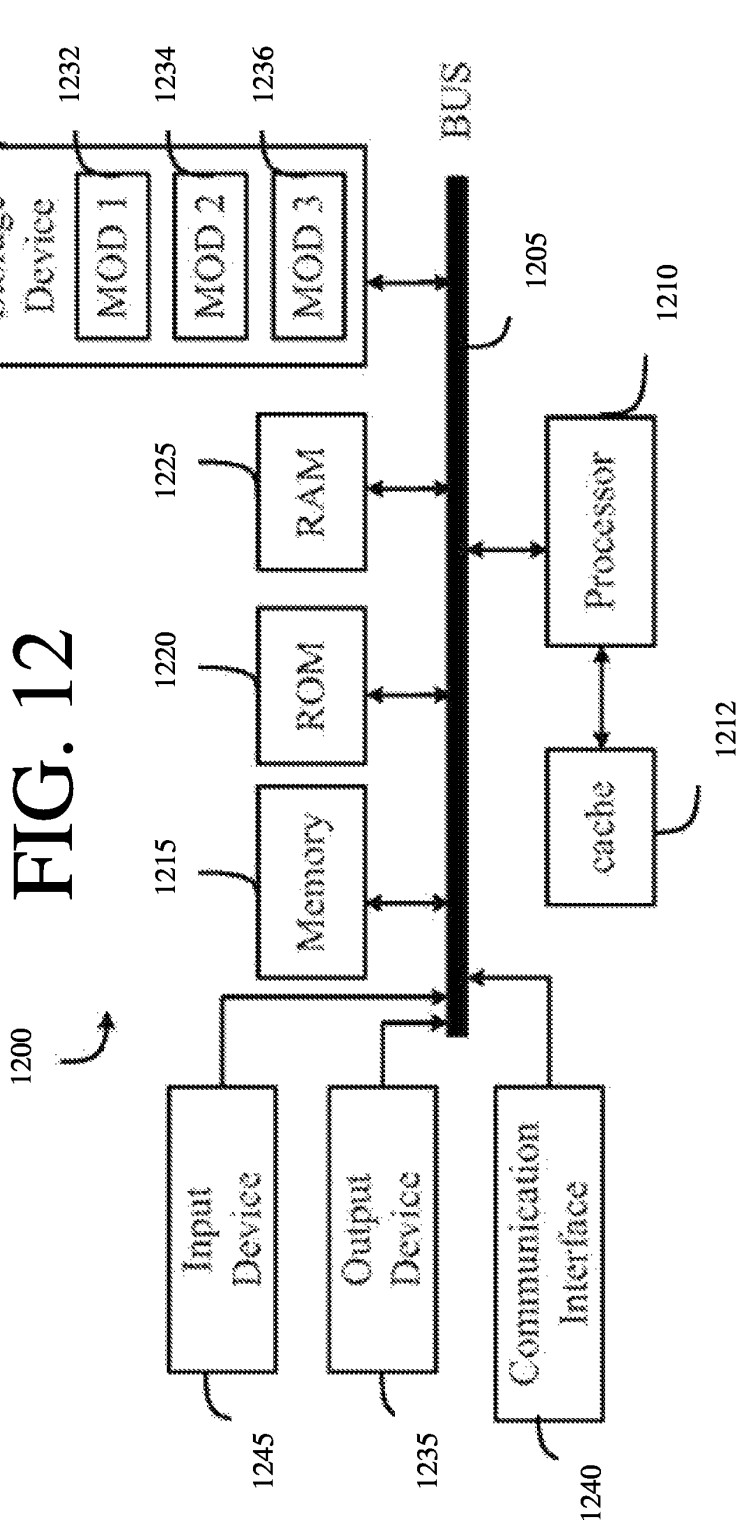

1230
1232
1234
1236
Storage Device
MOD 1
MOD 2
MOD 3
BUS
1205
1210
1225
RAM
Processor
1220
ROM
1212
cache
1215
Memory
1200
Input Device
Output Device
Communication Interface
1245
1235
1240

FIG. 12

METHOD, SYSTEM, AND APPARATUS FOR MULTIMEDIA CONTENT DELIVERY TO CABLE TV AND SATELLITE OPERATORS

CROSS-REFERENCE TO RELATED APPLICATION

This application is a continuation of U.S. patent application Ser. No. 16/152,606, which was filed Oct. 5, 2018, and is a continuation of U.S. patent application Ser. No. 15/538,911, which was filed Jun. 22, 2017, which is a National Stage Entry of International Patent Application No. PCT/US2015/067464, which was filed on Dec. 22, 2015, which claims priority to U.S. Provisional Application 62/095,504, which was filed on Dec. 22, 2014. The complete disclosures of which are hereby incorporated herein by reference in their entireties.

FIELD OF THE DISCLOSURE

The present disclosure provides a mechanism for delivering multimedia content from a cloud-based system to cable or satellite content providers.

The disclosure describes a novel method and a system for continuous media delivery and secured synchronization of multimedia files that are broadcasted to set top boxes or subscriber units in the field that are connected to IPTV or Cable Systems. The present technology can securely connect to a cloud-based platform (e.g. OpenStack, Amazon EC2, Mediamplify Cloud, etc.), creates a set of multimedia files (e.g. MPEG4 movies) into a secured repository (e.g. Secured File System, Linux/Windows, etc.), modifies those files according to certain rules as defined by the method herein, and reproduces those signals via a multicast video stream (e.g. User Datagram Protocol (UDP) multicast, etc.) encapsulated in a Transport Stream (TS) frame that can be a multiple transport stream (several transports in one TS frame) or a single transport stream (one transport stream according to the MPEG-2 Part 1 Specification or similar multimedia streaming that is compatible with MPEG-TS at a predetermined rate or at a variable bit rate).

BACKGROUND

Cable operators, Multiple System Operators (MSO), and Digital Satellite Systems (DSS) deliver media content by utilizing satellite, Radio Frequency(RF) and Integrated Receiver and Decoder (IRD) technologies, which provide outputs that can include Asynchronous Serial Interface (ASI) signal formats. Additionally, MSOs and DSSs use dedicated hardware encoders and transcoding systems if the source video/audio is incompatible with the set top boxes of the cable or satellite operator. In general, the video/audio content delivered via the satellite to the cable or satellite operator arrives via wireless link or receiver, which is processed by an IRD that receives the stream from the satellite and can ultimately broadcast that signal to the cable operator head end in several formats. In addition, some systems may include multicast units connected with IRDs that tune to the right transponder system.

Satellite systems are used to deliver data (e.g. TV, radio, Video-on-Demand, multimedia streams) from a particular source (e.g. third-party content provider) to cable head end systems or other satellite systems. Satellite delivery is performed via a broadcast signal containing digital pictures and audio inside a transponder frequency. Transponders are radio frequency (RF) space allocated in a particular satellite.

For example, a third-party content provider can maintain multimedia files in CD/DVDs, pre-recorded storage, or as pre-recorded files that are reproduced in a particular audio or video encoding format using a video or audio encoder (e.g. MP3, H.264, AC3, and others). The audio and video is then made part of an RF signal that is broadcasted to the satellite system. This signal is then received by the cable or satellite operator using an antenna receptor and is decoded to generate either an analog signal (e.g. RCA Cables or any other analog interface) or digital signal (e.g. ASI, Asynchronous Serial Interface). If an analog signal is received, modern DVB (Digital Video Broadcasting) Cable and Satellite systems will encode this signal to their particular video/audio encoding requirements such that it can be broadcasted in digital packets via a multicast MPEG Transport Stream. The same occurs if a receiver decodes the signal in ASI. As such, this signal is converted from ASI to Ethernet, or simply redirected to a multicast MPEG Transport stream if arriving in a compatible encoding format for the receiving head end cable system.

When no satellite is being used, video, pictures and music, are read out from the DVD or a hard-drive containing MPEG-layer 3 or MPEG-layer 2 files that were encoded at a pre-determined bit rate according. Those video feeds can be reproduced at a synchronized timing using a multicast MPEG Transport Stream using RTP (Real-time Transport Protocol)-based multicast communication and RTCP (RTP Control Protocol)-based mechanisms, as well as standard UDP (User Datagram Protocol) multicast streams with proprietary timing.

Additionally, IPTV systems can provide mechanisms to broadcast a signal using the multicast protocol in MPEG transport streams to a customer premises with compatible set top boxes (same encoder, same streams, encryption keys, etc). A compatible set top box is such that when connected to the cable TV system it can properly decode video/audio from the cable operator's head end system. Some of these IPTV systems rely on CDN (Content Delivery Networks) that enable distribution of multimedia files to IP-enabled devices. For example, a mechanism can be provided whereby a head end content (MSO) that is being broadcasted to a cable subscriber is also available to an IP-enabled device such as a smartphone, PC, or tablet computer.

SUMMARY

Disclosed are systems, devices, methods, and non-transitory computer-readable media for media delivery from a cloud or IP-based distribution network, or CDN (Content Delivery Network) to MSO (Multiple System Operators) or head-ends that include cable and satellite delivery mechanisms. The present technology unifies cloud-based delivery (Mediamplify cloud) with the cable-based mechanism (e.g. Comcast, Verizon FiOS).

An example computer-implemented method can receive, from a content provider such as a cable or satellite operator, a request for at least one media stream for playback on a broadcast media channel. The request for the at least one media stream can include a request for a plurality of multimedia items. Content corresponding to the plurality of multimedia items can be obtained from at least one website or cloud service that offers the content in at least one first format. Based on the obtained content, the plurality of multimedia files can be generated in a second format that is compatible with the content provider. The media stream can assembled using each of the multimedia items generated in

the second format. The media stream can be provided to the content provider for broadcast on the broadcast media channel.

In some aspects of the present technology, obtaining the content can include retrieving at least one audio file corresponding to an audio component of the multimedia item and retrieving a plurality of images as screen captures that can correspond to a video component of the multimedia item. Generating the multimedia files in the second format can include combining the plurality of images and the at least one audio file to create each of the multimedia items.

BRIEF DESCRIPTION OF THE DRAWING

There are shown in the drawings, embodiments which are presently preferred, it being understood, however, that the disclosure is not limited to the precise arrangements and instrumentalities shown

FIG. **1** shows an example block diagram illustrating an exemplary head end (MSO);

FIG. **2** shows an example block diagram of the apparatus located at the MSO facility (mediaplug);

FIG. **3** shows an example method for initialization of Mediaplug components;

FIG. **4** shows an example method to obtain list of files to multicast to a cable operator MSO;

FIG. **5** shows an example method for encoding video and audio files;

FIG. **6** shows an example method for providing multimedia content to a cable operator;

FIG. **7** shows an example block diagram of example software components of the Mediaplug;

FIG. **8** shows an example method to multicast from a component in the Mediaplug;

FIG. **9** shows an example method to insert metadata into in an MPEG Transport Stream;

FIG. **10** shows an example block diagram for a Virtualized Mediaplug

FIG. **11** shows an example method to initialize virtual mediaplug components; and

FIG. **12** shows an example possible system embodiment for implementing various embodiments of the present technology

While the present technology is amenable to various modifications and alternative forms, specifics thereof have been shown by way of example in the drawings and will be described in detail. It should be understood, however, that the intention is not to limit the present technology to the particular embodiments described. On the contrary, the intention is to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the present technology.

DETAILED DESCRIPTION

The following description should be read with reference of the drawings, in which like elements are numbered in similar fashion. The drawings are not necessarily at scale and are not intended to limit the scope of the disclosure. Those skilled in the art understand that there are alternatives that may be used as well which are also considered to be within the scope of the disclosure.

Generally, the disclosed technology pertains to a delivery mechanism for providing multimedia content to cable systems without the use of a satellite system in a fault-tolerant and reliable fashion. FIG. **1** illustrates a block diagram that includes aMediamplify Cloud **101**. The cloud **101** can refer to a set of virtualized instances or non-virtualized instances of one or more servers that provide access to archives and digital files with media content stored in them. For example, the cloud **101** can be implemented using VMWave or Xen and OpenStack, or simply reside in Amazon Web Services or Rackspace. In addition, special provisioning can be provided in cloud **101** for secured access.

The cloud **101** service files can be accessible via the internet **105** and can be stored in a cloud-based file system or cluster file system (e.g. GlusterFS or Hadoop, Amazon S3). These files can be multimedia files that include, as non-limiting examples, MPEG-4 Video files with H.264 encoded video and AAC encoded audio or MPEG-layer 3 audio as well (MPEG2 Video could also be used). These files can be accessed using a secured transport protocol such as, but not limited to, SSL or a synchronization tool as "rsync," commonly found in Linux/MacOS environments. The communication link **106** can be a DSL, Cable Modem, Wireless WAN, Fiber, Metro Ethernet, etc. and can be linked with the MediaPlug **110** unit. The Mediaplug **110** can reside at the "MSO" facility and can be collocated with all the cable or satellite operator equipment. The MSO is a facility used by the Cable Operator to receive all TV and Radio Programming that the cable operator will then multiplex, re-encode, and distribute from the MSO to a set of subscriber units with set top boxes, or modulate the signal in TV analog channels (2-60+).

One function of the MediaPlug **110** is to provide multimedia content, e.g., video and audio, to an MPEG multiplexer at the headend **120**. The content can be pre-formatted in MPEG Transport Streams that the multiplexer **120** (e.g. Arris TMX-2010) will then be able to capture, reformat in any way the operator requires, and deliver to the cable operator's subscribers via Coaxial Cable **125** or any other means suitable for a multicast or unicast delivery to its customers with "Set Top boxes" **130**, **131**, **132**. A "Set Top Box" is customer premise equipment that will be able to decode and display in a TV set or other screen display, via a signal received by its HDMI or analog input, the contents of the TV programming the cable operator offers.

The Mediaplug **110** can be a computer or server or set of computers of servers that can communicate with the Cloud **101** using a standard Local Area Network (e.g. Gigabit Ethernet). The Mediaplug **110** can store, encode, and transmit multimedia files in the format that the cable operator at its MSO requires. This cable format may include audio, video, and metadata (subtitles, control data, and any additional component that can be packaged in an MPEG Packet that is part of the MPEG Transport Stream). In one embodiment, Mediaplug **110** can include components such as a caching unit, and one or more multicasting servers.

FIG. **2** illustrates an example configuration of the hardware components of Mediaplug **110** which includes three servers. A server is a computer device, usually rack mountable unit with volatile memory such as RAM, one or more micro-processors, and non-volatile memory such as a hard disk. However, one skilled in the art will recognize that the present technology is not limited to a particular configuration and can be varied according to different specifications. FIG. **2** illustrates Mediamplify Cloud **202** which is connected to the Internet backbone **203**. Link **204** (e.g. DSL, Cable Modem, Fiber) provides connectivity between cloud **202** and a Network Address Translator unit **205** (e.g. Cisco RVS4000, or any other NAT device) which can provide Gigabit Ethernet switching capabilities. The lines **206**, **207**, and **208** show Gigabit Ethernet links, however one skilled in the art will understand that Gigabit Ethernet or a Wireless

LAN using 802.11g/n would be also a suitable interface to be used in a Mediaplug configuration. The Caching unit **210** can be the main storage component in the system and it can contain all of the multimedia files in the format required by the cable operators, such as the Transport Stream format. The caching unit can communicate with Multicast-01 **215** and Multicast-02 **220**. The two Multicast units **215**, **220** can pull or obtain information from the caching unit via TCP/IP or UDP, using protocols such as HTTP (Hypertext Transport Protocol) or RTSP (Real-time Streaming Transport). The caching unit can also encode and transcode the multimedia files it downloads from the Cloud **202**. The caching unit can also keep updated information of all the metadata and create customizable screens that can be converted into video formats compatible with the Transport Stream content that will be provided to the cable operator at its MSO. MPEG MUX MSO **230** can correspond to a program residing in a computer system that processes and handles the MPEG streams from multiple sources. The MUX **230** can also function as the bridge between the source of the signal and the customer's set top box units. A non-limiting example program would be the CherryPicker DM6400 by MOTOROLA. Each of the components or modules of the Mediaplug can include software for performing functions and/or methods according to the present technology.

FIG. **3** illustrates an example method that can be used to configure and provision the units at boot-time. Each unit can initialize keys for SSH/IP Sec access at **305**. For example, the units can use IPSec and SSH Tunnel keys that can be stored in the administrator user account. The keys can be generated by the Mediamplify Cloud that are private keys or certificates, shared secrets or similar components by which the Mediaplug can connect securely with the Mediamplify cloud. Each cable operator can provide custom-based IP addressing at **310** for the Gigabit Ethernet ports that connect to the operators' network. Changing the IP addresses of the Multicast-01 and/or Multicast-02 refers to the IP address by which the links **221** and **216** in FIG. **2** are linked to the MPEG MUX MSO unit. A change of the IP address can refer to the 'ifconfig' command which is used in Linux-based systems and that can be changed in an Ubuntu box at/etc/network/interfaces file. Similarly, the network routing can be changed if the multicast address cannot be routed to the default gateway which points to the 205 NAT, but to **221** and **216** respectively for Multicast-02 and Multicast-01. In general, the 239.*.*.* network address may be routed to those interfaces.

At step **320**, the Mediaplug can configure playlists per channel and multicast address. The playlist and channel configuration can be obtained from the cable/satellite operator and can include any number of channels for broadcasting multimedia content to end customers. As an example, the channels may include music channels corresponding to different music genres, e.g. rock, alternative, classical, jazz, hip hop, etc. Based on the particular genre, a corresponding playlist can be selected and/or configured. The Mediaplug can also determine the multicast address for each of the channels.

In some configurations a customizable user interface (UI) can be added to the output video MPEG Transport stream. As such, if the "Custom UI" variable is then true and valid, **325**, a link or URL **330** is loaded into the Mediaplug configuration that can be used when the video interface is created. The custom video interface can be created and fetched as needed or it can be created in real-time for a particular channel or for all the channels. The custom user interface variable can be uniquely configured per channel in the Mediaplug. The mediaplug can also monitor **340** all of the processes to ensure stability and continuous, uninterrupted operation. The initialization of the Mediaplug can also include setting the RSYNC profile **350**. The RSYNC profile can be used to update and synchronize media content with the cloud when the Mediaplug determines that the content has changed or been modified.

As described above, the Mediaplug can broadcast the multimedia MPEG stream using the programmed IP Address in multicast-01 and multicast-02 according to the method illustrated in FIG. **3**. In FIG. **4**, an example method is shown for obtaining the list of files to playback or broadcast to the MSO system. The file type or format requested by the multicasting embodiment, e.g. multicast-01 or multicast-02, can include Transport Stream (e.g. TS) and/or MPEG-4 Part 14 (e.g. MP4) values **405**. This request is executed from any of the multicasting embodiments, usually making use of the HTTP GET Request. The multicasting unit can connect to an HTTP Server and retrieve the list of files based on the type identified by the request. As the caching unit may handle multiple channels of different types and name, each channel can have a unique identifier corresponding to the name of the playlist. For example channel name "Cool" or "Rock," **410** are names that can identify the channel to be retrieved from the caching server. The activity log in the request can also be updated keeping track what step of the process is being completed **415**. At **420**, the caching server can generate a "playlist file" of mime type "audio/x-mpegurl" which will be interpreted as a multimedia playlist file when requested. Finally, as the playlist usually may not vary for a period of time until a new request is received, the playlist can be kept in the local memory caching service **425**.

As the requests arrive at the "Caching" unit from the multicasting units, the "Caching" unit can be configured to perform parallel encoding for all the different channels available from the unit. FIG. **5** illustrates an example method that can be implemented by the Mediaplug, and in particular, by the "Caching" unit. At step **505**, encoding flags or input parameters can be received which may include GOP (Group of Pictures) which is used by certain video encoders, resolution (e.g. 640×480) in pixels, bit rate in Kilobits per second, any encoding type of video (e.g. H.264), encoding type of audio (e.g. AC-3), duration of the video feed, etc. In addition, a "format" parameter can be received which refers to the output format or encapsulation, MPEG TS or MPEG4. The caching unit encodes audio and video, and can use the disk space in the Mediaplug. Hence in **508** the method checks for sufficient space left in the memory or hard drive. This task can be run on a thread together with all the other tasks that are working in parallel in order to speed up the processes of encoding and transcoding.

Several indexes or identifiers by the name "ChID," (these integers preferably no more than an integer value from 1 to the maximum number of channels) begin (e.g. MAX could be 50) to be generated by the caching unit **510**. This method can be performed for all the channels and all media linked to that particular channel identified by "MediaID" **515**, in this particular case the "MediaID." The variable "MAX" in this context can refer to the maximum number of media files read (e.g. **500**). The data captured from the media could be "Artist," "Author," or any other variable from an audio file. If a video file is used this could be "program name," "movie name," or any associated metadata information tied to the multimedia file and the Channel Identifier (ChID) associated with it "MediaID" file.

The caching unit can add a "Custom UI," or a customizable User Interface that is designed using Hypertext

Markup Language (e.g. HTML) or a web service. A web service that matches a REST interface (Representation State Transfer) and uses Javascript Object Notation (JSON) or XML (Extensible Markup Language) to respond to a custom UI request can be used. Moreover, this custom UI can include JavaScript, CSS, and HTML content files that can be rendered using a browser using WebKit (e.g. PhantomJS or Safari) or any other browser-rendering engine compatible with HTML4/5 or any future HTML version. If a customizable UT is part of the configuration **518**, rendered images from a web service can be used to create overlapping video or replace any video in the video feed file. Likewise, this video or customized screen can be used when no video at all is defined in the multimedia file, e.g. Audio-only file. The web-service to be contacted may use the "PlayListName" to be used for the Channel identified by the channel ID "ChID," retrieved using the "PlaylistID" function **520**. Each new PlayListName may contain different identifies to retrieve new images. Therefore one or more screens will be retrieved from the rendering engine as such **522** can be used to retrieve a set of screens from the web-service being contacted.

Capturing screens **526** can be done using a tool similar to PhantomJS (Webkit-based headless engine for rendering images) or QtCapture, or simply capturing screen frame buffers from a machine running any software tool. Alternatively, the method can capture a video file from another rendering function, which can create a sequence of screens that can be used to generate a video file. Once all screens and video are captured, **530** the resulting output created can be a video file that then is either replaced or merged (multiplexed) with the original file. As an example, if an audio content file is used such as an MP3 file, this function can create a video file from all the screens captured by **526**. Those screens are generated by calling a URL where the web-service is associated and creating a video file with the input audio and the captured screens. The output format can be an MPEG Transport Stream file that can be retrievable or streamed to the multicasting embodiment.

Once the output file containing the screen shoot sequence of videos encoded in H.264 (for example, or MPEG2Video) is created, the audio can be multiplexed and added to one of the encoding channels of the resulting video output and saved into the caching unit storage disk **550**. The multiplexing can be done using tools such as FFMPEG or VLC or any proprietary tool that can multiplex audio and video files into a resulting MPEG Transport Stream (or MPEG-4 output, or any similar output).

FIG. **6** illustrates an example method **600** for providing multimedia content to a cable operator. At **602**, a device such as the Mediaplug device receives a request from a cable/satellite operator for a media stream. A media stream can be formatted according to HTTP Live Streaming (HLS), an HTTP/RTSP playlist, or an RTSP stream. The media stream can include any number of multimedia items such as audio/video multimedia items. In some instances, the request can include a channel identifier that is associated with a particular category of multimedia items, such as a music genre corresponding to rock, classical, jazz, etc.

At **604**, contents corresponding to the multimedia items can be retrieved, downloaded, or otherwise obtained from one or more websites or cloud based servers. The contents can include data corresponding to either or both of the audio and video components of the multimedia items. For example, the data corresponding to the audio portion can include a music file in an MP3 format. Similarly, the data corresponding to the video portion can include a video that is obtained directly from the cloud. Alternatively, the video component can be assembled by using one or more screen captures from a website. The screen captures can include captures of still images presented by the website as well as captures of images from videos that are available on the website. As illustrated in FIG. **5**, the screen capture process can be repeated any number of times.

The Mediaplug can then generate **606** multimedia items in a second format based on the content obtained from the web server or cloud. That is, the Mediaplug can convert/encode the audio file into a format that is suitable for the cable operator and it can also assemble the various screen captures to generate the video component of the media item. Once the audio and video files are created, they can be combined, multiplexed, or encoded to a format that can be utilized by the multimedia stream. For example, the audio can be multiplexed and added to one of the encoding channels of the video output. The various multimedia items can be used **608** to assemble the media stream in a format corresponding with the request (e.g. HLS, HTTP/RTSP, RTSP stream). The media stream can be provided **610** to the content provider for broadcast on the broadcast media channel.

FIG. **7** illustrates a block diagram of an example architecture of the Caching Unit components. The figure shows **720** as the main operating system, which can be Linux, Windows, or any other operating system in use. The caching unit can contain two types of operating system services HTTP **710** and RTSP **712**. The RTSP service provides access so the media saved or created in the repository of the caching unit file system **730**. The RTSP server can be implemented using the Live555 RTSP server or similar. Alternatively, the HTTP Server can be implemented using "nginx" or "apache" web browsers, and the RTSP Servers can be implemented using Live555 services. In the case of the HTTP Server, this can also be used to get the Playlist of files generated from the method on FIG. **5** **715**.

The GetPlayList **715** command can be implemented as follows:

- Receive and process a request for the name of the channel or playlist to be used,
- Retrieve all the filenames ordered by date of creation of all the files in a particular directory,
- Cache all the files into cache memory (e.g. Memcache or similar tool),
- Add type of HTTP header as M3U or PLS (e.g. a text file with a list of files or URLs to play),
- Return a list of HTTP or RTSP URLs to access each video generated or stored in the caching unit.

In some embodiments, the HTTP Server can also be used to clean up, update, and delete operations. The block unit called "CleanUp" **722** is in charge of keeping up to date caching information data and/or deleting files already used or that are not required to be used anymore by the multicast unit(s). Also the HTTP Server functions can include servicing M3U8 files corresponding to the HTTP Live Streaming format and all the segments created by the HTTP Live Streaming function. As such, a HTTP Live Streaming (HLS) generation program will produce the files and segment them as needed by the encoder and can then be serviced by the HTTP Server **710**. The Mediamplify Parallel Encoder **705** corresponds to a block that can implement the method shown in FIG. **5**. The resulting outputs from the Media Parallel Encoder **605** are stored in the file system **730**. The Mediamplify Parallel encoder **605** can be implemented in Python and can rely on web services (such as Twisted or Django), PhantomJS, and FFMPEG. Monit **750** corresponds to a monitoring block that can ensure that the process

running the "Media Parallel encoder" keeps running at all times and does not stop upon failure. Additional blocks that can be included in Mediaplug are RSYNC **742** and SSH **744**. These blocks can be used to ensure synchronization and updates of new media files coming from the cloud. The RSYNC block uses the "rsync" protocol and program over ssh (Secured Socket Layer Shell) to download media from the "Mediamplify Cloud" and synchronize multimedia files that are newly updated and could be part of particular Channel ID and a Playlist Name. Each new file synchronized with the Mediamplify cloud has a Media ID value which the cloud can assign, and include additional metadata information such as "Artist" and "Author." The "Mediamplify Parallel Encoder" also may receive requests from other components such as getStatus or StartEncoding, indicating what file is being encoded, its progress, and what other files are in the queue for encoding.

In some embodiments, the information from getStatus or StartEncoding can be generated using a JSON message retrieved upon a request via HTTP GET to the Mediamplify Parallel Encoder. A graphical user interface can then be used to plot the status of each song being encoded or provide previews of the videos being generated. Below is one non-limiting example of a JSON response made by the "Mediamplify Parallel Encoder" service:

{"song_encoded": "ts", "artist": "Madonna", "duration": 0, "exists_on_disk": True, "genre": "Pop", "title": "Like a Virgin", "music_id": "1082863"}

Response regarding the tatus for a song being encoded or a list of songs being encoded, as follows:

{"music_id": "109281", "encoding": "78%", "output_file": "/var/www/eglacast/pop/109281-abcdef-uuuid.ts", "thumbnail": http://mediamplify.com/images/abcdef-uuid.png"}

In some embodiments, there are two possible TCP/IP sockets open tor listening used by the Caching component of the Mediaplug. A) Port 80 (as an example), or the standard HTTP port, used to retrieve content, view video content generated, update/delete cached files, and access the playlists, and B) Port 9553 (as an example), or the standard Mediamplify Parallel encoder port, used to monitor and review status of the songs being encoded, the data being collected, and all other related activities with encoding. Via this port, encoding/transcoding can be started or stopped.

Similarly, the "Mediaplug" components labeled "Multicast-01" and "Multicast-02" can also provide an HTTP interface to access the current song being played or being multicast via the HTTP Server **770**. For example, the HTTP Server may run a PHP or Python script that will return the current song being played by the streamer. The streamer block **768** can connect to the caching server via HTTP or RTSP protocols. The implementation of this block can be done using a combination of FIG. **8** instructions and using multicasting services available in VLC or FFMPEG (e.g. multicast, or tstools/tsplay).

One function of the streamer **768** is to read the files encoded by the caching unit, process those for multicasting and creating the MPEG Transport Stream multicast packets sent via the Ethernet port. Additionally, the multicast-01 and multicast-02 blocks contain a "Recording" function **790**, which is in charge or recording the multicasting streams and recording for later use in case of failure on the system. This operates by listening into the UDP (User Datagram Protocol) multicast address of each individual channels being broadcasted, and recording the output into a file. This file is then stored and made accessible for future use. Monit **764** can maintain the streamer process running at all times throughout a regular broadcasting cycle.

FIG. **8** illustrates an example method that can be performed by the streamer module in the Mediaplug. In one embodiment, the streamer can perform functions that include: connect to the caching unit; retrieve generated videos per playlist; determine if unit is working in fault-tolerant mode; playback pre-recorded audio if a failure is detected; and record units own output or any other streamer output if connected to switch or hub.

Turning to the method from FIG. **8**, at step **805**, the streamer reads the multicast address associated to the channel being broadcasted, in order to generate IGMP (Internet Group Management Protocol) messages and establish a multicast group (e.g. 239.0.0.1:8001). The channel name is also initialized at **810**. This value can be used to retrieve the proper content from the Caching server. In one embodiment, a configuration table can be created with tuples: <ChID>, <Channel Name>, <Multicast Address>, <Multicast Port>, such that no duplicates are used or created. Automation software can create these configuration tables and automate the process of creating all streamer calls. A streamer method can be called (e.g. from/etc/init.d/) at boot time and monitored with a tool such as Monit. Once the configuration is known, the streamer will check **850** if there are already multicasting transport streams generated by any other multicast component and avoid collisions. If such multicast data is detected, a delay can be used to delay a new attempt to check on that particular multicast group **860**. Hence this block indicates "Wait <Time>" or stop all processing for the amount of <Time> recommended by the specification. For example, the time for delay can be the "Main source" of input less the amount of time for receiving input from a backup server. During initialization, if the same multicast address is used to broadcast main and backup, the one with less amount of time delay will be first, followed by the "Backup." In cases were a hot spare is used, or two different multicast addresses can be in use, one for main and the other one for backup, then this step may be optional.

Once it is determined that there are no elements multicasting at the same address, the streamer will check if the Caching server is "alive" **815**. This can be performed in multiple ways, for example an HTTP Request must not generate a **404** or **403** error, but instead a successful **202** value. Likewise, ping requests can also be used before making an HTTP GET call to identify if the caching server is present and available. In the case that there are no ping responses, a timeout will trigger a failure and a pre-recorded content **820** will be played or sent to the multicast address and port of record. Recordings can be scheduled daily for an extended period of time (e.g. 8 hours or more). These recordings can store the recorded file in a temporary folder and then move that file over to the playback folder where streamer can read it.

If it is determined that the caching server is functioning properly, then there are three types of streams that can be sent to the multicast address and port:

HTTP Live Streaming (HLS) a multi-segment stream usually defined by extension M3U8, containing a set number of segments for a real-time stream source (Video/audio)

HTTP/RTSP file playlist, this means that one or many files are read from the caching server, usually defined by extension M3U or PLS

RTSP stream, this could be constant stream similar to HTTP Live Streaming (HLS) but using an RTSP protocol instead of HLS stream.

When multiple files are part of a playlist, the bit-rate may vary between playlist files. Different bit-rates among files in a playlist could cause problems in non-CBR (Constant Bit Rate) systems. To avoid such problems, the Mediaplug can maintain the stream at the bit rate of the previous stream by adding null MPEG TS packets at the same rate as the previous media file was being sent over the multicast port. This will maintain appropriate bit-rate for playlists.

In RTSP service, streaming occurs by writing the media content to a named pipe or a FIFO file and allowing the RTSP service to read from that file and generate an RTSP stream. As such, in HLS and RTSP Streaming, the caching server knows the filename of the file being streamed. When the file is streamed from via playlist, both the caching and multicast unit know the name of the file being streamed, as the multicast server can then request from the caching server the metadata associated with the file name being streamed.

Accordingly the present technology can accommodate both cases and retrieve the current file name being streamed as a JSON response. The response can identify the content displayed or played hack at the end-user's set top box.

If HLS is used for streaming **818**, the streamer will connect to the proper M3U8 file **820** to pull all the segments corresponding to the live playlist file on the M3U8 stream. Programs and libraries such as FFMPEG or VLC can then be used to encapsulate the stream feed to an MPEG TS and multicast it to the pre-programmed multicast address and port. Similarly, if an RTSP stream **825** is used, the same process takes place at **830** using the RTSP as a protocol instead of HTTP.

If a list of files in a playlist **832** is in use "M3U," the list can be obtained using an HTTP GET request made to the caching server. Each file can then be streamed to the multicast address and port of record **838** until all elements of the playlist are completed and played back **835**.

In some instances, metadata can be added to the stream as an additional PID (Program Identifier) in the MPEG Transport Stream. If metadata is needed **841** then it will be inserted **842** here in accordance with FIG. **9**.

For example, the metadata added could be as simple as a string containing Artist, Name, or other information, or as complex as DCII Text (DigiCipher version 2, as specified by Motorola), MPEG TS Control messages (Two-way), or any other metadata or PID that can be inserted into the stream being sent to the multicast address and port.

FIG. **9** illustrates an example method used to insert a special data packet into the stream being written to the multicast address, without making use of timing information. Therefore, the metadata can be inserted such that it does not have timing dependency. Alternatively, certain type of metadata such as subtitles or lyrics may need to be inserted only at certain times so that it is synchronized with the video data.

The sample MPEG TS packet shown in **902** and **905** corresponds to the metadata inside the packet. This matches standard MPEG TS packet structure and may vary depending on the type of metadata being added to the stream.

The method to insert the packet starts by reading the MPEG TS file retrieved from the caching server **910**. If metadata corresponds to only song information, this information can be added at uniform times. Non-uniform timing inclusions can also be done by adding a table that includes the time and the metadata content added to the stream **915**. This metadata can be retrieved from the Caching unit using an HTTP Get request directed to the caching server **918** and may include artist name, title of song, or any other information **920**.

Creation of the MPEG Packet(s) **925** to be inserted at the appropriate times, which will set the places with those packets, will be inserted in the MPEG TS. Modify the PMT (Program Management Table) of the generated file and include the PTD being inserted into the MPEG TS **930**. At step **932**, an audio PID may include a metadata PID of type DCII Text, which is added to the stream.

For each timing or location where the PID needs to be inserted **935**, the method can insert those packets and generate a buffer that can be sent to the multicast address as in illustrated in FIG. **8**.

As described above, the disclosed technology can be implemented using a set of modules included in the Mediaplug apparatus, which can be implemented using one or more servers accordingly. Alternatively, virtualization environments such as VMWare or Xen (FIG. **9**) can include a system and architecture that can be used to host all the Mediaplug functionality in a virtualized environment using a single server with multiple GbE ports.

The illustration in FIG. **10** shows a configuration of three virtual machines used for implementing the Mediaplug. Caching **1030** and its respective Ethernet port **1032**, Multicast-01 **1020** with two virtual Ethernet ports **1022** and **1024**, and Multicast-02 **1010**, with two Ethernet ports **1012** and **1014**. There are three bridges that include **1007**, **1008**, and **1009**. The multicast Ethernet ports **1024** and **1014** are bridged with eth**1** **1004** and eth**2** **1003** respectively via bridge **1009** and bridge **1008**, respectively. That is, the same content generated at **1024** can be forwarded via the bridge **1009** to the physical interface eth**1** **1004** in the hardware. The vSwitch **1045** or the virtual switch between the two bridged interfaces **1008** and **1009** pelnhits the two virtual machines of Multicast-01 **1010** and Multicast-02 **1020** to record each other and monitor their activity.

To achieve concurrency and proper execution in a cloud environment, the Mediaplug can use the example method shown in FIG. **11**. Once a create unit command is issued **1105**, provisioning of the metadata information and proper IP Address is provided for that particular instance **1110**. Once an IP Address and metadata has been chosen for the unit, the server can be allocated in the cloud and the instance can be created using CloudStack or OpenStack tools and services **1115**. The instance is then allocated and runs in the proper node in the cloud **1120**. Configuration of the assigned IP, Netmask, and VPN credentials are loaded at **1125**. Finally, certificate information is uploaded **1130** as well as all services run to enable the unit for execution of its caching functions, multicasting functions, or both.

FIG. **12** illustrates a conventional system bus computing system architecture **1200** such as can be used in Mediaplug **110**. Those of ordinary skill in the art will appreciate that other system architectures are also possible.

In computing system architecture **1200** the components of the system are in electrical communication with each other using a bus **1205**. Example system **1200** includes a processing unit (CPU or processor) **1210** and a system bus **1205** that couples various system components including the system memory **1215**, such as read only memory (ROM) **1220** and random access memory (RAM) **1225**, to the processor **1210**. The system **1200** can include a cache of high-speed memory connected directly with, in close proximity to, or integrated as part of the processor **1210**. The system **1200** can copy data from the memory **1215** and/or the storage device **1230** to the cache **1212** for quick access by the processor **1210**. In this way, the cache can provide a performance boost that avoids processor **1210** delays while waiting for data. These and other modules can control or be configured to control the

processor **1210** to perform various actions. Other system memory **1215** may be available for use as well. The memory **1215** can include multiple different types of memory with different performance characteristics. The processor **1210** can include any general purpose processor and a hardware module or software module, such as module **1 1232**, module **2 1234**, and module **3 1236** stored in storage device **1230**, configured to control the processor **1210** as well as a special-purpose processor where software instructions are incorporated into the actual processor design. The processor **1210** may essentially be a completely self-contained computing system, containing multiple cores or processors, a bus, memory controller, cache, etc. A multi-core processor may be symmetric or asymmetric.

To enable user interaction with the computing device **1200**, an input device **1245** can represent any number of input mechanisms, such as a microphone for speech, a touch-sensitive screen for gesture or graphical input, keyboard, mouse, motion input, speech and so forth. An output device **1235** can also be one or more of a number of output mechanisms known to those of skill in the art. In some instances, multimodal systems can enable a user to provide multiple types of input to communicate with the computing device **1200**. The communications interface **1240** can generally govern and manage the user input and system output. There is no restriction on operating on any particular hardware arrangement and therefore the basic features here may easily be substituted for improved hardware or firmware arrangements as they are developed.

Storage device **1230** is a non-volatile memory and can be a hard disk or other types of computer readable media which can store data that are accessible by a computer, such as magnetic cassettes, flash memory cards, solid state memory devices, digital versatile disks, cartridges, random access memories (RAMs) **1225**, read only memory (ROM) **1220**, and hybrids thereof.

The storage device **1230** can include software modules **1232**, **1234**, **1236** for controlling the processor **1210**. Other hardware or software modules are contemplated. The storage device **1230** can be connected to the system bus **1205**. In one aspect, a hardware module that performs a particular function can include the software component stored in a computer-readable medium in connection with the necessary hardware components, such as the processor **1210**, bus **1205**, display **1235**, and so forth, to carry out the function.

It can be appreciated that example system **1200** can have more than one processor **1210** or be part of a group or cluster of computing devices networked together to provide greater processing capability.

For clarity of explanation, in some instances the present technology may be presented as including individual functional blocks including functional blocks comprising devices, device components, steps or routines in a method embodied in software, or combinations of hardware and software.

Any of the steps, operations, functions, or processes described herein may be performed or implemented by a combination of hardware and software modules, alone or in combination with other devices. In an embodiment, a software module can be software that resides in memory of a client device and/or one or more servers of a content management system and perform one or more functions when a processor executes the software associated with the module. The memory can be a non-transitory computer-readable medium.

In some embodiments the computer-readable storage devices, mediums, and memories can include a cable or wireless signal containing a bit stream and the like. However, when mentioned, non-transitory computer-readable storage media expressly exclude media such as energy, carrier signals, electromagnetic waves, and signals per se.

Methods according to the above-described examples can be implemented using computer-executable instructions that are stored or otherwise available from computer readable media. Such instructions can comprise, for example, instructions and data which cause or otherwise configure a general purpose computer, special purpose computer, or special purpose processing device to perform a certain function or group of functions. Portions of computer resources used can be accessible over a network. The computer executable instructions may be, for example, binaries, intermediate format instructions such as assembly language, firmware, or source code. Examples of computer-readable media that may be used to store instructions, information used, and/or information created during methods according to described examples include magnetic or optical disks, flash memory, USB devices provided with non-volatile memory, networked storage devices, and so on.

Devices implementing methods according to these disclosures can comprise hardware, firmware and/or software, and can take any of a variety of form factors. Typical examples of such form factors include laptops, smart phones, small form factor personal computers, personal digital assistants, and so on. Functionality described herein also can be embodied in peripherals or add-in cards. Such functionality can also be implemented on a circuit board among different chips or different processes executing in a single device, by way of further example.

The instructions, media for conveying such instructions, computing resources for executing them, and other structures for supporting such computing resources are means for providing the functions described in these disclosures.

Although a variety of examples and other information was used to explain aspects within the scope of the appended claims, no limitation of the claims should be implied based on particular features or arrangements in such examples, as one of ordinary skill would be able to use these examples to derive a wide variety of implementations. Further and although some subject matter may have been described in language specific to examples of structural features and/or method steps, it is to be understood that the subject matter defined in the appended claims is not necessarily limited to these described features or acts. For example, such functionality can be distributed differently or performed in components other than those identified herein. Rather, the described features and steps are disclosed as examples of components of systems and methods within the scope of the appended claims.

What is claimed is:

1. A computer implemented method, comprising:

creating a plurality of multimedia assets at a caching unit,

for each one of the plurality of multimedia assets:

determining that there is sufficient storage space for the multimedia asset at the caching unit;

generating a channel identifier for the multimedia asset;

retrieving from a cloud service a plurality of media files to be included in the multimedia asset including a media identifier for each one of the media files;

for each one of the media files, creating a custom hypertext transfer markup language (HTML) user interface that includes video;

encoding each of the media files and encapsulating them together using an MPEG transport stream format;

storing each one of the multimedia assets at the caching unit;

receiving a request at the caching unit for one of the multimedia assets from a broadcasting unit; and

responsive to receiving the request, the caching unit providing the multimedia asset to the broadcasting unit in the MPEG transport stream format.

2. The method of claim **1**, wherein receiving the requests for the multimedia assets comprising receiving the requests over a REST API, Or: wherein retrieving the plurality of media files is performed using a REST API.

3. The method of claim **1**, wherein creating the custom HTML user interface for each media file is performed using Javascript.

4. The method of claim **1**, wherein encoding each of the media files include encoding each of the media files at a specified bit rate.

5. The method of claim **1**, wherein encoding each of the media files include encoding each of the media files using a H.264 encoder.

6. The method of claim **1**, wherein the custom HTML user interfaces are configured to be rendered using a Webkit browser.

7. The method of claim **1**, wherein the video for the custom HTML interfaces includes video taken from the media file.

8. The method of claim **1**, wherein encoding the media file is performed using an AC-3 file format for audio content in the media file.

9. The method of claim **1**, wherein the custom HTML user interfaces are configured so that multiple custom HTML user interfaces of the multimedia asset can be retrieved using a web rendering engine.

10. A computer-implemented method comprising:

virtualizing a system including a virtualized caching server, wherein the virtualized caching server performs:

receiving from a content provider, a request for at least one media stream for playback on a broadcast media channel, wherein the at least one media stream includes a plurality of multimedia items of different types;

obtaining content corresponding to the plurality of multimedia items from at least one source offering the content in at least one first format;

rendering a web page by a browser using the content;

generating a temporal sequence of screen captures of the rendered web page, where each screen capture defines all the content of the web page at a given time, and at least two adjacent screen captures illustrate a dynamic change of at least a portion of the content over time;

assembling the at least one media stream using the temporal sequence of screen captures; and

providing the at least one media stream to the content provider for broadcast on the broadcast media channel.

11. The method of claim **10**, wherein the obtaining comprises: retrieving, for each of the plurality of multimedia items, at least one audio file corresponding to an audio component of the multimedia item and a plurality of screen captures corresponding to a video component of the multimedia item.

12. The method of claim **11**, wherein the generating comprises: combining the plurality of screen captures and the at least one audio file to create each of the plurality of multimedia items.

13. The method of claim **12**, further comprising: the virtualized caching server detecting a change at the at least one webpage corresponding to at least one of the plurality of multimedia items; in response to detecting the change, retrieving a new plurality of screen captures from the at least one webpage for the at least one of the plurality of multimedia items; and reassembling the at least one of the plurality of multimedia items using the new plurality of screen captures to yield an updated multimedia item.

14. The method of claim **11**, wherein the retrieving of the plurality of screen captures comprises obtaining the plurality of screen captures from a playback of a video on the at least one webpage.

15. The method of claim **14**, wherein the combining of the plurality of screen captures comprises metadata corresponding to at least one of a song title, an artist, and a music genre.

16. The method of claim **10**, further comprising: the virtualized caching server identifying the at least one webpage based on a channel identifier associated with the broadcast media channel.

17. The method of claim **10**, further comprising: the virtualized server querying the content provider to determine the second format, wherein the second format corresponds to a Moving Picture Experts Group (MPEG) format.

18. The method of claim **10**, wherein the content provider is a cable television operator or a satellite television operator.

19. The method of claim **10**, wherein providing the at least one media stream to the content provider comprises streaming the at least one media stream to an MPEG multiplexer associated with the content provider.

20. The method of claim **10**, further comprising: the virtualized caching server provisioning, on at least one server, at least one virtual machine for performing the receiving, obtaining, generating, assembling, and providing.

21. The method of claim **10**, wherein virtualizing the system is performed using one of Docker, Xenserver, or a virtual machine.

22. The method of claim **10**, wherein virtualizing the system includes virtualizing the system to include at least one virtualized multicasting server that perform the providing the at least one media stream to the content provider.

23. The method of claim **10**, wherein virtualizing the system is performed for one channel, wherein the virtualized caching server is operable for one channel, wherein virtualizing the system is repeated for each one of a plurality of other channels.

24. The method of claim **10**, wherein receiving the request is performed using a JSON API.

25. A computer-implemented method comprising:

receiving, from a content provider, a request for at least one media stream for playback on a broadcast media channel, wherein the at least one media stream includes a plurality of multimedia items of different types;

obtaining content corresponding to the plurality of multimedia items from at least one source offering the content in at least one first format, performed over a first TCP-IP socket of a caching unit;

rendering a web page by a browser using the content;

generating a temporal sequence of screen captures of the rendered web page, where each screen capture defines all the content of the web page at a given time, and at least two adjacent screen captures illustrate a dynamic change of at least a portion of the content over time;

assembling the at least one media stream using the temporal sequence of screen captures;

providing the at least one media stream to the content provider for broadcast on the broadcast media channel; and

providing, at a second TCP/IP socket of the caching unit, a status of the obtaining, generating, and assembling.

26. A computer-implemented method comprising:

at a caching unit:

receiving, from a content provider, a request for at least one media stream for playback on a broadcast media channel, wherein the at least one media stream includes a plurality of multimedia items of different types;

obtaining content corresponding to the plurality of multimedia items from at least one source offering the content in at least one first format;

rendering a web page by a browser using the content;

generating a temporal sequence of screen captures of the rendered web page, where each screen capture defines all the content of the web page at a given time, and at least two adjacent screen captures illustrate a dynamic change of at least a portion of the content over time;

assembling the at least one media stream using the temporal sequence of screen captures;

at a multicast unit that is operable connected to the caching unit:

providing the at least one media stream to the content provider for broadcast on the broadcast media channel;

recording the media stream from the caching unit to produce a recorded media stream; and

upon a fault being detected at the caching unit, providing at least a portion of the recorded media stream to the content provider.

* * * * *

EXHIBIT 4

Stingray Link	Country	Providers	List of Providers
https://music.stingray.com/en/AR/television	AR	3	[,"Canal2","Encompass","Gigared","TeleRed Argentina"]
https://music.stingray.com/en/AW/television	AW	1	["Setar"]
https://music.stingray.com/en/AU/television	AU	1	["Foxtel"]
https://music.stingray.com/en/AT/television	AT	2	[,"Liwest","Magenta Austria"]
https://music.stingray.com/en/BS/television	BS	1	["Cable Bahamas"]
https://music.stingray.com/en/BO/television	BO	2	[,"Cotas Cable TV","Entel (Bolivia)"]
https://music.stingray.com/en/BA/television	BA	1	["Telemach Bosnia"]
https://music.stingray.com/en/BR/television	BR	7	[,"Azza Play","Cabo Telecom","EnterPlay","TVN","Vivo TV","Watch TV Brasil","YPLAY"]
https://music.stingray.com/en/CA/television	CA	170	[illegible] Systems","Aurora Cable","Bell Aliant Ontario - Bell FibreOP","Bell Aliant Ontario - NorthernTel FibreOP","Bell Aliant Quebec","Bell Aliant","Bell","Black Creek TV Inc","Briand et Moreau CV¢ble","Brooke Telecom","Brooks Bay Cable Corp.","Bruce Telecom","Buffalo Narrows Broadcasting","CCAP","CIPI Cable Inc.","CRRS-TV","Cable Cable (Canada)","Campbell River TV Association","CityWest Cable","Clearview Cable Limited","Coast Cable System","Coastline Broadcasting Ltd.","Cochrane Telecom Services","Cogeco Ontario","Cogeco Quebec","Columbia Cable T.V. Ltd - YourLink Inc.","Commstream Gigalinks Inc.","Community Recreation Association","Compton Cable TV Ltd","Connect it Networks / COV Communications","Conuma Cable","Coop Cablo Distribution Ste-Clotilde de Beauce","Coop CV¢blo Notre-Dame-des-Monts","Coop CV¢blo St-FidV®le","Coop CV¢blo Ste-Agathe","Coop CV¢blo Ste-Catherine-Fossambault","Coop CV¢blo Taillon","Coop de CV¢blodistribution Netagamiou","CoopTel","Copper Valley Cablevision","Cross Country TV","CV¢ble Axion","CV¢ble TV des Plateaux","CV¢ble VDN","CV¢blevision HSL-SDM","CV¢blevision du nord de QuV©bec","CV¢blovision Warwick","DERYtelecom","Davia Cable and Satellite Systems","Dawson City","Delta Cable Communications Ltd.","Diffusion Fermont","Duclos et Michaud TV©lV©com","Eastlink","Eston CATV Cooperative","Ex-cen Cablevision","Execulink","FCCQ","Fleximo","Gagnon et Fils Electric","Gitxaala Nation","Gosfield North Communications","Grand Bend Cable","Gulf Islands Cable","Guy Chouinard CV¢ble TV","Hastings CV¢ble Vision","Hay Communications","HuronTel","Ile a la Crosse Communications Society Inc.","Image Wireless Communications Inc.","Imperial Cable Systems","Internet Haut Richelieu","KBS","Kawartha","Keta Cable Inc.","Kincardine Cable","Kitamaat Village Council","La FV©dV©ration des Cooperatives du QuV©bec","Lake Broadcasting Corp.","Lynx Network (Cable TV of Camrose Inc.)","Lynx Network (Cable TV of Slave Lake)","Manitoba Telecom Services (MTS TV)","Markdale Communications","Mascon Cable Systems","Maskatel","Masset-Haida TV Society","MetroLoop","Milk River Cable Club","Mitchell Seaforth","Mornington Communications Co-Op Ltd.","Mountain Cablevision","NRTC Communications","New North Networks Ltd","Nexicom Communication","Nimpkish Valley Communications Ltd.","Nor-
https://music.stingray.com/en/KY/television	KY	2	[,"C3 Pure Fibre","Logic"]
https://music.stingray.com/en/CL/television	CL	3	[,"Entel (Chile)","Gtd","Telsur"]
https://music.stingray.com/en/CO/television	CO	2	[,"ETB","SuperCable"]
https://music.stingray.com/en/CR/television	CR	5	[,"Cabletica","Movistar Costa Rica","Telecable","Tigo","kV∂lbi hogar TV"]
https://music.stingray.com/en/HR/television	HR	1	["A1 Hrvatska"]
https://music.stingray.com/en/CW/television	CW	1	["Tres Networks"]
https://music.stingray.com/en/CZ/television	CZ	1	["freeSAT"]
https://music.stingray.com/en/DM/television	DM	1	["SAT Dominica"]
https://music.stingray.com/en/DO/television	DO	2	[,"Activa","Altice (RepvJblica Dominicana)"]
https://music.stingray.com/en/EC/television	EC	3	[,"CNT","Univisa","Xtrim TVCable"]
https://music.stingray.com/en/SV/television	SV	1	["Movistar El Salvador"]
https://music.stingray.com/en/GE/television	GE	1	["CELLfie"]
https://music.stingray.com/en/DE/television	DE	11	[,"DGTV","DNMG Equinix Frankfurt","Inexio","KEVAG Telekom","RFT kabel","SeeConnect","TV©lV©fibre La Minerve","Vodafone (DE)","Vodafone (frv9her Unitymedia)","wilhelm.tel","willy.tel"]
https://music.stingray.com/en/GT/television	GT	2	[,"Cable Intercentro","Movistar Guatemala"]
https://music.stingray.com/en/GY/television	GY	1	["E-Networks"]
https://music.stingray.com/en/HU/television	HU	2	[,"UPC Direct","UPC Hungary"]
https://music.stingray.com/en/IL/television	IL	1	["Yes"]
https://music.stingray.com/en/JM/television	JM	4	[,"Digicel","Flow","HOMETIME Cable","Telstar"]
https://music.stingray.com/en/KE/television	KE	1	["Zuku (Wananchi)"]
https://music.stingray.com/en/MV/television	MV	1	["Dhiraagu"]
https://music.stingray.com/en/MT/television	MT	1	["Melita"]
https://music.stingray.com/en/MX/television	MX	15	[,"Airecable","Cable VisiV≥n Regional","Claro TV","Cosmored","DIRECTV SKY","FTTH","GOBO","Gigacable","Izzi","Megacable","SKY (a travV©s de Blue To Go Video Everywhere)","StarTV","Telecable de Xaltianguis","Telesur","Totalplay"]

https://music.stingray.com/en/ME/television	ME	1	["M-Kabl"]
https://music.stingray.com/en/NL/television	NL	22	[,"Breedband-Helmonds","Cai Harderwijk","Caiway","Delta","Fiber","KPN","Kabelnoord","Kabeltex","Nederlandse Energie Maatschappij","On","OnsBrabantNet","Plinq","Rekam","SKP","Solcon","Sparql","Stipte","T-Mobile (NL)","Telfort","TriNed","XSyou","Xs4all"]
https://music.stingray.com/en/NI/television	NI	1	["Movistar Nicaragua"]
https://music.stingray.com/en/NO/television	NO	1	["Telia Norge"]
https://music.stingray.com/en/PA/television	PA	2	[,"Cable & Wireless","Cable Onda"]
https://music.stingray.com/en/PE/television	PE	1	["Movistar TV"]
https://music.stingray.com/en/PT/television	PT	2	[,"MEO","Vodafone Portugal"]
https://music.stingray.com/en/PR/television	PR	1	["Claro Puerto Rico"]
https://music.stingray.com/en/VC/television	VC	1	["Mustique Digital TV"]
https://music.stingray.com/en/RS/television	RS	2	[,"SBB","Telekom Srbija"]
https://music.stingray.com/en/SG/television	SG	1	["Singtel"]
https://music.stingray.com/en/SX/television	SX	1	["St. Maarten Cable TV (Innovative)"]
https://music.stingray.com/en/SI/television	SI	1	["Telemach Slovenia"]
https://music.stingray.com/en/ZA/television	ZA	1	["StarSat (TopTv)"]
https://music.stingray.com/en/CH/television	CH	6	[,"Databaar","GGA MAUR","Kabelfernsehen Bodeli","SASAG Kabelkommunikation","Sunrise","Ziknet"]
https://music.stingray.com/en/TH/television	TH	1	["TrueVision"]
https://music.stingray.com/en/TT/television	TT	3	[,"Amplia","B Mobile","Flow"]
https://music.stingray.com/en/TR/television	TR	1	["D-Smart"]
https://music.stingray.com/en/AE/television	AE	1	["du"]
https://music.stingray.com/en/GB/television	GB	2	[,"Quickline","TalkTalk"]
https://music.stingray.com/en/US/television	US	413	[redacted] Municipal-Utilities","Allens TV Cable Service Inc.","Alliance Communications Cooperative Inc.","Allo Communications LLC","Altice Mobile","Americable International Inc.","Americas Center Corporation","Antietam Cable Television","Armstrong","Arthur Mutual","Arvig","Audeamus","BCI Broadband","BELD","BTC (Ballard Telephone Cooperative)","BTC Bahamas","BTC Communications (OH)","BTC Multimedia","Baldwin-Telecom-Inc","Ballard Rural Telephone","Bay Springs","Bee-Line-Inc","BendBroadband","Benton Communications","Benton Ridge Telephone Company","Berkeley Cable Television Inc.","Big Sandy TV Cable, Inc.","Blue Stream","Bolt Fiber Optic","BrainTree Electric","Brantley Telephone Company (GA)","Brockway Television, Inc.","Brookings Municipal Utilities","Bruce Southern","Bryan Municipal Utilities","Buckeye CableSystem","C Spire","CAS Cable","CC Communications","CDE lightband","CP-TEL","CRST (Cheyenne River Sioux Tribe)","Cable America Missouri LLC","Cable One, Inc.","Cable South Media III, Inc.","Cable System of Nevada","Cable-Suite-541-Inc","Cable-TV-of-East-Alabama-fka-R-M-Greene-Inc","Cablevision of Marion County","Caicos TV Holdings dba WIV","CalTel Connections","Calaveras Cable Vision","Callabyte","Cameron Communications","Canby Telephone Association","Cannon-Valley-Cablevision-Inc-Bevcomm","Carr Communications","Cedar Falls","Celect Communications","CenCom Inc.","Central Arkansas Telephone Cooperative","Central-Telcom-Services-LLC","Chariton Valley Communications Corp","Chatmoss Cablevision","Cherokee Communications","Chesapeake-Bay-Communications-LLC","Chester Telephone Company","Chickamauga Telephone Corporation","Cim Tel Cable Inc","Citizens Cable Communications","Citizens Cablevision Inc.","City of Highland","City of Ketchikan Telecommunications","City of Monroe","City of Salisbury","City of Valparaiso dba Valparaiso Communications Systems","City of Wadsworth","City of Wilson","City-of-Hawarden-dba-HITEC","Co-Mo Comm Inc.","Co-Mo Connect","CoMPAS","Coast Communications Co., Inc.","Coastal-Link Communications, LLC","Coaxial","Coltontel","Columbia Power & Water Systems","Columbus Communications","Com-Net","CommZoom Communications, LLC","Communication-Construction-Services-Inc-CCS","Community Cablevision Company","Community
https://music.stingray.com/en/UY/television	UY	13	[,"CABLE DOLORES DIGITAL","CABLEVISIvìN DURAZNO","CCV","MINAS CABLE VISION","Montecable","Nuevo Siglo","Punta Cable","TCC","TVC","TvCable SanJose","VIDEO CABLE FLORIDA","Video Cable Oeste","Vision Canaria"]
https://music.stingray.com/en/VE/television	VE	3	[,"Multivision","NetUno","SimpleTV"]
Tootal		731	

EXHIBIT 5

EGLA COMMUNICATIONS

Confidential-DO NOT DISTRIBUTE

MUTUAL NON-DISCLOSURE AGREEMENT

Agreement between **EGLA CORP dba/ EGLA COMMUNICATIONS**, a Florida corporation having offices 3701 FAU Blvd Suite 210, Boca Raton, FL, 33431 (**"EGLA COMMUNICATIONS"**), and DMX Inc, a _____ corporation having offices at 1703 W 5th Street, ("DMX"), effective as of March 1st, 2012. Suite 600 Austin, Tx. 78703

WHEREAS, for the purpose as stated in Section 2 below, ~~Sensei and Leverage Partners~~ (collectively referred to as the **"Parties"** and individually referred to as a **"Party"**) have determined to establish terms governing the use and protection of Confidential Information (as defined in Section 1 below) that the either Party may disclose to the other Party.

NOW, THEREFORE, the Parties agree as follows:

1. **"Confidential Information"** means information that relates to the purpose stated in Section 2 below or that, although not related to such purpose, is nevertheless disclosed as a result of the Parties' discussions in that regard, and that should reasonably have been understood by the Receiving Party, because of legends or other markings, the circumstances of disclosure or the nature of the information itself, to be proprietary and confidential to Disclosing Party, an Affiliate of Disclosing Party or to a third Party. Confidential Information may be disclosed in written or other tangible form (including on magnetic media) or by oral, visual or other means. The term **"Affiliate"** means any person or entity directly or indirectly controlling controlled by, or under common control with a Party.

2. The Parties may use Confidential Information only for the purpose of understanding the proposal.

3. The Parties shall protect such Confidential Information from disclosure to others, using the same degree of care used to protect its own confidential or proprietary information of like importance, but in any case using no less than a reasonable degree of care. The Parties may disclose Confidential Information received hereunder to (i) its Affiliates who agree, in advance, in writing, to be bound by this Agreement, and (ii) to its employees, and its Affiliates' employees, who have a need to know, for the purpose of this Agreement, and who are bound to protect the received Confidential Information from unauthorized use and disclosure under the terms of a written agreement. Confidential Information shall not otherwise be disclosed to any third Party without the prior written consent of Disclosing Party.

4. The restrictions of this Agreement on use and disclosure of Confidential Information shall not apply to information that:

(a) Was publicly known at the time of Disclosing Party's communication thereof to the Company;

(b) Becomes publicly known through no fault of the receiving Party subsequent to the time of Disclosing Party's communication thereof to the receiving Party;

(c) Was in the receiving Party's possession free of any obligation of confidence at the time of Disclosing Party 's communication thereof to the receiving Party; provided, however, that the receiving Party immediately informs Disclosing Party in writing to establish the receiving Party 's prior possession;

(d) Is developed by the receiving Party independently of and without reference to any of Disclosing Party's Confidential Information or other information that Disclosing Party disclosed in confidence to any third Party;

(e) Is rightfully obtained by the receiving Party from third Parties authorized to make such disclosure without restriction; or

(f) Is identified by Disclosing Party as no longer proprietary or confidential.

5. In the event the receiving Party is required by law, regulation or court order to disclose any of Disclosing Party's Confidential Information, the receiving Party will promptly notify Disclosing Party in writing prior to making any such disclosure in order to facilitate Disclosing Party seeking a protective order or other appropriate remedy from the appropriate body. The receiving Party agrees to cooperate with Disclosing Party in seeking such order or other remedy. The receiving Party receiving Party further agrees that if Disclosing Party is not successful in precluding the requesting legal body from requiring the disclosure of the Confidential Information, it will furnish only that portion of the Confidential Information which is legally required and will exercise all reasonable efforts to obtain reliable assurances that confidential treatment will be accorded the Confidential Information.

6. All Confidential Information disclosed under this Agreement (including information in computer software or held in electronic storage media) shall be and remain the property of Disclosing Party. All such information in tangible form shall be returned to Disclosing Party promptly upon written request or the termination or expiration of this Agreement, and shall not thereafter be retained in any form by the receiving Party, its Affiliates, or any employees of the receiving Party or its Affiliates.

7. No licenses or rights under any patent, copyright, trademark, or trade secret are granted or are to be implied by this Agreement. Neither Party is obligated under this Agreement to purchase from or provide to the other Party any service or product.

8. Disclosing Party shall not have any liability or responsibility for errors or omissions in, or any decisions made by the receiving Party in reliance on, any Confidential Information disclosed under this Agreement.

9. This Agreement shall become effective as of the date first written above and shall automatically expire three (3) years thereafter, provided, however, that prior to such expiration, either Party may terminate this Agreement at any time by written notice to the other. Notwithstanding such expiration or termination, all of the receiving Party's nondisclosure obligations pursuant to this Agreement shall survive with respect to any Confidential Information received prior to such expiration or termination.

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10. Except upon the prior, written consent of Disclosing Party, or as may be required by law, the receiving Party shall not in any way or in any form disclose the existence or terms of this Agreement, the discussions that gave rise to this Agreement or the fact that there have been, or will be, discussions or negotiations covered by this Agreement.

11. The receiving Party acknowledges that Confidential Information is unique and valuable to Disclosing Party, and that disclosure in breach of this Agreement will result in irreparable injury to Disclosing Party for which monetary damages alone would not be an adequate remedy. Therefore, the receiving Party agrees that in the event of a breach or threatened breach of confidentiality, Disclosing Party shall be entitled to specific performance and injunctive or other equitable relief as a remedy for any such breach or anticipated breach without the necessity of posting a bond. Any such relief shall be in addition to and not in lieu of any appropriate relief in the way of monetary damages.

12. The receiving Party shall not assign any of its rights or obligations hereunder, except to an Affiliate or successor in interest, without the prior, written consent of Disclosing Party.

13. No failure or delay in exercising any right, power or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any right, power or privilege hereunder.

14. This Agreement: (a) is the complete agreement of the Parties concerning the subject matter hereof and supersedes any prior such agreements with respect to further disclosures concerning such subject matter; (b) may not be amended or in any manner modified except by a written instrument signed by authorized representatives of both Parties; and (c) shall be governed and construed in accordance with the laws of the Commonwealth of Florida without regard to its choice of law provisions.

15. If any provision of this Agreement is found to be unenforceable, the remainder shall be enforced as fully as possible and the unenforceable provision shall be deemed modified to the limited extent required to permit its enforcement in a manner most closely representing the intention of the Parties as expressed herein.

16. The Recipient shall not at any time prior to the expiration of three (3) years from the date of this Agreement, without the prior written consent of the Company, which consent the Company may withhold in its sole discretion, (a) attempt in any manner to deal directly or indirectly in any manner with any of the Contact Persons or other individuals or companies related to the Business Opportunity including by having any part of or deriving any benefit from the Business Opportunity or any aspect thereof, or (b) by-pass, compete, avoid, circumvent, or attempt to circumvent the Company relative to Business Opportunity including by utilizing any of the Confidential Information or by otherwise exploiting or deriving any benefit from the Confidential Information.

IN WITNESS WHEREOF, each of the Parties hereto has caused this Agreement to be executed by its duly authorized representative.

EGLA CORP dba/
EGLA COMMUNICATIONS

By: _____

Name: ___Edwin A. Hernandez, PhD_

Title:_____Vice-President and CTO___

Date:_____

DMX Inc

By: _____

Name: Gustavo Tarelli

Title: Managing Director LA Am

Date: 3/8/12

EXHIBIT 6

Client Authorization Form

Card holder name: EDWIN A MONDRAGON

Address: 4890 NW 101ST AVE CORAL SPRINGS FL 33076

Daytime Telephone Number: 561 306 4996
Mobile Telephone Number: 561 306 4996

Card Number (first 6 and last 4)*: 076437
Date of Transaction:

Card Holder Authorizing: [signature]

Product or Service purchased: IWEB

I, Edwin Hernan Mondragon.
(Cardholder name)

authorize IWEB to charge my card $1679.42 on the
(Merchant name)

following date(s) May 13, 2014.

Cardholder Signature: [signature]

Date: 7/9/2014

*please note: In accordance with PCI-DSS rules and regulations, we CANNOT accept full credit card numbers, card expiry dates or card CVV numbers. Please ONLY provide the first 6 digits of the credit card, and the last four.

EXHIBIT 7

EQUINIX

NOTE REGARDING USE OF THIS DOCUMENT: These Global Terms and Conditions ("**GTC**") are intended to be incorporated into country- specific master country agreements, and neither Licensed Space nor Services may be ordered in a country until the GTC and applicable master country agreements are fully executed.

Agreement Number: 00027557.0

GLOBAL TERMS AND CONDITIONS

1. ORDERING AND PROVISION OF LICENSED SPACE AND SERVICES

Customer may request Licensed Space and Services from Equinix by placing Order(s). Upon agreement of Order(s), Equinix shall provide Licensed Space and Services to Customer pursuant to this Agreement.

2. PAYMENT TERMS AND TAXES

a. Fees will accrue from the Billing Commencement Date and Customer will be liable for Fees for the full term specified in each Order. Customer will pay in full all invoices from Equinix in the currency stipulated in the Order within thirty (30) days of the date of invoice. Interest shall be charged on past due amounts at the lower of (i) one and a half per cent (1.5%) per month; or (ii) the highest rate permitted by applicable law. Unless otherwise mutually agreed, Equinix will invoice monthly in advance for all recurring Fees and in arrears for usage-based or non-recurring Fees. Fees will be listed on Orders, except for Online Orders and Phone Orders which will be subject to Equinix's then-current list price unless otherwise mutually agreed.

b. If the amount of any invoice or any part thereof is disputed by Customer in good faith *(bona fide)* (a "**Disputed Amount**"), then Customer must submit a written notice with reasonable supporting documentation within ninety (90) days of the date of the initial invoice on which the Disputed Amount appears, failing which Customer waives all rights to dispute such Disputed Amount and to file any claim. The Parties will work together in good faith to resolve the Disputed Amount within thirty (30) days after receipt of Customer's notice.

c. If Customer's account is past due two (2) or more times in any twelve (12) month period, Equinix may charge Customer a deposit of three (3) months of the then-billable Fees to be held without interest (the "**Deposit**"). Equinix may deduct amounts due from the Deposit and will return or credit any remainder upon termination.

d. All amounts payable by Customer to Equinix under this Agreement exclude Taxes. Customer shall be responsible for (i) Taxes related to its activities and the ownership and operation of Customer's Equipment and (ii) Taxes imposed, levied or assessed thereon by any governmental or other authorities. If Customer is required to make any deduction, withholding or payment for Taxes in any jurisdiction on amounts payable to Equinix, such amounts will be increased such that after making such deduction, Equinix receives an amount equal to what it would have received if such deduction, withholding or payment had not been made.

3. ACCESS TO AND USE OF THE IBX CENTERS

a. Subject to the terms and conditions of this Agreement, Customer will have access to the Licensed Space twenty-four (24) hours per day, every day of the year.

b. Customer will comply with the Policies, which have been furnished to Customer and are incorporated herein by reference. Equinix may modify the Policies from time to time effective upon notice. Customer may terminate an Order for a Licensed Space if Equinix modifies the Policies in a way that materially adversely affects Customer's use of the Licensed Space and the Services in such Licensed Space and Customer provides written notice of termination within ten (10) days from the date of Equinix's notice.

c. Customer may sublicense Licensed Space to a Sublicensee provided that (i) the terms and conditions of such sublicense will be no less restrictive than this Agreement; (ii) Customer will not act or purport to act on behalf of Equinix or any landlord of Equinix; (iii) Customer will require the Sublicensee to abide by this Agreement and the applicable Policies; and (iv) Equinix shall not be deemed to have any obligations to any Sublicensee. No Sublicensee shall further sublicense any Licensed Space. Notwithstanding any sublicensing, Customer remains responsible to Equinix for the performance of all obligations under this Agreement including the payment of all amounts owed under this Agreement.

d. Customer will be responsible and liable for all acts or omissions of Customer's Authorized Persons, Accompanying Persons, Associated Entities and for any equipment or services not provided by Equinix. Customer will indemnify, defend and hold harmless the Equinix Parties from any and all liability, loss, damages, costs and expenses (including reasonable attorneys' fees and expenses) for third-party claims brought by, arising from or related to Customer's Authorized Persons, Accompanying Persons or Associated Entities.

e. This Agreement is not intended to and does not constitute a lease of any real or personal property or a grant of any other real property interest. Customer acknowledges and agrees that (i) for Licensed Space and Services provided in a common law jurisdiction, it is granted only a license to use the Licensed Space in accordance with this Agreement; and (ii) for Licensed Space and Services provided in a civil law jurisdiction, the Licensed Space is made available and Customer is granted permission to access and use the Licensed Space in accordance with this Agreement. This Agreement is subject and subordinate to the leases for the IBX Centers and all superior instruments to such leases. Customer's Equipment will not be construed as fixtures or fittings. Equinix will retain title to all parts and materials used or provided by Equinix in providing the Licensed Space and the performance of the Services.

4. WARRANTY AND LIMITATION OF LIABILITY

a. Each Party represents, warrants and covenants that it will comply with all applicable laws and regulations in connection with this Agreement. Equinix represents warrants and covenants that it shall provide the Licensed Space and perform the Services in a professional and workmanlike manner. Customer represents warrants and covenants that it will maintain throughout the Term the legal right and authority (including regulatory consents) to operate, configure, install, maintain and repair Customer's Equipment as contemplated by this Agreement.

b. EXCEPT AS OTHERWISE SET FORTH IN THIS AGREEMENT, EQUINIX DOES NOT MAKE AND HEREBY DISCLAIMS ALL WARRANTIES INCLUDING BUT NOT LIMITED TO EXPRESS, IMPLIED AND STATUTORY WARRANTIES THAT THE SERVICES WILL BE UNINTERRUPTED, ERROR-FREE, OR COMPLETELY SECURE AND THE IMPLIED WARRANTIES OF MERCHANTABILITY OR SATISFACTORY QUALITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF ANY THIRD PARTY'S INTELLECTUAL PROPERTY RIGHTS. ALL LICENSED SPACE AND SERVICES ARE PROVIDED OR PERFORMED ON AN "AS IS", "AS AVAILABLE"

ASIS, AND CUSTOMER'S USE OF THE LICENSED SPACE AND ERVICES IS SOLELY AT ITS OWN RISK.

NOTWITHSTANDING ANYTHING TO THE CONTRARY IN THIS GREEMENT, IN NO EVENT WILL EITHER PARTY BE LIABLE TO THE THER PARTY FOR (I) LOST PROFITS; (II) LOSS OF BUSINESS; (III) OSS OF REVENUES (EXCEPT THAT CUSTOMER SHALL BE LIABLE FOR NY FEES OR OTHER AMOUNTS OWED TO EQUINIX UNDER THIS GREEMENT); (IV) LOSS OF DATA OR INTERRUPTION OR ORRUPTION OF DATA; (V) ANY CONSEQUENTIAL OR INDIRECT AMAGES; OR (VI) ANY INCIDENTAL, SPECIAL, RELIANCE, EXEMPLARY R PUNITIVE DAMAGES (IF APPLICABLE), EVEN IF ADVISED OF THE OSSIBILITY OF SUCH DAMAGES.

NOTWITHSTANDING ANYTHING TO THE CONTRARY IN THIS GREEMENT, EQUINIX'S TOTAL LIABILITY TO CUSTOMER IN THE GGREGATE FOR THE ENTIRE TERM (REGARDLESS OF WHETHER THE LAIMS ARE BROUGHT DURING OR AFTER THE TERM) WITH RESPECT O ALL CLAIMS ARISING FROM OR RELATED TO THE SUBJECT ATTER OF THIS AGREEMENT (INCLUDING ATTORNEY'S FEES) WILL OT EXCEED THE AMOUNT ACTUALLY PAID BY CUSTOMER TO QUINIX FOR THE THREE (3) MONTH PERIOD IMMEDIATELY RECEDING THE MONTH IN WHICH THE FIRST CLAIM AROSE. AS A URTHER LIMITATION, EQUINIX'S MAXIMUM LIABILITY FOR ANY LAIMS RELATING TO THE LICENSED SPACE AND THE SERVICES FFERED OR PROVIDED BY EQUINIX (I) FOR A NON-RECURRING HARGE ONLY; OR (II) AS SMART HANDS SERVICES, SHALL NOT XCEED THE AMOUNT OF THE FEE FOR SUCH LICENSED SPACE AND ERVICES PROVIDED ON THE OCCASION GIVING RISE TO THE CLAIM.

THE LIMITATIONS SET FORTH IN SECTIONS 4(c) AND 4(d) WILL PPLY TO ALL CLAIMS AND CAUSES OF ACTION, REGARDLESS OF WHETHER IN CONTRACT, TORT, STRICT LIABILITY OR OTHER HEORY.

Equinix and Customer each waive the right to bring any claim against e other Party arising out of or in any way relating to an Order more than one) year after the date such Order expires or is terminated. Each Party ecognizes and agrees that the warranty disclaimers, limitations of liability and emedy limitations in this Agreement are materially bargained for by Equinix nd Customer.

INSURANCE

Customer agrees to maintain the following insurance, at its expense, for ach IBX Center during the Term, with insurers having a minimum AM Best ating of A- VII or S&P rating of A: (i) Commercial General Liability or Public ability Insurance with a limit of US$2,000,000 per occurrence, US$4,000,000 the aggregate (or the local currency equivalent), provided these limits may e achieved through a combination of primary and excess policies. Such surance will include coverage for bodily injury and property damage; (iii) Vorkers' Compensation and Employer's Liability insurance where required by cal statute; and (iii) All Risk Property Insurance on a replacement cost basis ith limits adequate to cover the value of Customer's Equipment.

Customer will furnish Equinix with certificates of insurance upon request at evidence the minimum levels of insurance set forth herein, list Equinix as n additional insured or interested party on the Commercial General Liability r Public Liability policy and designate that Customer's insurance is primary nd non-contributory. Customer waives its insurers rights of subrogation on all olicies referenced above. Customer will provide at least thirty (30) days' prior ritten notice to Equinix of any non-renewal or cancellation of the policies eferenced above.

TERM, TERMINATION AND SUSPENSION

This Agreement will commence on the Effective Date and will terminate n the date the last Order then in effect expires or is terminated. A rmination of this Agreement shall terminate all Order(s).

b. Either Party may terminate this Agreement by giving written notice to the other Party if the other Party breaches any material term or condition of this Agreement and fails to cure such breach within thirty (30) days (ten (10) days in the case of a failure to pay Fees) after receipt of such notice. If Customer fails to cure a monetary breach, Customer will be responsible for all collections costs including reasonable attorneys' fees. If the breach (other than where Customer has failed to pay Fees) cannot be cured within thirty (30) days, the breaching Party shall be given a reasonable period of time, but not to exceed sixty (60) days after receipt of the notice, to cure the breach, provided that the breaching Party acts promptly and diligently to cure such breach.

c. Either Party may terminate this Agreement immediately upon giving written notice to the other Party if such other Party becomes unable to pay its debts as they become due, ceases to do business, enters into a deed of arrangement, undergoes judicial management, commences the process of liquidation, has a receiver appointed or begins winding up or similar arrangements.

d. Without limiting Equinix's rights under Section 6(b), Equinix may suspend the provision of the Licensed Space and/or the Services, deny access to and the removal of Customer's Equipment from the IBX Center, if Customer fails to cure any monetary breach of this Agreement within ten (10) days after notice of the same (or within five (5) days after notice of the same in the event Customer's account is past due on two (2) or more occasions during a twelve (12) month period).

e. Equinix may suspend the use of Licensed Space and/or provision of the Services if (i) Customer or Customer's Equipment interferes with Equinix's operation or maintenance of the IBX Center or with one or more of Equinix's other customers' use thereof, and within a reasonable time, not to exceed one (1) hour after being notified by email or phone, Customer fails to (a) cease such interference; (b) provide a plan acceptable to Equinix to cease such interference; or (c) authorize Equinix to take action to cease such interference (billed at Smart Hands rates); or (ii) in Equinix's reasonable judgment Customer or Customer's Equipment has the potential to interfere with Equinix's operation or maintenance of the IBX Center or with one or more of its other customers' use thereof, and within a reasonable time, not to exceed forty-eight (48) hours after being notified by e-mail or phone, Customer fails to (a) resolve such potential interference; (b) provide a plan acceptable to Equinix to resolve such potential interference; or (c) authorize Equinix to take action to resolve such potential interference (billed at Smart Hands rates). If Equinix suspends the use of Licensed Space and Services pursuant to this Section 6(e), unless Equinix has subsequently terminated this Agreement as permitted under this Agreement, Equinix will reinstate use of Licensed Space and resume the discontinued Services as soon as reasonably practical after it is reasonably satisfied that Customer has cured the breach(es) which gave rise to the suspension; and Equinix may charge a reinstatement fee. Further, Equinix may terminate this Agreement if Customer's breach referred to in this Section 6(e) continues for at least five (5) days or occurs more than three (3) times in any twelve (12) month period.

7. REMOVAL OF CUSTOMER'S PROPERTY

a. Customer will remove all of Customer's Equipment on or before the expiry or termination of the applicable Order. Unless Equinix otherwise agrees in writing, failure to remove Customer's Equipment within ten (10) days from the termination of the applicable Order, or within thirty (30) days if the Order is terminated due to Equinix's material breach; will constitute abandonment of Customer's Equipment under the laws of the jurisdiction where the abandoned property is located and Equinix will be entitled to pursue all available legal remedies, including without limitation and at Customer's risk and expense: (i) immediately removing Customer's Equipment and storing it at Customer's expense at an on-site or off-site location; (ii) shipping it to Customer; or (iii) upon thirty (30) days' prior written notice to Customer, liquidating it, and retaining the proceeds.

b. Subject to Section 7(a), while Customer has no right to use the censed Space or Services after an Order expires or terminates, if quinix permits Customer to do so in its sole discretion, Customer will emain bound by the terms of the Order and this Agreement, including, without mitation, all payment obligations, and such continued use may be rminated by Equinix immediately upon notice.

CONFIDENTIAL INFORMATION

a. "Confidential Information" means information disclosed by one arty to the other Party; including (a) information identified by the disclosing arty, in writing or orally, as confidential at the time of disclosure; (b) formation containing the disclosing Party's customer lists, customer formation, technical information, pricing information, financial position, trade ecrets, customer communications or proposals, benchmarking information, atisfaction surveys, or information relating to its business planning or usiness operations; (c) the terms of this Agreement; (d) the design of the IBX enters, the Licensed Space, the Services provided, equipment used at the X Centers, the configuration of cables, networks and services at the IBX enters. Information is not deemed Confidential Information if it (i) is known the receiving Party prior to receipt from the disclosing Party directly or directly from a source other than one having an obligation of confidentiality the disclosing Party; (ii) becomes known (independently of disclosure by the sclosing Party) to the receiving Party directly or indirectly from a source ther than one having an obligation of confidentiality to the disclosing Party; i) becomes publicly known or otherwise ceases to be confidential, except rough a breach of this Agreement by the receiving Party; or (iv) is dependently developed by the receiving Party. For the avoidance of doubt, e mere placement of materials or equipment containing information at an quinix location does not constitute disclosure of such information to Equinix.

b. Neither Party will use or disclose Confidential Information from the ther Party without the prior written consent of the other Party except where (i) in the opinion of counsel, the disclosure is required by applicable law or gulation (including securities laws regarding public disclosure of business formation) or by an order of a court or other governmental body having risdiction after taking steps to maintain its confidentiality where practicable; (ii) reasonably necessary to be made to that Party's, or its Affiliates', mployees, officers, directors, attorneys, accountants and other advisors, or i) necessary for a Party to exercise its rights and perform its obligations nder this Agreement. In any case, the disclosing Party shall ensure that sclosure shall not be broader than necessary, and that the recipient agrees rior to receipt to keep the information confidential to the same extent as nder this Agreement (except that such agreement need not be obtained for sclosures to a court, regulator or arbitrator).

c. Neither Party grants the other Party the right to use its trademarks, ervice marks, trade names, copyrights, other intellectual property rights or ther designations in any promotion, publication or press release without e prior written consent of the other Party in each case. Notwithstanding this ection 8, (i) Equinix may issue a press release announcing Customer's entry to the IBX Centers; (ii) Equinix may display Customer's name, presence in e IBX Centers and other information uploaded by Customer on the Equinix arketplace; and (iii) either Party may publicly refer to the other Party as a ustomer or vendor of Licensed Space and Services.

MISCELLANEOUS

a. Notice. Unless expressly stated in the Agreement, all notices, onsents, or approvals required by this Agreement will only be effective if in riting and sent by (i) certified or registered mail, postage prepaid; (ii) vernight delivery requiring a signature upon receipt; (iii) delivery by hand; or v) facsimile or electronic mail (promptly confirmed by mail), to the Parties at e respective addresses or numbers in this Agreement or as designated in riting by the Parties. Notices, consents and approvals under this Agreement ill be in writing, with either ink or electronic signature, and be deemed ffective on the date of receipt. Notwithstanding anything to the contrary in is Agreement, notices relating to Policies sent by Equinix shall be presumed be received five (5) days after mailing if sent by mail, two (2) days later if ent by overnight courier or on the date of dispatch if sent by electronic mail.

b. Entire Agreement. This Agreement, including these Global Terms and Conditions and the Equinix Service Level Agreement set out in Exhibit 1 to these Global Terms and Conditions, and all Orders, which are incorporated by this reference, constitute the entire agreement between the Parties with respect to the subject matter of this Agreement, and supersede and replace all prior or contemporaneous discussions, negotiations, proposals, understandings and agreements, written or oral, as well as any industry custom. Each Party acknowledges that, in entering into this Agreement, it has not relied on, and shall have no right or remedy in respect of, any statement, representation, assurance or warranty other than as expressly set out in this Agreement, but nothing in this Section 9(b) shall limit or exclude a Party's liability for fraud. This Agreement may be executed in two or more counterparts (and the signature pages may be delivered with ink or electronic signature or by facsimile or email), each will be deemed an original, but all together will constitute one and the same instrument. Except where otherwise expressly stated herein, this Agreement may be amended only by the written agreement of both Parties.

c. Construction. Each Party agrees that it has reviewed this Agreement, and this Agreement shall not be interpreted more strictly against the drafting Party. The section headings and captions are for convenience only and will not be used to construe this Agreement. If any provision of this Agreement is adjudged by a court to be invalid, illegal or unenforceable, it will not affect the validity, legality, or enforceability of the other part(s) of the same provision or of the other provisions in this Agreement.

d. Survival. Sections 3(d), 4(c) – (f), 7 and 9(d) will survive the termination of this Agreement. Section 8 will survive for three (3) years after termination of this Agreement.

e. Subcontracting and Transfer. Equinix may permit any other Equinix Company, independent contractor or other third party, to perform any of Equinix's obligations hereunder. Equinix may transfer this Agreement or any of its rights and obligations hereunder with prior notice to Customer. Customer may transfer this Agreement or any of its rights and obligations hereunder to an Affiliate or to an entity which is acquiring all or substantially all of Customer's business or assets with prior notice to Equinix, and in all such events the person or entity to whom this Agreement is assigned by Customer must agree in writing to be bound by all of the terms of this Agreement. This Agreement will be binding upon and inure to the benefit of all successors and permitted transferees of Equinix and Customer, who will be bound by all of the obligations of their predecessors or transferors.

f. Force Majeure. Except for Customer's obligation to pay amounts owed under this Agreement, including Fees, neither Party will be responsible or in any way liable to the other Party, and neither Party will have any termination or other rights, arising out of or relating to a failure by the other Party to perform any of its obligations under this Agreement if such failure is caused by events or circumstances beyond its reasonable control. These events may include but not be limited to acts of God, war, labor strike, terrorist act, fire, flood, earthquake, health epidemic or any law, order, regulation or other action of any governing authority or agency.

g. Conflicts. All Orders are subject to the terms and conditions of this Agreement. In the event of ambiguity, conflict or inconsistency among the documents comprising this Agreement, the documents shall be given a descending order of precedence as follows (i) the Order; (ii) the master country agreement including attachments and exhibits to the master country agreement, other than these Global Terms and Conditions; (iii) the Policies; and (iv) these Global Terms and Conditions.

h. Data Protection. "Contact Data" means business contact data (including but not limited to CRM databases and data that is set out on access lists at any IBX Center from time to time) containing personal and/or private information of a Party, its agents, employees or any

thorized user of the Licensed Space and Services (including ublicensees) and its agents, employees, consultants, contractors or rtners provided to or obtained by the other Party by virtue of the rformance of the Agreement and whose use, processing or transfer of ch data is regulated by law or regulation as "personal data".

Customer acknowledges that Equinix, Equinix Parties and their ents will, by providing the Licensed Space and Services, come into ssession of Contact Data. Customer acknowledges and agrees that quinix, Equinix Parties and their agents may use, process and/or transfer ntact Data (including intra-group transfers and transfers to the United ates or to other countries located within or outside the European Economic ea): (i) in connection with the provision of Licensed Space and Services; to incorporate Contact Data into databases controlled by Equinix or quinix Parties for the purpose of account administration, billing and conciliation, operational maintenance and support activities, fraud detection d prevention, and customer and market analysis and reporting; and (iii) to mmunicate to Customer by voice, letter, fax or email regarding products d services of Equinix or Equinix Parties or third parties through the quinix Marketplace. Customer may withdraw consent for such use, ocessing or transfer of Contact Data as set out in (iii) above by sending itten notice to Equinix on the prescribed form, available from Equinix. ustomer acknowledges that it has the right to access Contact Data upon itten notice and have any agreed errors in such Contact Data rectified, to ve its Contact Data deleted or to obtain additional information on the use, ocessing and/or transfer of its Contact Data.

i. International Security Concerns. Customer represents, rrants and covenants that Customer: (i) is compliant with applicable nction Laws; (ii) is not listed, or owned or controlled by an entity or person, the U.S. Department of Treasury list of Specially Designated Nationals, or cated in or organized under the laws of a country subject to U.S. or E.U. mbargo (collectively, "**Restricted Persons**"); (iii) is not providing services in nnection with this Agreement to Restricted Persons, including any ublicensees; and (iv) will not use the Licensed Space and Services, or ow them to be used, for any purposes prohibited by applicable Sanction ws, including, nuclear, chemical, or biological weapons proliferation, or velopment of missile technology. Notwithstanding any other provision in this greement, Equinix reserves the right to terminate this Agreement mediately upon written notice to the Customer if Equinix reasonably termines that Customer is not in compliance with this Section 9(i) or is using Equinix to be exposed to violations under Sanction Laws.

j. General. Except where otherwise expressly stated herein, and bject to the limitations set forth in Section 4, the rights and remedies ovided for herein are cumulative and not exclusive of any rights or remedies at a Party would otherwise have.

The Parties are independent contractors and this Agreement does not tablish any relationship of partnership, joint venture, employment, franchise agency between them. Neither Party may bind the other or incur ligations on the other's behalf without the other's prior written consent.

ere will be no third party beneficiaries to this Agreement.

No waiver of any breach of any provision of this Agreement will constitute waiver of any prior, concurrent or subsequent breach of the same or any her provisions hereof, and no waiver will be effective unless made in iting and signed by an authorized representative of the waiving Party.

Each master country agreement (i) is only binding upon the MCA gnatories and not upon any other Equinix Company or Customer Affiliate d (ii) only affects Orders placed under that master country reement. For avoidance of doubt, no other Equinix Company or ustomer Affiliate except the MCA Signatories are required to agree to y of the terms and conditions set forth in that master country reement. The Equinix Company that enters into an Order with ustomer for Licensed Space and Services shall provide the Licensed pace and Services in accordance with this Agreement and no other quinix entity shall be jointly or severally liable with such Equinix Company for the provision of Licensed Space and performance of the Services.

10. DEFINITIONS

Capitalized terms used herein but not otherwise defined will have the meaning ascribed to them in this Section 10 or the applicable master country agreement.

Accompanying Person: Each person (other than an employee of Equinix) accompanied by an Authorized Person while at an IBX Center.

Affiliate: As to a Party, any entity controlling, controlled by, or under common control with such Party, where the term "**control**" and its correlative meanings, "**controlling**," "**controlled by**," and "**under common control with**," means the legal, beneficial or equitable ownership, directly or indirectly, of more than fifty percent (50%) of the aggregate of all voting equity interests in an entity.

Agreement: The meaning given to such term in the relevant master country agreement into which these Global Terms and Conditions are incorporated.

Associated Entity: Means (i) each individual, company, partnership or other entity of any type which employs, contracts with, or is otherwise associated or affiliated with Customer, Authorized Persons or Accompanying Persons, (ii) any of Customer's end users and (iii) Sublicensees.

Authorized Person: Each person included on the most recent list of Authorized Persons given to Equinix by Customer in accordance with Equinix's then-current form and procedures, who may be authorized by Customer to, for example, access an IBX Center, place Orders on an Equinix customer care website or act as Customer's shipping contact.

Billing Commencement Date: For Licensed Space or a Service ordered in an Order (other than Online Orders or Phone Orders), the date designated in the Order as the Billing Commencement Date or if there is no date designated in the Order, then the date on which the Licensed Space is provided or the Service is delivered. For Licensed Space or a Service ordered in an Online Order or Phone Order, the date Equinix begins providing the Licensed Space or Service to Customer, unless otherwise agreed to by the Parties in the Order.

Cross-Connect: A physical or wireless interconnection within an IBX Center that (i) exits Customer's Licensed Space or (ii) connects Customer to another Equinix customer.

Customer's Equipment: All network, computer and other equipment provided, owned or controlled by Customer, Customer's Affiliates, Customer's Authorized Persons, Accompanying Persons or Associated Entities (including wiring and connections between such equipment and Customer's demarcation equipment) excluding Cross-Connects or Equinix's demarcation equipment.

Equinix Company: An Affiliate of Equinix, Inc.

Equinix Marketplace: A portal established and operated by Equinix whereby the Customer may promote its own products and services to other customers or prospective customers of Equinix or obtain information about procuring products and services from other Equinix customers, known as the "Marketplace" or such other future marketing medium with a similar purpose aimed at current or potential Equinix customers.

Equinix Parties: Equinix and the Affiliates, owners, officers, directors, employees, and agents of Equinix.

Fees: Charges and fees for Licensed Space and Services charged to Customer by Equinix, exclusive of Taxes.

IBX Centers: The International Business Exchange Centers in which

ustomer receives Licensed Space and Services from Equinix pursuant to n Order.

icensed Space: The areas which, for space in an IBX Center in a common aw jurisdiction, are licensed by Customer or, for space in an IBX Center in civil law jurisdiction, are made available to Customer with permission to ccess and use, in each case under this Agreement and the Orders, and as dentified in the Orders as to the amount of space. For each Licensed Space, quinix will determine at all times the exact location in the IBX Centers here the Licensed Space will be located, and Equinix will notify Customer ccordingly.

ICA Signatories: The Equinix Company and Customer Affiliate that are the ignatories to a master country agreement.

nline Order: An Order placed via an Equinix customer care website or mail, to be effective only after Equinix accepts it in accordance with Equinix's pplicable procedures or Equinix begins providing the Licensed Space or the ervices ordered under the Online Order.

rder: An order for Licensed Space or Services prepared by Equinix, or an mendment thereto that is incorporated into this Agreement by reference; hich describes the Licensed Space or Services. Orders are not valid until igned by both Parties, except for Online and Phone Orders. Equinix is under o obligation to accept an Order. Unless otherwise specified, reference to rder(s) shall also include Online Orders and/or Phone Orders.

hone Order: An Order placed over the phone, where available, will be ffective only after Equinix accepts it in accordance with Equinix's applicable rocedures or when Equinix begins providing the Licensed Space or the ervices.

Policies: Equinix's procedures, rules, regulations, security practices and policies for the IBX Centers, as amended from time to time.

Sanction Laws: All applicable sanction or embargo laws and regulations from time to time, including trade and economic sanctions maintained by the Treasury Department's Office of Foreign Assets Control ("**OFAC**") and any other enabling legislation or executive order relating thereto.

Services: All services, goods and other offerings provided by Equinix under an Order pursuant to this Agreement.

Smart Hands: Equinix's onsite technical assistance which may include following Customer's express instructions relating to remote management, installation or troubleshooting of Customer's Equipment or any other assistance agreed to by Equinix in an Order.

Sublicensee: A customer of Customer or other third party who (i) sublicenses all or part of the Licensed Space from Customer, if such Licensed Space is located in a common law jurisdiction, or (ii) is able to access and use all or part of the Licensed Space as made available by Customer, if such Licensed Space is located in a civil law jurisdiction.

Taxes: Sales, use, transfer, privilege, excise, consumption tax, Value Added Tax ("**VAT**") or Goods and Services Tax ("**GST**") as applicable, and other similar taxes and duties, whether foreign, national, state or local, however designated, levied or imposed (whether as a deduction, withholding or payment) now in force or enacted in the future, which apply to the Licensed Space provided or the Services performed by Equinix for Customer or to Customer for its operations and use of the Licensed Space or Services, but excluding taxes on Equinix's net income.

Term: The duration of this Agreement, as determined under Section 6(a) of this Agreement.

Unavailable: The meaning given to such term in the context of a service level specified in the Equinix Service Level Agreement set out in Exhibit A to these Global Terms and Conditions, and "**Unavailability**" will be construed accordingly.

CUSTOMER TO COMPLETE:
Acknowledged and agreed.

Customer Company Name: **EGLA COMMUNICATIONS**
(*Complete Legal Name*)

Authorized Signature: EDWIN HERNADNEZ
EDWIN HERNADNEZ (Mar 17, 2014)

Printed Name: EDWIN HERNADNEZ

Title: VP OF ENGINEERING

EQUINIX TO COMPLETE:
Acknowledged and agreed.

Authorized Signature: Michael Markham
Michael Markham (Mar 17, 2014)

Printed Name: Michael Markham

Title: VP Global Business Operatic

EQUINIX SERVICE LEVEL AGREEMENT
EXHIBIT A TO GLOBAL TERMS AND CONDITIONS

The purpose of this Service Level Agreement ("**SLA**") is to define the measurable performance levels for the provision of Equinix Services and specify remedies available to Customer if Equinix fails to achieve these levels. Words capitalized but not defined in this SLA will have the meaning defined in the Agreement.

1. POWER SERVICES

Redundant Power at 99.999+% availability. This is met by achieving less than five (5) minutes of Unavailability over a twelve (12) month period. ("**Redundant Power SLA Threshold**") per cabinet. For the purposes of this paragraph, a Redundant Power Service is considered Unavailable when a functioning cabinet that includes Customer provided automatic failover capability is powered by two (2) power circuits from d power busses, and both power circuits experience a simultaneous interruption in electrical power such that the cabinet experiences an interruption in electrical power. Subject to Section 4, if Unavailability exceeds the Redundant Power SLA Threshold, Customer will be entitled to a Service credit equal to 1/30th of the Monthly Recurring Charges ("**MRC**") for the affected power circuits and Licensed Space MRC for the cabinet attached thereto ("**Loaded Cabinet MRC**"). Further, Customer will be entitled to an additional Service credit equal to 1/30th of Loaded Cabinet MRC for the affected Loaded Cabinet for every full hour of Unavailability beyond the Redundant Power SLA Threshold.

Non-Redundant Power at 99.99+% availability. This is met by achieving less than fifty-two (52) minutes of Unavailability over a twelve (12) month period ("**Non-Redundant Power SLA Threshold**") per cabinet. For the purpose of this paragraph, a Non-Redundant Power Service is considered Unavailable when a functioning cabinet is powered by one (1) power circuit, and the power circuit experiences an interruption in electrical power such that the cabinet experiences an interruption in electrical power. Subject to Section 4, if Unavailability exceeds the Non-Redundant Power SLA Threshold, Customer will be entitled to a Service credit equal to 1/30th of the Loaded Cabinet MRC for the affected Loaded Cabinet. Further, Customer will be entitled to an additional Service credit equal to 1/30th of Loaded Cabinet MRC for the affected Loaded Cabinet for every full hour of Unavailability beyond the Non-Redundant Power SLA Threshold.

2. LICENSED SPACE ENVIRONMENTAL SERVICES

Temperature at 99.99+% availability. This is met by achieving less than fifty-two (52) minutes of Unavailability over a twelve (12) month period ("**Temperature SLA Threshold**") per cabinet. For the purpose of this paragraph, temperature is considered Unavailable when the temperature drops below 64.4.F (18 C) or exceeds 80.6 F (27 C). Subject to Section 4, if Unavailability exceeds the Temperature SLA Threshold, Customer will be entitled to a Service credit equal to 1/30th of the Loaded Cabinet MRC for the affected Loaded Cabinet. Further, Customer will be entitled to an additional Service credit equal to 1/30th of Loaded Cabinet MRC for the affected Loaded Cabinet for every full hour of Unavailability beyond the Temperature SLA Threshold.

Humidity at 99.99+% availability. This is met by achieving less than fifty-two (52) minutes of Unavailability over a twelve (12) month period ("**Humidity SLA Threshold**") per cabinet. For the purposes of this paragraph, Humidity is considered Unavailable when the humidity drops below twenty-five percent (25%) or exceeds sixty-five percent (65%). Subject to Section 4, if Humidity Unavailability exceeds the Humidity SLA Threshold, Customer will be entitled to a Service credit equal to 1/30th of the MRC for the affected Loaded Cabinet. Further, Customer will be entitled to an additional Service credit equal to 1/30th of Loaded Cabinet MRC for the affected Loaded Cabinet for every full hour of Unavailability beyond the Humidity of SLA Threshold.

3. CROSS-CONNECT

Cross-Connect service at 99.99+% availability. This is met by achieving less than fifty-two (52) minutes of Unavailability over a twelve (12) month period ("**Cross Connect SLA Threshold**") per Cross-Connect. A Cross-Connect is considered Unavailable when the passive physical media that Equinix uses for the Cross-Connects fails and the endpoints of the Cross-Connect are not able to maintain a communication connection due to the failure of the physical media. Subject to Section 4, if Cross-Connect Unavailability exceeds the Cross-Connect SLA Threshold, Customer will be entitled to a Service credit equal to the MRC for the affected Cross-Connect.

4. GENERAL

Notwithstanding anything to the contrary in this Attachment or the Agreement the following provisions apply to all Services: The Service credits set forth in this Attachment are Customer's sole and exclusive remedy if Equinix fails to meet the service level thresholds stated herein and in any calendar month the maximum Service credit to which Customer shall be entitled for any Service will not exceed the MRC for such Service. All periods of Unavailability must be verified by Equinix, and approved credits will be applied by Equinix to the invoice for the month following the month in which the credit was approved. The period of Unavailability is measured from Customer's notification to Equinix of the incident to the time the Unavailability has been remedied as confirmed by Equinix. For avoidance of doubt, Equinix measures Temperature and Humidity Unavailability between three (3) and five (5) feet from the floor and no closer than twelve (12) inches from the cool air intake side of a cabinet. Customer shall not be entitled to a Service credit if the event or condition that would have otherwise given rise to the credit was caused by any of the following: acts of God, war or acts of terrorism, labor strikes or other labor action, fire, flood, earthquake, landslide, earth movement, hurricane, typhoon, tsunami, volcanic eruption or other natural disaster, riot or civil unrest, official orders from judicial, law or civil authorities, scheduled maintenance windows, Customer's equipment, actions or inactions of Customer or its representatives, actions or inactions outside of Equinix's reasonable control; or if Customer does not request a credit from Equinix in writing at the appropriate country contact specified below within seven (7) days after the incident entitling Customer to a credit has been remedied.

For questions or support please work with your authorized Equinix Sales Representative or the Equinix Service Desk in your region.

EXHIBIT 8

Mood Media Corporation Completes Acquisition of DMX

NEWS PROVIDED BY
Mood Media Corporation →
Mar 20, 2012, 16:38 ET

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TORONTO, March 20, 2012 /CNW/ - Mood Media Corporation (ISIN: CA61534J1057) (TSX:**MM**/ LSE AIM:MM) ("Mood Media") announced today that it has completed its previously announced acquisition of DMX Holdings, Inc. ("DMX") for US$86.1 million in cash including net debt repaid on closing, subject to certain adjustments for working capital. The equity value of the transaction will be approximately US$53.8 million.

Also in connection with the DMX acquisition, Mood Media completed its previously announced private placement of 31,800,000 common shares, issued at 231 pence per common share (C$3.60 per common share), raising £73.5 million (C$114.5 million) before expenses. The proceeds of the private placement were used in part to satisfy the consideration payable in connection with the DMX acquisition. The additional net proceeds of the private placement will be used for general corporate purposes.

DMX

DMX is a US provider of multi-sensory branding services, delivering services to over 100,000 locations. DMX uses music, video and digital signage, messaging, scent, and audio/visual systems to personify and enhance brands to create lasting connections that encourage customer loyalty. In the 12 months ended 31 December 2011, DMX recorded revenues of US$84.6 million, EBITDA of US$16.5 million and profit before taxation of US$5.6 million.

Stock Exchange Matters

The common shares issued pursuant to the private placement have been conditionally approved for listing on the Toronto Stock Exchange, subject to satisfaction of the exchange's customary conditions.

About Mood Media Corporation

Mood Media Corporation (TSX:**MM**/ LSE AIM:MM), named Canada's fastest growing company by PROFIT Magazine is a leading in-store media specialist that uses a mix of music, visual and scent media to help its clients communicate with consumers with a view to driving incremental sales at the point-of-purchase.

Operating through its two principal divisions, In-Store Media and Retail Point-of-Purchase, Mood Media Corporation works with over 470,000 commercial locations in over 40 countries throughout North America, Europe, Asia and Australia.

Through its subsidiaries Mood Media, Muzak, and Mood Entertainment, Mood Media Corporation's products and services reach 100 million people every day in a broad client base including more than 850 U.S. and international brands in diverse market sectors that include: retail, from fashion to financial services; hospitality, from hotels to health spas; and food retail, including restaurants, bars, quick-serve and fast casual dining.

For further information about Mood Media, please visit **www.moodmedia.com**.

Cautionary Statement Regarding Forward-Looking Statements

This press release contains forward-looking statements. The words "believe", "expect", "anticipate", "estimate", "intend", "may", "will", "would" and similar expressions and the negative of such expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. These forward-looking statements are subject to important assumptions, including the following specific assumptions: the ability of Mood Media and DMX to meet their respective revenue targets; the ability to achieve cost synergies; the completion of the DMX acquisition and the private placement in accordance with their respective terms; general industry and economic conditions; changes in Mood Media's or DMX's relationships with their customers and suppliers; pricing pressures; and other competitive factors; and changes in regulatory requirements affecting the businesses of Mood Media and DMX. While Mood Media considers these factors and assumptions to be reasonable based on information currently available, they may prove to be incorrect. Historical performance may not be indicative of future performance.

Known and unknown factors could cause actual results to differ materially from those projected in the forward-looking statements. Such factors include, but are not limited to: the impact of general market, industry, credit and economic conditions, currency fluctuations as well as the risk factors identified in the Risk Factors section of Mood Media's management discussion and analysis dated March 5, 2012 and the risk factors identified in the annual information form of Mood Media dated March 30, 2011, both of which are available on **www.sedar.com**.

Given these uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements. All of the forward-looking statements made in this press release are qualified by these cautionary statements and other cautionary statements or factors contained herein, and there can be no assurance that the actual results or developments will be realized or, even if substantially realized, that they will have the expected consequences to, or effects on, Mood Media.

Forward-looking statements are given only as at the date hereof and Mood Media disclaims any obligation to update or revise the forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable laws.

The common shares issued pursuant to the private placement are not and will not be registered under the U.S. Securities Act of 1933, as amended, and may not be offered or sold in the United States absent registration or applicable exemption from registration requirements. This news release shall not constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction.

Mood Media presents EBITDA information as a supplemental figure because management believes it provides useful information regarding operating performance. EBITDA is not a recognized measure under Canadian GAAP, does not have standardized meaning, and is unlikely to be comparable to similar measures used by other companies. Accordingly, investors are cautioned that EBITDA should not be construed as an alternative to net earnings or (loss) determined in accordance with GAAP as an indicator of the financial performance of Mood Media or as a measure of the Mood Media's liquidity and cash flows.

For further information:

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EXHIBIT 9

TERM SHEET

The purpose of this document (hereinafter "Term Sheet") is to summarize the basic business terms under which **AEI Collingham Holdings Co. Ltd**., db/a **DMX** (hereinafter "DMX") and **EGLA CORP** db/a **EGLA COMMUNICATIONS** (hereinafter "EGLA") are willing to engage in to a final agreement which shall be executed between the parties within 30 days from the date this Term Sheet is signed.

RECITALS:

DMX has a web product formed by a set of music channels created by **DMX** for the ISP and cable operators.
EGLA will provide DMX a web solution plus a technical solution for cable systems. In order to provide the Service, as defined below, EGLA will provide DMX with the MEDIAMPLIFY or MEDIA PLATFORM and with the EGLA MEDIA PLUG APPLIANCE. The specifications of each one of these products are detailed in Exhibit I and Exhibit II.
DMX and **EGLA** desire to engage in an agreement where EGLA will provide the use of the EMP and the EMPG, and certain technical services for TV-EVERYWHERE product. (DMX2GO)

Therefore, the parties agrees to the following:

SERVICE: The EGLA Service (hereinafter the "Service") shall include the use by DMX of the following: (i) **EGLA MEDIA PLATFORM**; (ii) the **EGLA Media Plug-In**, and (iii) **Technical Support**.

(i) **EGLA MEDIA PLATFORM: EGLA** developed and owns **MEDIAMPLIFY or EGLA MEDIA PLATFORM** (hereinafter EMP) which is Software as Service (SaaS) with a multimedia engine capable of streaming music at any bit rate and different formats with a multimedia authentication and validation mechanisms suitable for a subscription based system and is also capable of supporting concurrent users and many music channels as request by the customer; which features and detailed specs are included in Exhibits I and II.
EGLA shall maintain a set of **Application Programming Interfaces** (hereinafter API) that allow mobile, web, and IPTV applications to connect to EMP.
Each EMP unit includes, without any additional charge, the End User Licensing Agreement (EULA); a 1-year support package (as define below); and all the upgrades for the software that shall be needed.

(ii) **EGLA MEDIA PLUG-IN: EGLA** also developed the **EGLA MEDIA PLUG** (hereinafter EMPG) which is a multimedia device capable of provide IPTV, Telecommunication carriers and cable operators with audio channels for Set Top Boxes.

(iii) **TECHNICAL SUPPORT**: **EGLA** shall give DMX technical support for both, EMP and EMPG as part of the Service.
In order to do that, EGLA shall maintain an active supporting staff dedicated to bring DMX the necessary support on EMP and EMPG services. EGLA Staff shall answer any DMX technical support request within 24 hours from the particular request.
A 24/7/365 Support number shall be provide to DMX.
DMX shall pay EGLA a monthly fee of four thousand dollars (U$S 4,000) for all needed Technical Support, including but not limited to the following services: troubleshooting, customization services, integration services, re-encoding and/or transcoding times, cable users interfaces, security changes in software and/or hardware, technical sales support, presentations and reports to ensure sale of DMX services, use of new codecs, protocols and/or multicasting techniques, etc. (hereinafter Support Fee).
The Technical Support shall be limited to a number of 10 cable operators.
No additional bills will be sent to DMX for technical support.
The support for API development will be handled via web forum and online documentation without any additional charge.
The API support is only available M-F from 9am-5pm, except during US Holidays (Dic. 31st, Jan 1st, July 4th, Labor Day, Thanksgiving Day, Dec. 24th, Dec 25th).
No travel expenses are included in the fees referred below.
EGLA shall work with DMX to train DMX's Staff in order to monitor the Platform's operation.
EGLA shall provide DMX with the EMP and all documentation related to the system and how it works.

TERM: 3 years agreement.

EFFECTIVE DAY: January 1rst. 2013.

SOFTWARE DEVELOPMENT: DMX agree to pay EGLA a non-refundable fee of $ 60.000 as a set up cost for the development of EMP and EMPG. Any intellectual property rights and the ownership of the licenses regarding the software remain exclusively on EGLA. This fee includes: setup, initial setup of all servers in EGLA's cloud and configuration of up to version EGLA 1.2 version in the cloud.

MONTHLY FEES: DMX shall pay EGLA a monthly fee of U$S 17,200, plus Florida Tax of 6%.

COMPATIBILITY: EMP and EMPG shall support uploading of new content using DMX compatible format (s).

BRANDING: DMX shall include the language *"Powered by EGLA COMMUNICATIONS"* in company brochures and marketing materials.

HARDWARE AND LICENSING: For any EMPG order by DMX, EGLA shall charge $ 15,000 per unit ("Hardware Fee"), which shall be delivered by EGLA within 15 days from the request by DMX.
The Parties agree that 1-year licensing agreement; 1-year support package and 1-year upgrades for the software shall be included in the Hardware Fee referred before. DMX shall have the option to extend the license of the software and hardware referred in this section depending on software version required see Exhibit A, for every cable operator with a valid contract with DMX that requires the use of such software. For the avoidance of doubt, if the business relationship with any cable operator ends for any reason, DMX shall not be liable nor responsible for the payment of such extension of the License.

CUSTOMIZATION: EGLA shall customize the platform in order to reach every client's requirements. The number of clients shall not exceed the maximum of ten (10) cable operators. The customization cost shall be included in the Technical Support rendered by EGLA. For the avoidance of doubt, there will be no extra cost for any customization, beside the Support Fee set herein before.

STORAGE/CLOUD: EGLA shall provide DMX up to 10 TB cloud storage space. DMX shall have access to the cloud and its assets at any time. The storage space shall be limited to a maximum of ten (10) cable operators.

TERMINATION: If either party breaches any of the material terms or conditions set in this Term Sheet and fails to cure such breach within thirty (30) days, after receipt of written notice of the breach from the other party, then the party giving such notice shall have the right to terminate the agreement. Parties agree that DMX or EGLA shall have the right to terminate this agreement by giving a sixty (60) days prior written notice if, by any reason, DMX or EGLA decides to discontinue this line of products. DMX shall have the right to terminate this agreement if, by any reason, the revenue derivate from DMX's Client Portfolio

that uses EGLA's Platform decreases in a 40% or more. In case of termination by breach of contract, EGLA shall only be liable for a termination fee equals to three months of the monthly fee.

NON COMPETE: EGLA shall not in any manner offer to provide the Service that DMX gives to any commercial client which is already receiving the Service by DMX or any of its distributors. Nevertheless, with a written previous notice to DMX, EGLA would be able offer DMX's commercial client any other solution that is not related in any manner to DMX's Services.

NON-EXCLUSIVE USE OF PLATFORM: DMX acknowledges that EGLA will provide services to other customers within the same or similar markets as DMX.

MUSIC RIGHTS: DMX shall be fully and exclusively responsible for the contents and distribution of its Signal and for the copyrights and/or intellectual property rights arising therefrom. All rights related to DMX's Signal, its contents and distribution shall be DMX's exclusive responsibility.
All intellectual property rights to the signal and the programming, interstitial, "filler" and other material included in the reception and distribution thereof themselves, mastered or duplicated backup versions thereof or other materials created hereunder based thereon (collectively, the "Property") are, shall be immediately upon creation, and shall thereafter remain, the sole and exclusive property of DMX, and EGLA shall have no interest in, and shall not create or acquire any interest in, by virtue of its performance of the Service hereunder or otherwise, such Property including, but not limited to: (a) all copyrights in respect of any and all media, throughout the universe in perpetuity, in the Property and all works related in any way to the Property (the "Works"); (b) all rights of every kind and character in respect of all media throughout the universe in perpetuity in the name, voice, likeness, publicity and other rights of all cast members or creators of the Property for the purposes of marketing and exploiting the Works, including, without limitation, to Works embodying all or a portion thereof, and all rights of merchandising in any way related to the Property; and (c) the benefit of all waivers of moral rights of the creators in the Works. EGLA shall return the Property to DMX or other persons designated by DMX upon termination of this Agreement or upon DMX's request. EGLA shall destroy and certify such destruction in writing.

MISCELANEOUS: After the execution of this Agreement, the Parties will endeavor in good faith to negotiate and execute a long term agreement which shall be based upon the terms and conditions set forth herein and such other terms and conditions that the Parties execute such long form agreement, enforceable in accordance with its terms and shall inure to the benefit of the Parties hereto and their respective successors and assigns and nothing herein is

intended or shall be construed to give any other person any right, remedy or claim under, to or in respect of this Agreement.

This Agreement set forth the entire agreement and understanding of the Parties hereto and supersedes any and all prior agreement, arrangement and understanding among the parties.

If any provision of this Agreement is invalid or unenforceable, the balance of this Agreement shall remain in effect.

THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE INTERNAL LAWS OF MIAMI-DADE COUNTY WITHOUT GIVING EFFECT TO THE PRINCIPLES OF CONFLICTS OF LAW THEREOF.

EGLA COMMUNICATIONS

AEI COLLINGHAM CO. LTDA

EXHIBIT A.

PLATFORM SOFTWARE AS A SERVICE CURRENT VERSIONS

- MEDIAMPLIFY 0.7-SKY included in price
- MEDIAMPLIFY 1.2 will be upgraded at no cost upon signature of contract.

EGLA MEDIAPLUG SOFTWARE VERSIONS

- Audio Only version MEDIAPLUG 0.8a $1,500/yr subscription per cable operator, included 1st year.
- Video/Audio version MEDIAPLUG 1.2 $1,500/yr subscription per cable, price included in 1st year.

EXHIBIT B- MEDIA PLUG SOFTWARE

Specifications current

EXHIBIT C – WEB MEDIAMPLIFY PLATFORM

Specifications current

EXHIBIT 10

Newsline REPORT MEXICO

TV PAGA • TV • CINE • PRODUCCION • TECNOLOGIA

FEB/MAR DE 2014

AÑO 10 | Nº **66**

MÉXICO
Nuevas cadenas y apagón análogico



EDICION ESPECIAL

NAB 2014



MULTIMEDIA
Plataforma El Financiero y Bloomberg TV



SONY

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Un matrimonio de estilo, flexibilidad y alto rendimiento

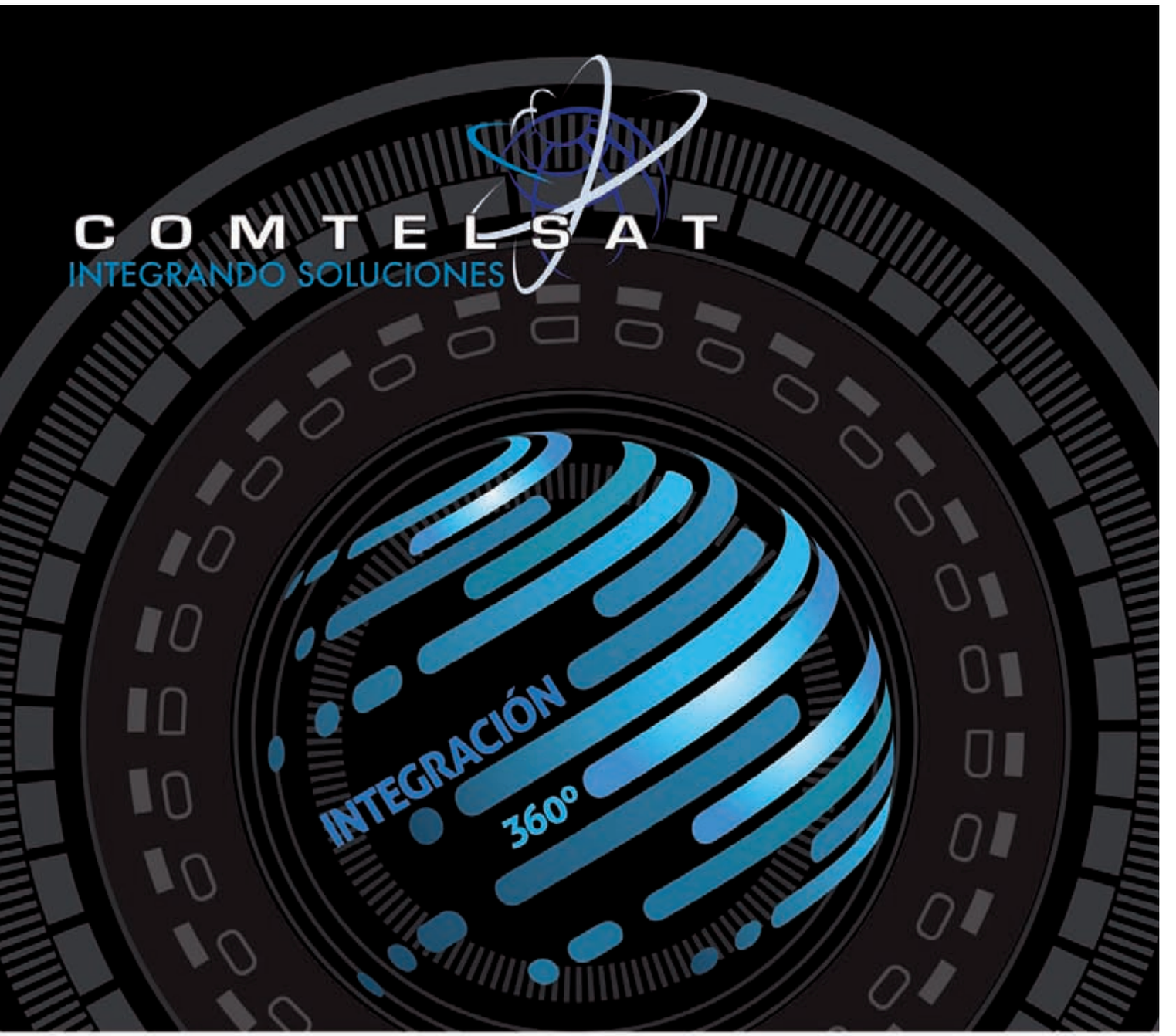




Lentes intercambiables E-mount

Compatibilidad universal PAL/NTSC
Objetivo 18-200 mm Power Zoom
Ranura FMU para memoria flash
Captura fotos de 16.1 megapixels
Ranura para tarjetas SD y MS

Full HD 1080 Exmor R CMOS Sensor AVCHD MPEG2 SD



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Descubra lo fácil que es generar negocios y construir su marca mientras gana dinero.

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Newsline REPORT
TV PAGA • TV • CINE • PRODUCCION • TECNOLOGIA MEXICO

MÉXICO, UN MERCADO ÚNICO CON EL MAYOR POTENCIAL DE NEGOCIO A NIVEL MUNDIAL

Nuevas cadenas de televisión y apagón analógico

En esta nota, recurrimos a la visión de algunos de los proveedores más importantes de México, para que nos den su visión al respecto de los importantes proyectos de emisoras que se avecinan en la industria profesional mexicana.

Echada a rodar la pelota, la apertura de los proyectos de nuevas cadenas televisivas en México están en marcha y las compañías proveedoras de nuestra industria están pendientes de todo lo que vaya evolucionando en este aspecto, preparándose para un 2015 que será muy activo, no solo por la llegada de las nuevas televisoras, sino también por el deadline a fin de ese año del apagón analógico.

Para **Jorge Camacho**, Director General de **Magnum**: "Estas son evidentemente nuevas oportunidades que presenta el mercado mexicano, con nuevos participantes en esta industria. Si bien varios de los que se estarán postulando son jugadores actualmente en el mercado de telecomunicaciones, no lo son a escala nacional en televisión abierta, sino en otros sectores. Para empresas como nosotros representa un gran reto y oportunidad para poder acercar nuevas tecnologías a estas nuevas televisoras y lograr la sinergia que siempre hemos alcanzado con nuestros clientes".

Con un nivel permanentemente ascendente en los negocios, **Enrique Gutierrez**, Director General de **Sistemas Digitales en Audio y Video** nos expresa: "El 2013 ha sido un año importante con muchos proyectos, tal como suele pasar con los primeros anos de cambio de gobierno, y en nuestra visión de mercado, absolutamente nos hemos visto favorecidos por el mundial, ya que siempre es una forma directa o indirecta de incrementar las ventas. Tanto para olímpicos como mundial siempre estamos preparados, por ejemplo nuestra marca Ross en Brasil para estos dos eventos tendrá soporte local permanente, además de servicio de renta de equipo, refacciones, reparación para que todos nuestros clientes estén seguros con un soporte completo. Por lo que con estos nuevos proyectos de nuevas cadenas, si bien hoy día no hay nadie seguro aun, sabemos que hay importantes candidatos en juego, por lo que se abre un abanico de posibilidades importantes donde tendremos que exponer y vender nuestras soluciones, además de apoyar y dar el mejor soporte".



Preparados con una nueva visión de compañía, **Alfonso Vázquez** de **Teletec** admite: "De entrada para nosotros, es una plataforma que el país requiere, la migración a la nueva tecnología es algo que a todos nos va a beneficiar, tanto a **Teletec**, que hoy día somos una empresa capaz de integrar la obra civil, hasta la programación en social media. Todo en un solo integrador, el portafolio nuestro es muy amplio, por lo que vemos una oportunidad de negocio importante con todo esto que está sucediendo, vislumbramos un crecimiento de infraestructura tecnológica que para el país maravilloso y considero que a todos nos beneficia.

(continúa en página 22)



¡Los mini convertidores con la mejor calidad de transmisión, ahora tanto en los modelos comunes como en los más potentes!

Ahora los convertidores más populares del mundo están disponibles en modelos tanto para estudios como para transmisiones en vivo desde exteriores. Al estar fabricados en aluminio sólido, los nuevos modelos de mayor rendimiento lucen fantásticos y son sumamente resistentes. Te ofrecemos 14 modelos diferentes que incluyen HDMI, fibra óptica análoga, vinculación y desvinculación de audio, y además conversión ascendente, descendente y cruzada. Los mini convertidores también están disponibles en tarjetas OpenGear para montar en módulos y bastidores.



Cambio Automático entre SD y HD

Los mini convertidores alternan instantáneamente entre todos los formatos SD y HD, incluso NTSC, PAL, 1080PsF23.98, 1080PsF24, 1080PsF25, 1080i50, 1080i59.94, 1080i60, 720p50, 720p59.94 y 720p60. Las actualizaciones pueden cargarse a través del puerto USB.



Entrada SDI Redundante

Todos los mini convertidores cuentan con una entrada redundante y una salida SDI en bucle. Basta con conectar un cable SDI redundante a la segunda entrada, y si se pierde la entrada SDI principal, el mini convertidor cambiará automáticamente al instante. Esta característica resulta de suma utilidad en tareas críticas tales como eventos en vivo.



Audio Pro Analógico y AES/EBU

Se incluyen conectores de 0.25 pulgadas para obtener un audio profesional balanceado que alterna entre AES/EBU o analógico. A diferencia de otros convertidores, no necesitas costosos cables de audio y ahorrarás miles de dólares.



Tecnología SDI de 3 Gb/s

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Mini Converter HDMI a SDI	US$ 295	Mini Converter H/Duty HDMI a SDI	US$ 345
Mini Converter Sync Generator	US$ 295		
Mini Converter SDI a Audio	US$ 495		
Mini Converter Audio a SDI	US$ 495		
Mini Converter Fibra Óptica	US$ 295		
Mini Converter UpDownCross	US$ 495		
Mini Converter SDI Distribution	US$ 295		



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incorporaciones & mudanzas



Tras un breve paso por Grass Valley, **José Calles** regresa a **Avid** sumándose al equipo de América Latina en el cargo de Gerente Sénior Comercial para Argentina, Bolivia, Chile, Ecuador, Paraguay y Venezuela. «Avid tiene una posición privilegiada en la transición tecnológica al ser líder en la creación, manipulación, almacenamiento y distribución de contenidos digitales en múltiples plataformas», declaró Calles.



Santiago Sánchez se suma a **Avid Technology** como nuevo Gerente de Cuentas Pro Audio para Cono Sur, que incluye a Chile, Argentina, Bolivia, Ecuador, Guatemala y Costa Rica. Basado en Ciudad de México, el ejecutivo cuenta con más de 16 años en el ámbito de audio y video profesional y ha trabajado con líderes de la industria como Sony Broadcast & Professional, Kramer Electronics, Ross Video y Sierra Video.



Hansen Technologies expande su presencia en América Latina incorporando a **Giovani Henrique** como Vicepresidente de Ventas. El ejecutivo se enfocará en aumentar la presencia de la plataforma de facturación de la firma en la región a través de nuevas adquisiciones de clientes, así como también en lograr un crecimiento orgánico de sus cuentas existentes.



El experimentado ejecutivo de medios **Ibra Morales** encabezará como presidente la cadena de televisión hispana de EE.UU., **MundoFox**. Morales llega después de servir como VP Senior de Marketing Nacional para Katz Television Group y anteriormente desempeñó el cargo de presidente de Telemundo Station Group y VP Senior de Ventas de Hearst-Argyle Television.



Discovery Communications designó a **Jean-Briac Perrette** al cargo de presidente de **Discovery Networks International**. El ejecutivo asumirá el cargo luego de la dimisión de Mark Hollinger, quien renunció luego de 23 años en la compañía. Desde 2011, Perrette ha construido importantes organizaciones digitales y tecnología, colaborando con la consolidación de la presencia de Discovery en el campo digital.



Sony Professional Solutions Latin America designó a **Adriano Bedoya** como nuevo Director de Ventas para los países de América Central y América del Sur, a excepción de Brasil. La intención de la compañía es capitalizar la reputación del ejecutivo de ventas como contribuidor de equipo, facilitador de negocios enfocado a la atención al cliente para continuar aumentando su presencia en toda la región.



Tras la salida de Giovani Henrique, **Ricardo Pirola** es nombrado como nuevo responsable de las ventas y desarrollo de negocios para Latinoamérica de **Irdeto**. Pirola cuenta con casi 20 años de experiencia en el mercado de la televisión paga en América Latina y se especializa en estrategias y tecnologías que dan forma a la evolución de los modelos de entretenimiento de banda ancha y de televisión.



Ricardo Milani se une a **FOR-A** como Ingeniero de Ventas para América del Sur, siendo su objetivo impulsar las ventas y brindar soporte técnico en Brasil, contribuyendo a las operaciones en el Cono Sur, incluyendo Argentina, Chile y Uruguay. Milani comenzó su posición en FOR-A hacia finales de enero y tiene su base en São Paulo, Brasil.



Azteca América nombró a **Manuel Abud** como su nuevo presidente y CEO para dirigir la red de difusión de la compañía en Estados Unidos, además de 25 estaciones locales, y reportará directamente a Gustavo Guzmán, miembro Senior del Comité ejecutivo de Azteca y uno de los fundadores de la compañía. Abud fue presidente del Grupo de Estaciones Telemundo donde lideró 16 estaciones locales de la televisora.



José Antonio de Brigard es nombrado Senior Creative Officer de **Teleset**; al tiempo que **Ángela Vergara** fue promovida al cargo de Directora General. De Brigard estará trabajando con SPT y Teleset para desarrollar nuevos contenidos en español para Latinoamérica y el mercado hispano de EEUU. Vergara supervisará los negocios de producción de la compañía en Colombia y México.

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Lanzamiento de Cisneros Media Distribution



Jonathan Blum de Cisneros Media Group y Juan Carlos Sosa de Venevision Studios rodean a los talentos de ´Sangre de diván´

NATPE fue el lugar elegido para el debut en sociedad, ante ejecutivos y clientes de la industria, de la nueva división de Cisneros Media, que dejará el nombre Venevision International con más de 35 años, acumulando un amplio catálogo que supera las 30 mil horas de programación de televisión que ha comercializado en más de 100 países y 20 idiomas.

Cisneros Media Distribution (CDM) presenta una amplia y diversa propuesta de programación que consta de una amplia variedad de contenido de entretenimiento, desde las telenovelas románticas y teleseries llenas de acción, películas y documentales, y comedias – gran parte de ello proveniente de las mejores productoras independientes de la industria – un componente que distingue CMD de su predecesor.

«Estamos muy entusiasmados con la llegada de esta nueva era para nuestra distribuidora de programación; evolucionar con los tiempos es un desarrollo natural, permaneciendo 'sintonizados' con los avances en la tecnología, el desarrollo de nuevas plataformas, la creciente necesidad de contenidos y la transformación en las formas de distribución», subrayó **Jonathan Blum**, Presidente de Cisneros Media.

César Díaz estará a cargo de Cisneros Media Distribution como su Vicepresidente. «Esto es mucho más que un cambio de nombre para la empresa, tenemos una nueva misión corporativa que se extiende por todo el mundo y se expande con la innovación de la industria al compás de una tecnología que rompe las fronteras geográficas, las barreras de distribución, y la manera en la que el público ve el contenido de entretenimiento», declaró **Díaz**.



DIXIT

«En las redes sociales se ve el auge del contenido y los personajes de las series, relevantes para una audiencia que interactúa y quiere ser oída. Esto nos da la posibilidad de estar en contacto directo con ellos, y ver cómo reaccionan inmediatamente ante los contenidos. Las redes sociales son una base fundacional del canal y una herramienta muy importante de forma de mercadeo porque los mismos fanáticos se transforman en voceros de tu marca y contenidos. Si bien siempre decimos que 'el contenido es el rey', los usuarios son los que pagan la renta al rey».

Vicky Zambrano
VP y Gerente General de Warner Channel

AMC/Sundance Channel
promueve su equipo de programación

Harold Gronenthal, Vicepresidente Ejecutivo de Programación y Operaciones de AMC/Sundance Channel Global, anunció la promoción de **Gail Gendler** a Vicepresidente de Adquisiciones, mientras que **Patrick Conolly** es ahora el nuevo vicepresidente de Programación y Servicios Creativos.

Gronenthal comentó sobre quienes le seguirán reportando: «Gail y Patrick han sido esenciales en la expansión de nuestra compañía a nivel global. Su planeamiento estratégico y colaborativo a través de todas las áreas de programación, así como su conocimiento del mercado de la televisión, dieron como resultado en un incremento de la demanda de AMC/Sundance Channel».

Gendler se unió a la firma (formalmente, Rainbow Media) en 2000 y supervisa las adquisiciones para AMC/Sundance Channel Global. En su cargo, ella encabeza los acuerdos relacionados a los contenidos multiplataforma y lleva a cabo la estrategia de adquisición para Sundance Channel Global y WE TV Asia. Gendler se inició en la compañía como Directora de Derechos y Adquisiciones. Comenzó su carrera en NBC en Later… with Bob Costas y como parte de la Unidad Olímpica de NBC. Alcanzó su título de Licenciatura en Periodismo Televisivo en la Universidad de Siracusa y es miembro de la Academy of Motion Picture Arts and Sciences (AMPAS), New York Women in Film and Television (NYWIFIT) y Women in Cable Television (WICT).





Conolly supervisa la programación, promoción, y creatividad de la señal de TV y video on demand de Sundance Channel y WE TV Asia. Previo a este cargo, fue consultor de programación para Showtime. Conolly comenzó su carrera en programación en Fox, donde ocupó varios puestos incluyendo el de Vicepresidente de Programación Infantil. También prestó servicios como consultor de programación para el Sundance Film Festival, Outfest y la International Documentary Association. Actualmente es miembro activo del board de BAFTA Nueva York y forma parte del Television Comitee de BAFTA Nueva York, el Screening Comitee y es Co Presidente del Digital/Social Media /Gaming Comitee. También es miembro de la Academy of Television Arts & Sciences (ATAS). Conolly tiene un diploma en literatura inglesa por Universidad de California Los Angeles (UCLA).

LATINOAMÉRICA EN NATPE 2014

UNA APUESTA TOTAL
a los contenidos de calidad y al mundo digital

Con más de 5500 visitantes, entre los que hay que contemplar la presencia de unos 1100 compradores y 250 exhibidores, se desarrolló en Miami la 51º edición del show organizado por National Association of Television Program Executives.

La estrategia de crecimiento de la mayoría de las compañías latinoamericanas está centrada en ofrecer a sus clientes, en todas las regiones y en las principales plataformas, una amplia gama de soluciones de contenido que incluye latas, formatos y proyectos de coproducción en mercados estratégicos. También están desarrollando estrategias para mercados emergentes, territorios no tradicionales, con muy buenos resultados. De hecho, no son pocos los profesionales del sector coinciden en afirmar que, cada año, las producciones son de mayor calidad.
Si algo quedó claro en NATPE es que en América Latina crecen los negocios tradicionales, y que la mayoría de las compañías están intentando experiencias de distribución a través de plataformas digitales y desarrollando, aún de modo incipiente, negocios transmedia.
Hoy por hoy, está claro que los hábitos de consumo de las audiencias están mutando. La TV lineal, todavía considerando el liderazgo, convive sin mayores inconvenientes con la aparición de las denominadas segundas pantallas a partir de audiencias que procuran enriquecer su experiencia audiovisual a partir de la puesta en escena de las redes sociales, los teléfonos inteligentes o las tabletas, entre otros dispositivos complementarios de la TV lineal.
Es obvio que la industria transita un cambio en el modelo de distribución de contenidos que no todavía no está claramente definido para su monetización. La pregunta del millón es si existe un modelo de negocio consolidado para comercializar el contenido a través de las nuevas plataformas de distribución.
«Claramente aún no se encuentra consolidado el modelo comercial y es por eso que estamos intentando acercarnos con mucha prudencia, haciendo sinergia con los sistemas tradicionales de distribución. A pesar de ello, la tasa de crecimiento indica que seguramente la consolidación llegará antes de lo previsto» sostiene **Claudio Ipolitti**, Director de Negocios Internacionales de **Telefe**.
Otro de los puntos de vista que hemos recogido al respecto es **Marcel Vinay Jr.**, CEO de **Comarex**, quien analiza: «Estamos viendo que se crea un contenido adicional que ayuda para que el OTT pueda darle fuerza a la TV; y por otro lado, que la TV pueda darle fuerza a la OTT creando contenidos especiales tales como clips musicales o escenas inéditas. La tendencia que se observa es la producción de contenidos para una plataforma principal, sumándole contenido adicional apto para otras plataformas para que sirvan de complemento.»
Raphael Corrêa Netto, Director Ejecutivo de Negocios Internacionales de **Globo**, asegura que los productos de su compañía son ofrecidos al mercado internacional listos para ser vistos en cualquier ventana de exhibición. «Las nuevas plataformas enriquecen el hábito de ve televisión, razón por la cual estamos atentos a todas las oportunidades multiplataforma. Pero el contenido es soberano, por eso apostamos a la calidad y tenemos el cuidado para



Emilio Azcárraga de Televisa, la filántropa Lilly Tartikoff Karatz y Rod Perth de NATPE

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que continúe encantando a las personas alrededor del mundo, independientemente de la ventana donde sea exhibido. La demanda por nuevas ventanas de exhibición está en plena transformación y en formación, lo mismo ocurre con el modelo de negocio. Pero la premisa más importante que supone hacer llegar el contenido a los espectadores donde quiera que estén sí está consolidada», concluye.

En una misma línea argumental es **Carlos Castro Acosta**, Director General de Ventas de **Televisa Internacional**, quien afirma: «La producción y transmisión de contenidos para las nuevas plataformas se encuentran expansión, por lo tanto los modelos de negocio para su explotación comercial también están también en constante evolución. La clave para maximizar esta explotación está en la flexibilidad y en la visión a mediano y largo plazo.»

Completar el escenario de análisis ***Luis Daniel Capriles***, Vicepresidente de Medios Digitales de ***Telemundo*** **Internacional**, al brindar detalles de su estrategia para abordar el mercado de las nuevas plataformas. «Estamos ofreciendo a nuestros clientes derechos de catch up, así como otros derechos VOD para que puedan ofrecer a su audiencia contenido que pueden ver cuando y donde quieran. Conscientes de que las nuevas plataformas son el complemento perfecto para la televisión abierta, cable y satélite, adaptamos nuestras telenovelas para que se ajusten a este cambiante patrón de consumo. Hemos realizado adaptaciones que han sido dirigidas, producidas y reeditadas a modo de ofrecerle a la audiencia que demanda contenido TV everywhere, opciones con menos cantidad de episodios que lo hacen más fácil de consumir considerando el género de la telenovela y su formato.»

A la luz de los testimonios que se ofrecen en esta apretada síntesis, se pone en evidencia que tras el eslogan que la organización impulsó este año -»No Barriers, New Business»- la gran mayoría interpreta que las segundas pantallas constituyen una herramienta indispensable para conducir a las audiencias al contenido de primera pantalla. Y todos reconocen que la segunda pantalla es mejor cuando incluye a los anunciantes, puesto que facilita la financiación de ciertos contenidos.

Brandon Tartikoff Legacy Award 2014



Emilio Azcárraga, Lauren Zalaznick, Lilly Tartikoff Karatz, Jon Feltheimer y James L. Brooks

El martes 28 se realizó la 11° edición de los **Brandon Tartikoff Legacy Award**. Este año los galardonados fueron Emilio Azcárraga Jean, Presidente y CEO de **Grupo Televisa**; **James L. Brooks**, creador de *Los Simpsons*, **Jon Feltheimer**, CEO de **Lionsgate**, y **Lauren Zalaznick**, veterana ejecutiva ex **NBCUniversal**, todas primeras figuras.

«Los hemos elegido porque han conseguido logros extraordinarios y son algunos de los mejores del negocio. Sus logros son destacables, desde la formidable expansión de Televisa lograda por Emilio, la habilidad única de Jim entretenernos con sus historias y la estrategia de crecimiento para todas las pantallas establecida por Jon y los logros de Lauren en la creación de marcas para cable en esta época tan digital» expresó **Rod Perth**, CEO de **NATPE**, durante el acto de apertura.

El único ejecutivo latinoamericano, **Emilio Azcárraga Jean**, dedicó la distinción recibida a los 25 mil trabajadores de **Televisa**, al tiempo que reconoció públicamente la labor de **José «Pepe» Bastón**, Presidente de Televisión y Contenido de **Televisa**, y de sus ejecutivos del área internacional **Carlos Castro**, **Pedro Font** y **Fernando Pérez Gavilán**.

Lanzamientos, exhibiciones y acuerdos

Uno de los lanzamientos más importantes de NATPE 2014 fue el nacimiento de **Cisneros Media Distribution**. El área de la piscina del Fontainebleau Resort fue el escenario escogido por **Grupo Cisneros** para presentar en sociedad su nueva distribuidora global de programación y contenido para todas las plataformas.

«Esto es mucho más que un cambio de nombre para la empresa, tenemos una nueva misión corporativa que se extiende por todo el mundo y se expande con la innovación de la industria al compás de una tecnología que rompe las fronteras geográficas, las barreras de distribución, y la manera en la que el público ve el contenido de entretenimiento», explicó **César Díaz**, Vicepresidente de **CMD**, quien reconoció que la compañía está decidida a incrementar su catálogo de programación, «no sólo con el aumento de la producción de nuestras empresas afiliadas en Venezuela y los Estados Unidos, sino mediante la creación de una infraestructura empresarial para facilitar el inventario y la comercialización de productos realizados por terceros de productores independientes, que es nuestro primer objetivo en esta nueva era».

La **Organización Cisneros** también anunció en Miami su alianza estratégica con **Bungalow Media + Entertainment,** grupo privado de medios y entretenimiento recien-



Jonathan Blum de Cisneros Media Group y Juan Carlos Sosa de Venevision Studios rodean a los talentos de ´Sangre de diván´



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temente fundado por Robert Friedman, enfocándose en el desarrollo de series y contenidos para audiencias latinas producidos tanto en inglés como en español. Asimismo, la organización renovó y ampliado el convenio de distribución internacional que mantenía con **Medina Media**.

Entre los screenings, una vez más sorprendieron fueron **Globo** y el talento brasileño. La compañía reunió más de 200 programadores en su tradicional desayuno donde destacó su nutrido catálogo que este año se vio enriquecido con los largometrajes de **Globo Filmes**


Pedro Lascurain, Alberto Santini y Rodrigo Fernandez de Azteca rodean a Joshua Mintz de Telemundo Studios

tición -que se disputará en territorio brasileño- y que contará con recursos sin precedentes: tecnología de punta e infraestructura de primer orden, 600 periodistas deportivos que estarán trabajando en las 12 sedes con más de 40 cámaras exclusivas dedicadas a mostrar las historias más conmovedoras de cada una de las 32 selecciones que competirán en 64 partidos.


Robert Friedman de Bungalow Media+Entertainmenty junto con Adriana Cisneros de la Organización Cisneros

y el lanzamiento de **NewSource Globo**, agencia que ofrece contenido informativo y servicios de transmisión para dar apoyo a productores e las redes de TV extranjeras.

Como emisora oficial del próximo mundial de fútbol FIFA 2014, **Globo** ofreció detallas acerca de la cobertura que está preparando para la competición -que se disputará en territorio brasileño- y que contará con recursos sin precedentes: tecnología de punta e infraestructura de primer orden, 600 periodistas deportivos que estarán trabajando en las 12 sedes con más de 40 cámaras exclusivas dedicadas a mostrar las historias más conmovedoras de cada una de las 32 selecciones que competirán en 64 partidos.

En el marco de una conferencia de prensa y un impactante screening, eventos encabezados por **Marcos Santana**, Presidente de **Telemundo Internacional**, y en los que participó **Joe Uva**, Chairman Hispanic Enterprises & Content de **NBC Universal**. En ese contexto, se anunció el lanzamiento de su nueva súper serie «Camelia la Texana» con la presencia estelar de **Sara Maldonado**, protagonista principal de la serie que ocupará la franja horaria central de las 10pm, donde ya brillaron »La Reina del Sur» y «El Señor de los Cielos».

La compañía también aprovechó la oportunidad para comunicar el acuerdo alcanzado entre **Telemundo Media** y la española **Reset TV** para la creación, producción y distribución del formato de competición musical «El artista» para la temporada 2014-2015. En este sentido, vale señalar que **Toni Cruz** y **Josep Maria Mainat fueron** creadores de formatos exitosos como «Crónicas Marcianas», «Mira Quien Baila» y «Operación Triunfo».

Adicionalmente, **Telemundo Internacional** anunció a partir del 1 de febrero el lanzamiento de un segundo feed para su canal de TV paga en América Latina.

En rueda de prensa, **Viacom International Media Networks The Americas** anunció la ampliación de su portafolio de producción con más de 1200 ho-

Sony Pictures Television celebró 10 años en Latinoamérica


Alexander Marín, Angélica Guerra y Keith Legoy de SPT rodean a José Bastón de Televisa

La división de producción y distribución de la compañía convocó a amigos y clientes de Latinoamérica en el Soho Beach House para celebrar su décimo aniversario en la región. Por parte de la compañía anfitriona estuvieron presentes **Keith Legoy**, Presidente de Distribución de SPT; **Alexander Marin**, VP Senior de Distribución para Latinoamérica y U.S. Hispanic de SPT; y **Angélica Guerra**, VP Senior y Directora General de Producción de SPT. Entre los invitados de honor, destacaron personalidades de la industria como **José Bastón**, Presidente de **Grupo Televisa**; **Mario San Román** y **Pedro Lascurain**, CEO y Director de Adquisiciones de **Azteca** respectivamente; **Eric Jurgensen**, CEO y Director de **América TV** y **Luis Camacho**, Director de Comunicaciones del canal peruano con quien acordó la realización de la segunda adaptación latinoamericana de la comedia *Los Jeffersons* (*Los Gutiérrez*).

Adicionalmente, se informó que junto con **Teleset**, inició la producción la serie original «En la boca del lobo», que se emitirá en Colombia a través de la pantalla de **RCN Televisión** y será vendida en los mercados de habla hispana.

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ras de producción original a través de múltiples plataformas en mercados clave. La compañía dio luz verde a más contenido original, incluyendo la primera novela de **Nickelodeon** en portugués producida en Brasil «Dani Who», los «Kids' Choice Awards Colombia» y la versión colombiana del show de «MTV Catfish». El anuncio lo hizo **JC Acosta**, VP Senior, CFO y Ejecutivo a

Hispanic, **Tatiana Rodriguez**, VP Sénior de Programación y Estrategia Creativa de ***Nickelodeon*** **Latin America** y **Federico Cuervo**, VP Sénior y Brand Manager de **Comedy Central Latinoamérica**.

En ese marco, **Tatiana Rodríguez** anunció la producción de su nueva serie original «La cocina de Talía» en asociación con **Somos Productions**.



Jesus Torres Viera de Telemundo, Sara Maldonado protagonista de ´Camelia la Texana´, Joe Uva de NBC Universal y Marcos Santana de Telemundo International



Tatiana Rodríguez, JC Acosta, Fernando Gastón y Federico Cuervo de Viacom rodean a Lorna Salazar, Damaris Valero y Libelle Salamao del MIC de Colombia

Cargo de Producción de **VIMN The Americas**, quien estuvo acompañado por **Fernando Gastón**, SVP - Brand Head de **MTV VH1 Latin America** y **Tr3s US**

La compañía también anunció diversos acuerdos y renovación de programación alcanzados con importantes televisoras en la región como **Bandeirantes** y **SBT** de Brasil, **UCVTV** de Chile y **Televisa** de México.

Univision dio a conocer un acuerdo de licencia con **Telelatino** en Canadá para cambiarle el nombre a la cadena por **Univision Canadá**. Ambos canales han mantenido una relación de socios durante más de una década y **Telelatino** se emite actualmente por las plataformas de televisión de pago más importantes de ese país. **Alberto Ciurana**, Presidente de Programación y Contenido de **Univision Networks**, se mostró satisfecho unirse a la familia de **Corus Entertainment** bajo su propia marca. «El compromiso de Univision de servir a la audiencia hispana en los Estados Unidos se expande hacia Canadá con el objetivo de ampliar la presencia de nuestra compañía en otro mercado hispano», declaró.



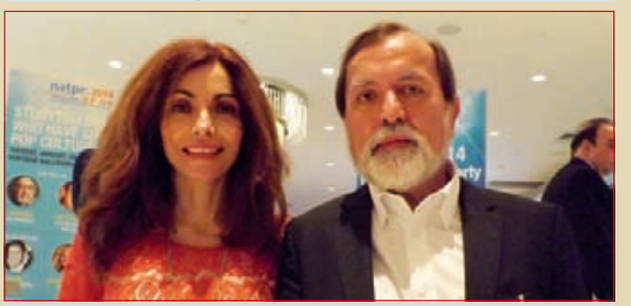
Alberto Islas de América Móvil junto con Enrique Martínez y Allan Navarrete de Discovery



Bruce Boren y Fernando Betancurt de Televisa Networks



Ricardo Gómez Pérez y Enrique Yamuni de Megacable



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Cóctel de AMC Networks / *Sundance* Channel

La noche del miércoles 29, última jornada de NATPE, **AMC / Sundance Channel** realizó un cóctel en The Standard Miami Beach al que asistieron sus máximos ejecutivos: **Bruce Tuchman**, Presidente Global; **Ed Palluth**, VP Ejecutivo de Distribución Global; **Elana Mandelup**, VP de Comunicaciones Corporativas; y **Gustavo López**, VP de Distribución Global y Desarrollo Comercial para Latinoamérica.

Tuchman dio la bienvenida a los invitados, ante quienes aseguró que **Sundance Channel** fue muy bien recibido por los televidentes de Latinoamérica desde que fue lanzando el año pasado a través de **DIRECTV**. Luego fue el turno del propio **López**, quien explicó que la señal la señal se encuentra disponible para operadores regionales de TV paga en formato estándar y alta calidad, servicio de video on demand, dispositivos móviles y streaming online autenticados.

El cóctel contó con la presencia de ejecutivo de la talla de **Bruce Boren** y ***Fernando Muñiz*** **Bethancourt** de **Televisa Networks**; **Juan Carlos Gómez**, **Carla Conde** y **Diana Baumberger** de **Discovery**; **Marcelo Contro** y **Ricardo Montagnana** y **Alejandro Kember** de ***Chellomedia***; **Alejandra Marano y Ralph Haiek de Construir TV**; **Fernando Gastón** de **Viacom**; **Esteban Borrás** de **Claxson** y **Marta Ochoa** de **Alianza Contra la Piratería de Televisión Paga**.



Bruce Tuchman y Gustavo López de AMC Networks / *Sundance* Channel



Elana Mandelup y Ed Palluth de AMC Networks / *Sundance* Channel

Asimismo el ejecutivo hizo saber que **UniMás** adquirió los derechos exclusivos de la serie dramática «El varón de la droga», basada en la historia de Joaquín 'El Chapo' Guzmán, escrita por Andrés López López; al tiempo que adelantó que el 23 de febrero próximo por primera vez en la historia de los medios de comunicación dirigidos a los hispanos en los Estados Unidos, **Univision**, **UniMás** y **Galavisión** se unirán para trasmitir simultáneamente el estreno de la serie dramática «La Viuda Negra».

Telefe opcionó el formato «Aliados» de **Cris Morena Group** a **Televisa** Estados Unidos para el mercado doméstico. El anuncio fue realizado por **Daniel Otaola**, flamante Gerente de Distribución de Contenidos.



Paul Dempsey de BBC Worldwide

Julián Giraldo, VP de Canales Internacionales de **RCN**, adelantó durante el show que a partir del 1 de marzo **TvColombia** se transformará en **Nuestra Tele**. La señal internacional comenzará a utilizar su nueva imagen y tendrá una nueva fórmula de entretenimiento con una programación en la que estarán las mejores producciones del **Canal RCN** y también contenido propio y original.

BBC Worldwide anunció durante el show un acuerdo que permitirá a los usuarios de **Xbox Video** en América Latina adquirir y descargar los mejores contenidos de la **BBC** directamente a sus consolas de juego «Xbox 360º», la plataforma de juegos y entretenimiento de Microsoft.

La compañía británica también informó acerca de la venta de su formato «Dancing with the Stars» a **Teletica** de Costa Rica.

FremantleMedia International y **Young Hollywood** hicieron público un acuerdo de primera opción con el pionero del entretenimiento digital, ampliando así el portfolio de propiedades multiplataforma de **FremantleMedia** que ahora incluye los shows de «Young Hollywood's Greatest» y «Young Hollywood Presents Evolution Of…» . La comunicación fue realizada por **Hayley Dickson**, flamante VP de Adquisiciones y Desarrollo de **FremantleMedia**.



Alberto Ciurana de Cadenas Univision

Dori Media anunció ventas europeas para su formato «Lo Sabe, No Lo Sabe». Creado por **Oded Menashe** y distribuido por **DMG** es transmitido en Alemania, Grecia y Portugal, con pilotos que están siendo producidos en Francia y Bélgica.

La casa productora de contenidos multiplataforma **Blue Print** presentó en NATPE su alianza comercial con **PXTV** por más de 500 horas de programación dedicados a los deportes en acción, cuyo contenido será distribuido internacionalmente por **Comarex**. En la conferencia de prensa que sirvió para comunicar el acuerdo estuvieron presentes **Raúl Campos**, CEO

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Cóctel de Stingray Latinoamérica

Stingray Digital, que recientemente adquirió los activos de **DMX Media Latin America**, organizó un cóctel que tuvo lugar en los **jardines del Eden Roc Hotel. Allí presentaron Eric Boyko**, Presidente y CEO de **Stingray Digital, junto con su VP de Operaciones *Alejandro Cacciola*** y **Gustavo Tonelli**, Gerente General de **Stingray Digital América Latina**.



Raelene Rydzik de Columbus Communications junto con Moisés Chico de Stingray Digital

Durante el evento, **Stingray** anunció un acuerdo que permite llevar sus 50 canales de música a la plataforma digital de **Columbus Communications**, uno de los prestadores de servicios de TV paga más importantes del Caribe. Bajo la marca **Flow**, ofrece 50 canales del servicio de música digital **Galaxie** a sus clientes de **Flow TV** en cuatro de sus más importantes mercados: Curaçao, Granada, Jamaica y Trinidad. **Raelene Rydzik, Directora Sénior de Contenidos de Columbus Communications**.



Gustavo Tonelli, Eric Boyko y *Alejandro Cacciola de* Stingray Digital



Marcel Vinay Jr., Raúl Campos y Alejandro Mercado

de **Blue Print**; **Alejandro Mercado**, Presidente de **PXTV**; y **Marcel Vinay Jr.**, CEO de **Comarex**.

Un día después del show, **HBO Latin America** presentó en Miami el nuevo feed en inglés para **MAX** en el Caribe. «Este nuevo canal fue creado específicamente poder satisfacer las necesidades de nuestro público en el Caribe, dándoles el contenido de calidad que esperan de nosotros y para que puedan disfrutar de todo lo que el paquete Premium de **HBO/MAX** ofrece,» declaró **Gustavo Grossmann**, VP Corporativo de **HBO LA Networks**.

El CEO de **NATPE**, **Rod Perth**, confirmó durante la conferencia de clausura que el año que viene la convención volverá a hacerse en el **Fontainebleau** de Miami entre los días 20 y 22 de enero. Prometió que, mientras continúe al frente de la organización del show, las fechas no volverán a coincidir con **Realscreen.** El ejecutivo se mostró entusiasmado por los números de **NATPE 2014**, especialmente al reconocer que «se registró un crecimiento de dos dígitos en número de buyers, con fuerte participación de compradores digitales».



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TELMEX

Tiene poder para comprar a Dish México

La telefónica cuenta con acuerdos para adquirir a la firma de TV de paga desde 2008, según revelan documentos y auditorías entre las empresas.

Telmex tiene un acuerdo de compra/venta con el servicio de televisión paga satelital **Dish México**, donde la telefónica puede solicitar auditorías, información, además de opciones de adquirir la empresa que controla la familia Vargas.

Los papeles muestran que a inicios de 2012, **Telmex** y **Dish México** (donde convergen **Grupo MVS** y **EchoStar**) contaban con diversos acuerdos para definir tanto las características de su contrato de prestación de servicios de facturación y cobranza; como convenios para definir las opciones de compra/venta entre ambas compañías.

«DM (Dish) otorga a favor de Teninver (Telmex) una opción incondicional e irrevocable para que ésta suscriba 51% del capital social de DM (…) Teninver otorga a favor de DM una opción incondicional e irrevocable para obligar a Teninver a suscribir 51% del capital social de DM», señala un documento entre las compañías.

Los archivos muestran un acuerdo denominado «Pull&Call Agremment», en que **Telmex** cuenta con una opción para adquirir a **Dish**, y que para ejercerla, deberá pagar **US$ 325 millones**, o el DTH puede obligar al operador de telecomunicaciones a consumar la compra, condicionado a la autorización del ente regulador. Además **Telmex** cuenta con una opción para «auditar» a **Dish México** y sus subsidiarias sin especificar un límite ni momento.

Esto reabre la acusación que realizó **Telefónica**, a través de su subsidiaria de servicios de comunicación fija **GTM**, ante la extinta Comisión Federal de Competencia (CFC) a fines de 2008 por una relación ilegal entre Telmex y Dish. Sin embargo, la CFC había negado que existiera alguna relación indebida ya que la prestación de **Telmex** «consisten en la facturación y cobranza, distribución y arrendamiento de equipos» y estos «no permitirán a Telmex conducir efectivamente a Dish, ni permitirán u obligarán un compromiso de adquisición accionaria o de partes sociales que posibiliten a Telmex participar en asambleas de accionistas de Dish, ni participar en el nombramiento de funcionarios de Dish», había explicado el desaparecido organismo en su resolución CNT-116-2008 del 13 de mayo de 2009.


Carlos Slim

En el acuerdo denominado Distribution Agreement se muestran relaciones menos fuertes entre las compañías, pues indican que tanto Telmex como Dish tienen la opción de realizar dos auditorías al año, aunque añaden una cláusula donde se le prohíbe a la telefónica prestar servicios «similares a favor de cualquier tercero en condiciones más favorables que las otorgadas a Cofresa (Dish México)».

Dish aceptó en un comunicado de prensa que existe una opción de compra de **Telmex**, pero que no significa que exista una participación accionaria de la firma de **Carlos Slim**, y asegura que América Móvil ha informado a las autoridades estadounidenses desde 2008 sobre la existencia de estos contratos y sus alcances.

Canitec cuestiona la relación Telmex-Dish

La **Cámara Nacional de la Industria de Telecomunicaciones por Cable** (Canitec) criticó la relación que existe entre **Telmex** y **Dish**, sobre acuerdos de compra/venta en que la compañía de **Carlos Slim** puede adquirir una parte de **Dish México**.

«Legisladores, reguladores, consumidores y tomadores de decisiones de política pública han sido testigos de nuestro esfuerzo por evidenciar siempre los embates de la empresa dominante en telecomunicaciones, por mantener privilegios a costa de todo y de todos», señaló la cámara en un desplegado.

Telmex admitió tiene la alternativa de tomar en el futuro hasta 51% de **Dish México**, aunque descartó que sea accionista del operador de televisión restringida. El director de alianzas estratégicas de Telmex, **Arturo Elías Ayub**, señaló que la empresa siempre ha sido transparente en su relación con **Dish**.

Po su parte, **Canitec** calificó la respuesta de **Telmex** como una mentira al señalar que el comisionado presidente del **Instituto Federal de Telecomunicaciones** (IFT), **Gabriel Contreras**, dijo que el organismo no tiene dicho acuerdo entre el operador de televisión y la telefónica en sus expedientes.

«Se abre un nuevo capítulo en el que se evidencia el engaño, la violación de la ley y la complicidad de algunos funcionarios y autoridades regulatorias, a favor de una empresa y en contra de todos los mexicanos», concluyó **Canitec** sobre el tema.

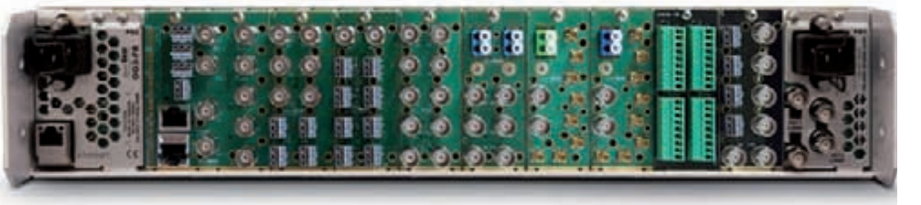
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TV DE PAGA EN MÉXICO

Casi 15 millones de suscriptores

Estas cifras significan que el sector creció un 13% durante el año porque añadió 1,7 millones de usuarios (los números oficiales de 2012 eran de la extinta Comisión Federal de Telecomunicaciones -Cofetel-), impulsado principalmente por el crecimiento de 15.9% y 11.7% en los segmentos de cable y vía satélite, respecto al mismo periodo de 2012.

De acuerdo con los resultados del **ITEL**, estos dos servicios de TV restringida fueron de los mejor desempeños en telecomunicaciones en el último cuarto trimestre de 2013, junto a larga distancia internacional de entrada y telefonía celular móvil.

De acuerdo a un informe del Instituto Federal de Telecomunicaciones (IFT), el mercado alcanzó los 14,7 millones de abonados al finalizar 2013.

El servicio de televisión vía satélite o DTH registró un crecimiento el cual, aunque significativo, es el más bajo registrado desde el segundo trimestre de 2009. Esta modalidad totalizó en **7.8 millones** de suscripciones en el último trimestre de año, consolidándose como la principal tecnología de televisión de paga.



La televisión por cable observó un mayor crecimiento en el trimestre, con una tasa de 15.9%, y concluyó el trimestre de referencia con 6.8 millones de suscripciones, las cuales representan 46.3% del total de los usuarios de televisión restringida.

El número de suscripciones de servicio de televisión vía microondas (MMDS) reitera su tendencia negativa, al descender en 11.5 por ciento, a tasa anual, en el último trimestre de 2013, respecto al mismo lapso de 2012. Al finalizar el periodo, este servicio contaba con más de **134 mil** suscripciones.




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VIENE DE TAPA / MÉXICO, UN MERCADO ÚNICO CON EL MAYOR POTENCIAL DE NEGOCIO A NIVEL MUNDIAL

Este positivismo, el mismo que mantiene **Andrés Martinez**, Director General de **Amtec** que nos dice: "El efecto será muy positivo y habrá varios beneficiados: los mexicanos televidentes; los productores, artistas y técnicos de la televisión que tendrán más trabajo; las empresas que nos dedicamos a la promoción, venta, instalación y servicio de equipos; los



fabricantes aunque la mayoría son extranjeros. Respecto a las grandes cadenas que ya existen, no creo haya preocupación pues realmente una pequeña parte de sus ingresos se verá afectada, pero muy pequeña".

Con profundidad **Eduardo Aguilar** de **Canon** sostiene que: "La apertura en Mexico de un sector importante que ha permanecido sin cambio durante muchas décadas. Da una visión de modernidad, en la que Mexico se posicionara como punta de lanza en la Producción de todo tipo de géneros, pero uno de ellos muy relevante será el educativo. La convergencia tecnológica, permite hoy el anexar a la televisión al uso de banda ancha y proveer de servicios de valor agregado que permitan hacer llegar la cultura y la enseñanza a todos los mexicanos. El 28% de los alumnos de Secundaria reciben clase por medio del sistema de *Telesecundaria*. Hoy la tecnología permite cerrar la interactividad con los alumnos por medio de la Televisión y la Banda Ancha. Si a esto agregamos que en el ancho de banda de 6 Mhz actual se pueden multiplexar de 10 a 12 señales digitalmente, adicionalmente a la sincronización de metadatos, pues entonces imaginemos un espectro en el que la televisión no solo llevará entretenimiento como lo ha hecho tradicionalmente. Permitirá cultivar y educar a los mexicanos proporcionando, además identidad nacional y una brecha amplia al conocimiento universal."

Para **Alejandro Fragoso** de **Dicimex**, el desafío a comenzado y así lo persive: "Hay mucho ruido desde hace varios años acerca de esto, todos los proveedores broadcast estamos esperando ese buen momento de la economía. Te diría que ya hay mucho movimiento de clientes que están pidiendo información y cotizaciones. Si bien aun no hay un panorama claro, todos hablamos de los mismos candidatos para estas nuevas cadenas. Por el lado de **Rodolfo Vergara**, considera clave el ámbito político en este momento: "Lógicamente se habla del tema de las nuevas cadenas en México. Yo creo que descansa mucho mas esta decisión de más cadenas televisivas en el aspecto político, por lo que creo que la apertura esta más en las ganas que tengan importantes jugadores de la industria en participar de los medios televisivos, por lo que te diría solo -por dar un ejemplo- que hoy **Grupo Carso** está listo para comenzar."

Paulino García de **Videoservicios** considera que para los nuevos jugadores será complicado: "A menos que me equivoque, creo que las nuevas cadenas -si es que alguien se aventura- entrarían a un mercado de desigualdades ya con mucha competencia impuesta. Con relación al negocio broadcast, deberíamos tener en mente que quizás dependiendo de los ganadores de las licitaciones; de hecho, puede darse la situación de que se trate directamente con el fabricante, algo que ya se está dando en México".

Jaime Tovar de **Artec** también encamina sus comentarios por el ámbito político, asegurando: "Pienso que el presidente Enrique Pena Nieto está encarando muy bien el proyecto de las nuevas cadenas. Se ve la mano de una persona experta y conocedora en la redacción de la ley, ya



que me gusta mucho esto de que primero se abra una etapa de selección de participantes, de posibles licitantes; porque con eso prevenimos esto de los prestanombres , de darle canales a los candidatos de siempre , a mí me gustaría que aparecieran nombres nuevos, ya que considero que México se merece tener una visión diferente de la televisión, abriéndose la posibilidad a los empresarios que están dentro de este negocio, ya sea como dueño, sino también dentro de la parte de ingeniería, creativa, con la forma de expander la televisión y llevarla a los dispositivos móviles, con nuevos desarrollos y tecnologías que hoy no se están utilizando en México".

Por el lado de la continuidad en el desarrollo del apagón analógico en México, sin dudas **Teletec** ha sido uno de los participantes más importantes hasta el momento, por lo que el propio **Alfonso Vazquez** señala: "Creo que el apagón analógico es un tema de convergencia de beneficio social, como ya lo he dicho; por ejemplo como el caso de Tijuana, fue un beneficio claro, llegábamos, le instalábamos y ya, era palpable. Tijuana fue un caso de éxito maravilloso, con el 93% de penetración en esa ciudad, ósea de menos de un 20% ir a un 93% en 3 meses, fue una locura. Hoy día se acaba de llevar el segundo piloto que llevo la SCT en el cual cambio el modelo, con televisiones de 24 pulgadas con el sintonizador integrado, van a hacer una especie de distribución, no incluye servicios, no incluye antenas, entonces ese laboratorio que creo será Reynosa y Nuevo Laredo, en conjunto con el primer laboratorio de Tijuana. Indudablemente, les va a dar la visión completa para salir al apagón formal para prácticamente la mitad del país. El apagón analógico lo veo necesario porque estamos hablando de las cadenas sino tengo liberado el espectro y no estoy penetrando y apagando ciudades, a las nue-

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vas cadenas quienes las van a ver, van de la mano, es el último eslabón en la cadena de nuestra industria. A nivel país, la SCT está teniendo un gran acierto en combinar la penetración de la televisión digital con la interconectividad del país. Esos son los dos grandes retos."

En este punto, **Enrique Gutierrez** amplía su pensamiento acerca del estado de situación. "Creo que la mayoría de las televisoras más importantes y buena parte de los estatales han estado trabajando para llegar por etapas al final del camino, y pues creo que todo el mundo va muy bien, creo que al final esperamos buenos resultados para finales del 2015".

Así la preparación es profunda en cada empresa proveedora para estos desafíos que se avecinan en el mercado profesional mexicano, como lo dice **Jorge Camacho**: "Nos hemos preparado con tecnología de punta que ha cambiado la forma de capturar y enviar noticias en vivo, en tiempo real y con calidad, como es el caso de LIVEU, que hoy día es un estándar en la industria mexicana en news gathering. A su vez, proporcionando servicios de produccion, post-produccion, digitalización, almacenamiento, transmisión y distribución de contenido para cubrir los requerimientos inmediatos de nuestros clientes como partners de ellos en esta tarea.

Concordante, **Paulino Garcia** de **Videoservicios** declara: "Con relación a la preparación de nuestra empresa para el apagón analógico, que es donde tenemos la visión que tenemos de podemos captar operaciones por la diversificación, tenemos proyectos bajo la planificación de integración de soluciones llave en mano."

Eduardo Aguilar nos comenta al respecto el claro compromiso de **Canon** en México:

"Canon es una empresa líder en la creación de imágenes. En esta década, estamos en la gran expectativa del efecto detonante en la economía de los países MINT (México, Indonesia, Nigeria y Turquía) que seguramente desarrollaran su infraestructura durante la presente década. Canon ha apostado a esta expectativa estableciendo bases solidas en todas las divisiones de negocio en México, además de completar la gama de productos que se manejan a nivel mundial en México. En el año 2012 se estableció el negocio de broadcast, cinema y medicina en México y apenas el pasado mes de enero ejecutamos la fusión de **Oce** en **Canon Mexicana**. En el área de cinema y lentes de televisión tuvimos un excelente año en ventas pero más importante en el posicionamiento de los creadores de contenidos de alta calidad. Hoy está en plena producción el largometraje «Tierras Rojas» que utiliza nuestra óptica y camaras cinema EOS en locaciones de Guadalajara y México D.F. Los diversos documentales de la serie *Planeta Televisa* utilizan lentes y cámaras Cinema EOS, entre muchas otras producciones. Hoy proporcionamos HD, 2K y 4K en la adquisición y tenemos un reconocimiento de los expertos en imagen. Prueba de ello, es nuestro primer lugar al booth mas visitado en la convención de la NAB durante los últimos 3 años."

Alejandro Fragoso no duda en afirmar que observa mucha actividad en varios estados por el tema del apagón analógico. "Por ejemplo había migrado a digital el Mexiquense, ya comenzó Tabasco y esperamos este año se de al menos en diez estados más. Así también lo expresa **Andrés Martinez** reconociendo que "México se está preparando para este evento, ello es lógico y nosotros también lo estamos haciendo".

Edgar Diaz de la Vega de **Insitel Mexicana** expresa: "Sin lugar a dudas será una gran oportunidad para las compañías proveedoras de México, por lo cual todos debemos estar listos para dar lo mejor en este momento importantísimo de la industria televisiva mexicana".

Israel Gómez, Director General de Broadcast y Servicios de Pro-

Las televisoras "dominantes" también juegan su papel



Gabriel Contreras, Presidente del Instituto Federal de Telecomunicaciones (IFT) aclaró en su momento que **Televisa** ni **Azteca** no podrán participar en la licitación de dos nuevas cadenas de televisión.

En este sentido, explicó, que ambas compañías ya cuentan con 12 megahertz de espacio radioeléctrico, por lo que no podrían competir por las dos nuevas cadenas de televisión.

Mario San Román, Director General de **Azteca**, cuestiona: "Yo creo que se habla mucho de la ley, pero en realidad lo que tenemos que ver es cómo queda; pues ahorita, no hay ley. Si nos ponemos a ver qué va a pasar no sabemos porque todavía no se discute la ley. En México se alude a que habrá una tercera y cuarta cadena, pero contemos cuántas cadenas hay. Lo que pasa es que a **Televisa** y a **Azteca** nos cuentan como una cadena, pero en Estados Unidos una cadena es **ABC**, que es un canal y otras cadenas son **NBC**, **CBS** y **FOX.** Aquí tenemos los canales **2**, **4**, **5**, **7**, **9**, **11**, **13**, **22**, **40**, **Cadena Tres.** Entonces, ¿cuál tercera cadena? Hay muchas cadenas."

Cuando se le sugiere que la normativa refiere a la existencia de dos cadenas dominante es categórico: "Sí, pero que haya más o menos canales no es la diferencia. Aquí lo más importante es ver qué contenidos se le va a dar a las audiencias. Se dice que va a haber mucha competencia, pero si vamos a tener un canal como **Estrella TV**, pobre México. Y aquí me gustaría puntualizar los riesgos porque la calidad de producción y de contenidos la televisión mexicana es muy alta, que viaja por todo el mundo y es bien reconocida. Entonces, lo que no podemos permitir es que esta ley nos obligue a bajar la calidad porque ese sería un riesgo muy fuerte. Y además, resulta evidente que en muy pocas partes del mundo ha habido más de dos cadenas rentables; eso hay que ponerlo muy claro. Y no por eso quiere decir que la gente tenga más alternativas porque la gente quiere ver buenos contenidos y entretenerse de acuerdo con sus propios intereses".

Finalmente, vale destacar la palabra del grupo de comunicación más importante de México. **Emilio Azcárraga Jean**, Presidente de **Grupo Televisa**, declaró tras finalizar su participación en Miami durante el show de NATPE: "La competencia es el mejor motor para el desarrollo y el crecimiento económico. La competencia es también siempre positiva para las empresas privadas y la iniciativa apunta en esa dirección". Y sentenció: "Damos la bienvenida a la competencia en televisión, nosotros ya estamos preparados para competir".

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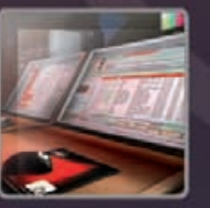

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ducción de **Comtelsat** para Estados Unidos, México, Centroamérica y Brasil, pone en duda que todo el mundo esté listo para llegar al apagón en tiempo y forma para el 2015. “Este es uno de los temas que está tomando mayor importancia dentro de nuestra industria, sobre todo en clientes de mediano y del gobierno que están preocupados por los tiempos. A esto hay que sumarle la coyuntura del cambio de gobierno, donde muchos proyectos estaban parados y ahora se están reactivando. Si bien muchos de los clientes han empezado a equipar sus satélites para trasmitir en HD, lo último que se había quedado es el tema de transmisión. Muchas compañías están con un gran avance en el tema de producción y generación de contenidos en alta definición y los que se vendrá será el tema netamente de trasmisión. El tema interesante será combinar esto con la reciente iniciativa de reforma en telecomunicaciones, con temas de ‘must carry’ y ‘must offer’ y la licitación de dos cadenas nacionales. Esto puede tomar una importancia grande y puede ser un driver. Viene una buena época para México y hay lugar para más jugadores, servicios y mucho por construir”. Mostrando un panorama y su visión de lo que vendrá en el mercado profesional de México, **Jaime Tovar** está convencido de su modo de ver la cuestión: “Se vienen el Mundial y los Juegos olímpicos, ambos en el mundo latino. Esto llevará a que habrá mucho impulso y venta de publicidad en la televisión; por lo que creo que 2014 será un gran año. Veo venir para México dos anos muy buenos para esta industria. Teniendo un 2015 con nuevas cadenas y el apagón analógico, la industria profesional global estará con la mirada puesta en México”.

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Apuesta al crecimiento con la digitalización

El foco de la firma en México llega de la mano del apagón, ya que invirtió muchos recursos financieros acercando una gran tecnología al país con los mejores precios. Otro negocio en auge es el desarrollo de OTT.

Tras cumplir 20 años en el mercado, la empresa china quiere seguir creciendo en México de la mano de la TV Digital, donde la compañía invirtió muchos recursos financieros en el mercado de broadcast contando con transmisores de TV Digital Abierta, cajas receptoras y un gran abanico de productos para esta industria, señala **Idan Kessel**, Director General de **Gospell Digital Technology**.

«En 2013 iniciamos la operación de broadcast en el país por decisión de la empresa y nos asociamos a grandes empresas del sector, ya que hay grandes empresas que cuentan con nuestros productos, otros están en proceso de compra y otros probaron nuestros productos. Ya podemos contar con clientes como Televisa, Azteca y MVS, entre otros», manifiesta el directivo de la empresa.

Sin embargo, **Kessel** dijo que el sector broadcast «sufrió un poco con el cambio de gobierno por el atrasaron licitaciones y decisiones», como también el cambio de la **Cofetel** por la nueva **IFETEL**. «Todo esto es una barrera pequeña que se debe pasar y tenemos muchas expectativas, que tiene que ver con el proceso d la digitalización en el país», añade.

Según el ejecutivo la filosofía de la compañía es tener la mejor tecnología del mundo con el mejor servicio y cubrir de la forma más cercana a nuestros clientes, con servicios rápidos en reparaciones por medio de nuestros ingenieros y dos oficinas en el país.

Otro foco fuerte en el mercado mexicano es el desarrollo de OTT. Por eso la firma apunta a cubrir este tipo de mercados con soluciones completas fabricando desde los centros de transmisión hasta cajas tipo Android, que convierten en una pantalla formal en la casa hasta pantalla Smart TV. «Básicamente convertir una pantalla de televisión en una computadora», indica.

En sus tres años en la industria de la televisión mexicana, también distribuyen y fabrican cajas de recepción digital hasta centros de transmisión para cableoperadores o sistemas satelitales y ofrecen soluciones llave en mano.



Idan Kessel


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SE LANZA AL MERCADO DE AMÉRICA LATINA

AVP Distributors

Desde Miami y con el foco puesto en America Latina, profesionales de la industria con vasta experiencia en el mercado se unen para buscar ser la primera opción en distribución para sus clientes y proveedores.

Con una misma filosofía de trabajo de más de dos décadas en la industria profesional de América Latina de sus fundadores, abre sus puertas al mercado **AVP Distributors** operando desde el Doral en Miami, Florida, ubicados estratégicamente en las cercanías del aeropuerto y las empresas de exportación para facilitar la mejor logística para sus clientes, tal como explica **Carlos Carrillo**, CO-CEO de **AVP Distributors**, definiendo: "Somos una empresa que distribuye equipos de Audio, Video, Fotografía y accesorios para uso profesional y broadcast en todas las regiones de América del sur, Centroamérica y el Caribe, región que conocemos ampliamente y que hemos proveído durante muchos años, por lo que todos los referentes de nuestra industria nos conocen muy bien".

En esta misma línea **Rubén Gómez**, CO-CEO de **AVP Distributors**: "A nuestra vasta trayectoria en la industria, agregamos una amplia selección de productos y marcas que sabemos garantizan la mayor satisfacción de nuestros clientes, a un precio competitivo, fácil acceso y el asesoramiento especializado que siempre le hemos dado", ampliando: "Somos conscientes y conocemos perfectamente las infinitas oportunidades disponibles en videografía, fotografía y otras industrias de difusión en el mercado, por eso nuestros clientes confían en los todos los profesionales de de la compañía a la hora de adquirir sus equipos."



Carlos Carrillo.



Ruben Gómez.

Los ejecutivos destacan que el servicio al cliente es una de las principales prioridades para **AVP Distributors**, tal como lo remarca **Carrillo**: "Estamos orgullosos de nuestros profesionales altamente respetados con más de 24 años en la industria, siempre dispuestos a brindar el asesoramiento correcto y el soporte que necesite nuestros clientes, ya sea vía telefónica, email o personalmente."

Ampliando en este sentido **Gómez**: "Es la misma temática de trabajo profesional con la que nos hemos mantenido durante muchos años en la industria profesional de America Latina, por lo que con todo ese background de anos de profesionalismo que poseemos, decidimos lanzar nuestra propia compañía con nuestra propia filosofía, respaldados por un equipo profesional que también conoce perfectamente el mercado de la región y sus necesidades, para de la manera más rápida y efectiva, poder proveer y revolver todas las inquietudes y necesidades existentes de nuestros clientes en America Latina". "Todo nuestro equipo se esfuerza por ser los mejores en lo que hacen, con el objetivo de ser la primera opción para nuestros clientes y proveedores", concluyen al unísono los directivos.

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Sostiene que Brasil continúa siendo el principal mercado para TV digital en América del Sur, al tiempo que asegura haber realizado importantes operaciones en Ecuador, Perú, Colombia, Chile y Argentina.

¿Cuáles son las principales novedades que la compañía exhibirá durante NABShow?
Para nosotros, NAB 2014 será una gran oportunidad de presentar al mercado y a los clientes nuestra nueva imagen corporativa y nuestra planificación para los próximos años. **Screen** ha sido reestructurado recientemente, la dirección ha sido cambiada y la nueva inyección de capital acordada con nuestro pool de bancos, permitirá a la compañía liderar el mercado con mayor fortaleza que en el pasado. Este proceso de cambio se viene desarrollado de muy buena manera, lo que se ve reflejado en el entusiasmo de nuestros inversores; de hecho, en las últimas semanas nuestras acciones se han duplicado. En este contexto, el foco de nuestra propuesta es el equipamiento de productos broadcast al que abordamos con soluciones innovadoras y una alta perfomance en que concierne a los tiempos de entrega.

¿Cómo están evolucionando las soluciones de la compañía en el campo de la TV digital y la TV móvil?
En los últimos meses hemos presentado nuevas soluciones y equipos innovadores para aplicaciones de TV digital. Estamos constantemente entregando equipos desde nuestras dos fábricas, la italiana y la brasileña. Nuestra nueva línea de transmisores *High Efficiency Broadband* garantizan a nuestros clientes las mejores prestaciones con un consumo de energía muy bajo, lo que demuestra nuestro fuerte compromiso para alcanzar y satisfacer sus necesidades.

¿Cuál es el panorama actual de los negocios de Screen en América Latina?
Desde cinco años estamos fabricando equipamiento para la región desde nuestra fábrica en Brasil. Este activo es probablemente el más importante de **Screen Group**. En este sentido, **Screen do Brasil** ha vendido más de 1200 equipos de transmisores para TV digital destinados para el mercado local y el resto de América Latina. Observamos que el crecimiento que estamos experimentando es bastante veloz, especialmente si consideramos que años atrás no estábamos con una participación tan activa en estos mercados. Hemos podido revertir nuestra posición gracias a nuestro formidable equipamiento, soluciones perfectas para nuestros clientes y un personal local dedicado y comprometido, que siempre está próximo de las necesidades de nuestros clientes, desde la primera cita hasta después de los procedimientos de soporte de ventas y mantenimiento.

¿En qué medida la inauguración de la fábrica en Brasil les abrió nuevas oportunidades hacia la expansión regional?
En los últimos años iniciamos con firmeza nuestras actividades en todos los países de Latinoamérica. Tuvimos muy buenas ventas en países como Ecuador, Perú, Colombia, Chile y Argentina. Y por supuesto Brasil continúa siendo nuestro principal mercado en América del Sur, teniendo en cuenta también que es el país que realiza mayores inversiones en TV digital.

¿Cuáles son los atributos que distinguen a la tecnología de transmisión desarrollada por la compañía respecto de sus competidores?
El equipamiento de **Screen** posee una tecnología única, patentada *SWDT (*Software Defined Transmitters*), que le posibilita* el uso de una sola plataforma como hardware y la carga de todos los diferentes estándares analógicos y digitales utilizados en todo el mundo. Esa es la razón por la cual todos nuestros equipos tienen un modo dual real de transmisión análogo / digital, sin la necesidad de solicitar cambios de hardware para pasar de una operación análoga a una operación digital. De hecho, solo se requiere de algunos segundos para cambiar.
Desde el momento en que los clientes comienzan a probar y utilizar nuestros equipos advierten que son de una operación muy sencilla, pudiendo ser operados de forma local o remota ya que todos cuentan con conexión IP para internet.

Nuestra línea de productos no solo incluye transmisores, sino que proponemos una solución completa: desde la recepción con nuestro satélite RX, pasando por todo el *head end* con nuestros multiplexores y decodificadores, los MW Links con muy alta capacidad, mono y bidireccional, especialmente dedicados a las contribuciones para TV Digital Broadcast.

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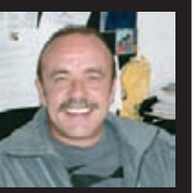




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CONCEPTOS CLAVE Y PRÁCTICAS RECOMENDADAS

El uso de la metadata en sistemas de DAM



Por el Ing. Jaime Tovar Fischer

¿Sabe usted qué activos digitales tiene y como identificarlos, organizarlos y describirlos? Esta pregunta merecen tiempo para contestarse apropiadamente pues su impacto en la puesta en marcha de un sistema de DAM se traducirá en eficiencia y finalmente en resultados. El efecto de una buena estrategia con su metadata se reflejara en sus flujos de trabajo y en todos los procesos involucrados.

¿Qué es la metadata y qué implica dentro de un sistema de DAM?

La metadata es un activo en sí misma, de hecho, de suma importancia pues provee la estructura y la información requerida para permitir la accesibilidad a sus activos de media y por lo tanto maximizar su valor. En otras palabras, la metadata convierte sus activos en «activos inteligentes». La simple digitalización de sus archivos de audio y video es solo la capa inferior del valor de dichos activos digitales, su verdadero potencial se hace realidad con el uso y la relevancia de la metadata asociada a ellos. ¿Cuánto valor puede tener un activo que no se encuentra?

Simplemente poner datos acerca de los datos. Se refiere a los elementos descriptivos que definen y describen un activo. La NISO (National Information Standards Organization) clasifica la metadata en 3 grandes categorías:

1- Descriptiva: la metadata que describe un activo con fines de identificación y origen (es la que se usaría normalmente en una búsqueda). Se trata de elementos como título, autor y palabras clave.

2- Estructural: la metadata que indica como está formado el activo, por ejemplo, cuantas páginas tiene el libro, con cuantos capítulos y cuantas páginas… (P.E. Formato de archivo, dimensión del archivo, longitud del archivo, cuantos canales de audio, etc.)

3- Administrativa: la metadata que provee la información requerida para administrar el activo, como por ejemplo, cuando fue creada, quien puede accesarla, quien es el dueño, etc. Hay varios subgrupos de metadata administrativa, hay 2 subgrupos que normalmente se tratan separadamente: metadata concerniente a derechos de autor (que tiene que ver con la propiedad intelectual del activo) y la metadata de preservación (que incluye toda la información concerniente a como archivar y preservar los activos)

Algunos conceptos importantes de entender si está iniciando su análisis de metadata:

Taxonomía: la ciencia encargada del poner nombre y organizar los objetos en grupos, clases o tipos que comparten características similares. En el caso de DAM es con el propósito de clasificar, agrupar e identificar activos digitales.

Taxonomía en la metadata: las categorías, subcategorías y términos que resultan en una taxonomía, frecuentemente son resultado de la metadata. La taxonomía en la metadata permite obtener resultados más precisos en los procesos de búsqueda y permite la personalización y la segmentación.

Vocabulario controlado: los vocabularios controlados contiene los vocablos «preferidos» y sus variantes con relaciones definidas, jerárquicas o asociativas, algunos ejemplos de vocabularios controlados son los glosarios, diccionarios especializados, sinónimos listas de terminología de estándares, definiciones taxonómicas especificas y tesauros.

Tesauros: una herramienta que controla sinónimos y que identifica las relaciones entre diferentes términos. Normalmente hay un término preferido y sus relaciones jerárquicas, pero no forzosamente tiene que ser así. Por ejemplo: Perro, can y cachorro, donde «Perro» es el término preferido.

Archivos con jerarquia: típicamente utilizados para listas de personas, organizaciones, geolocalizaciones PE. Segmentos de la industria, empresas públicas y ubicaciones geográficas. Estas pueden verse como taxonomías.

Definiendo una estrategia con la metadata: puntos clave

Una vez revisado los cimientos con las definiciones y conceptos clave, ahora se puede pensar en la estrategia. Las tres preguntas que debe Usted hacerse son:

1- ¿Cuáles son los problemas que estoy tratando de resolver?
2- ¿Quién va a usar la metadata y para qué?
3- ¿Qué tipo de metadata son importantes para este propósito?

Es importante considerar cuanta metadata va usted a necesitar, la metadata es cara, toma tiempo valioso crear la estructura y asegurarse de que va a satisfacer sus necesidades. Si usted no considera lo anterior entonces gastara tiempo y dinero en no encontrar los archivos que busca, debido a metadata inadecuada. Crear, probar, capturar los datos y mantener la metadata y sus taxonomías implican costo. Implementar una estructura efectiva para su metadata puede requerir cambios en la Interfaz del usuario (GUI) o en la electrónica. Cada campo de metadata cuesta dinero y tiempo no solo en su implementación, pero también durante el periodo de ajuste.

Se debe tener la estrategia de metadatos y los flujos de trabajo antes de comprar las herramientas tecnológicas, no cometa el error de hacerlo al revés, es decir comprar los equipos y luego iniciar la estructura de sus me-

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tadatos. Cerciórese de que tener claro los objetivos del negocio y como la metadata debe contribuir a alcanzar estos objetivos. Para avanzar en este sentido, aquí le damos unos componentes críticos de la estrategia de metadata que debe considerar:

Tener el equipo humano correcto: nombre un equipo de colaboradores del DAM para identificar las metas y el diseño de la estrategia de metadata para conseguir dichas metas.

Definir sus requerimientos: antes de involucrarse con cualquier fabricante de tecnología o representante de ventas, usted debe ser capaz de definir claramente (al fabricante y a su propia organización) aquellas cosas que usted necesita que el DAM haga para su organización



Haga la parte financiera: identifique todos los costos, beneficios y riesgos de crear y mantener esta estructura de metadata, cuando haga su cálculo de retorno de la inversión debe considerar los costos de añadir, mantener, probar y actualizar su estructura de metadata y sus taxonomías. Asegúrese de considerar el mantenimiento de la base de datos que elija.

Especificaciones de su estructura de metadata: siempre sujetas a cambio pero usted debe tener una imagen clara de cómo se verá su estructura de metadata a lo largo de los diferentes flujos de trabajo que diseñe. Incluyendo vocabularios controlados y palabras clave.

Flujos de entrada: ¿de dónde viene la metadata?, ¿quién será el responsable de mantener y añadir la metadata?, ¿cuáles son los procesos que seguirán?, ¿tendrán un proceso de control de calidad de la entrada de metadata?

Recabar opiniones de usuarios y pruebas: tenga una forma de medir la efectividad de su estructura de metadata, flujos de trabajo y protocolos varios. Una métrica detallada ayuda muchísimo para la toma de decisiones y la mejora continua.

Es mucho el trabajo que se requiere, pero el seguimiento apegado de estos conceptos, le permitirá, iniciar la implementación de su DAM en la forma y dirección correctas.

¿Cómo se llega ahí?

Uno no puede exagerar acerca de la importancia de entender cuáles son los beneficios que la aplicación de DAM no puede realizar sin buena metadata. Debe vender la visión acerca de lo que su organización va a ganar teniendo buena metadata en su sistema. Una buena estructura de metadata maximiza la eficiencia en su DAM al permitir a los administradores, mejor control y a los usuarios les permite encontrar lo que necesitan ágilmente.

Algunos campos mandatorios para metadata son:
Metadata básica: creador, fecha de creación, propietario, fecha de publicación, título.
Metadata para identificación: creador, titulo, descripción, sinopsis, responsable de la publicación
Metadata para derechos de autor: fecha de expiración de derechos, restricciones de uso por geografía, restricciones de uso, precio, dueño de los derechos
Metadata de mantenimiento: ¿quién ha usado este archivo?, ¿para qué se usó?, ¿qué organización lo utilizó?
Metadata financiera.

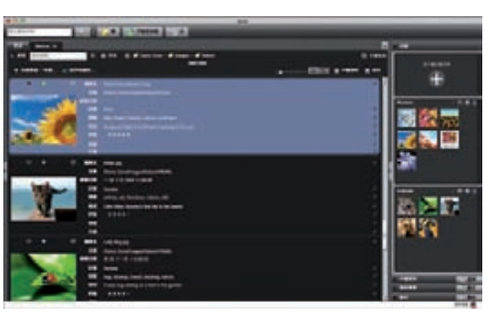
La consistencia es clave cuando se trata de metadata, considere el siguiente ejemplo:

- Presidente Enrique Peña Nieto
- Enrique Peña Nieto
- Presidente Enrique Peña
- Peña Nieto
- Peña
- EPN

Cada una de estas etiquetas podría referirse a una temática distinta, sin embargo, el contenido del elemento «Presidente Enrique Peña Nieto» es lo que es relevante. El hecho de tener un administrador de su DAM o un especialista en manejo de metadata en su equipo de trabajo es fundamental. De hecho, dependiendo del tamaño de su organización puede darse el caso de tener varios administradores de metadata en diferentes ubicaciones que sean responsable de la catalogación e identificación de sus activos. En este caso cobra mayor grado de sofisticación e importancia la consistencia de la metadata.
También hay metadata en las cabeceras de los archivos (*headers*), en los *file systems*, convenciones para renombrar archivos y listas de actividad (logs) que pueden extraerse automáticamente y estructurarse en forma de metadata. Aunque las herramientas de clasificación automática existen y producen resultados sumamente consistentes, los humanos son más precisos para reconocer las variaciones en las etiquetas (véase ejemplo anterior), así que un esquema semiautomático, hibrido o simplemente supervisado por unos ojos humanos que permitan corregir, ampliar y asociar la metadata son la mejor forma de atender este aspecto.

¿Cómo es la estructura de su metadata?

Las personas utilizan varias formas de describir un activo según su propia experiencia profesional, nivel





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cultural y puntos de vista. Este aspecto se traduce frecuentemente en mas de 75 campos para la catalogación de los archivos, algunas veces el numero de campos rebaza los 100, la sobre información mata, hace que la experiencia de consultar y buscar un archivo sea tediosa y que consuma más tiempo que el que debería provocando que la experiencia del usuario no sea tan positiva como quisiéramos.



La idea es encontrar un número de campos «manejable», donde uno sea capaz de discernir las características principales de un activo (administrativas, descriptivas y técnicas). No existe un número mágico de campos de metadata,la experiencia muestra que este numero de campos no debe exceder los 20.

¿Cuál es su taxonomía?

Una vez que usted haya identificado sus activos y tenga ya una estructura para su metadata, llega el momento de ver como esto quedara organizado dentro de su sistema de DAM, desde la parte del archivo hasta la interfaz para el usuario –de cabo a rabo-.

Los usuarios normalmente buscan sus contenidos de interés de varias formas:

Sistemas clasificados: búsqueda de activos por más de un valor o dimensión. P.E. Buscar por tipo de material: Oro, plata, bronce, etc.

Búsqueda por folders: búsqueda en folders debidamente organizados. P.E. El folder de «Aves», estará en la «a» dentro de un arreglo alfabético.

Vocabulario estructurado: según un vocabulario definido y relacionado por el administrador del sistema, P.E. «Búsqueda / Búsqueda avanzada»

Piense en sus usuario y en como querrán navegar dentro de su catalogo y buscar los activos. La solución puede no ser única o cumplir con sus objetivos plenamente pero cualquier aplicación de DAM reconocida le permitirá configurar sus mecanismos de búsqueda de tal forma que mejor cumpla con sus requerimientos.

¿Cuáles son los estándares en la industria y cuales son adecuados para mí?

Es necesario revisar los estándares mundiales durante la planeación de su estrategia de DAM. Los estándares y las normas fueron creadas por miembros de la industria para satisfacer los requerimientos de su industria específicamente. Es recomendable apegarse a una norma si encuentra alguna que sea adecuada para sus requerimientos y se flexibilice tanto como usted lo necesite. La flexibilidad en los estándares en importante, es común que los estándares no consideren algún aspecto que sea importante para Usted.

Frecuentemente los dueños de contenido requieren herramientas que permitan niveles de colaboración que permitan el intercambio de contenidos y la interoperabilidad de la metadata entre diferentes plataformas y aplicaciones de DAM. Es importante recordar que los estándares y las normas son imprescindibles para las búsquedas precisas, las búsquedas federadas, la recuperación de materiales desde otros repositorios, el intercambio de materiales entre sistemas de DAM, así como para la automatización de flujos de trabajo colaborativos, distribución de media y metadata y la integración con otros sistemas, incluso con otros módulos de su propio sistema. La adopción de estándares trae como resultado grandes ahorros debido a las eficiencias que generan.

Beneficios de una metadata bien organizada

Es común que las personas pierdan más del 40% de su tiempo buscando activos de su interés o simplemente recreándolos o sustituyéndolos cuando no los encuentran. Esta perdida de productividad puede resultar muy costosa. La clave para evitar estos costos innecesarios es tener buena metadata para ayudar y permitir la búsqueda y recuperación de archivos. Otros beneficios de tener buena metadata son:

Mejor retorno de su inversión: basada en maximización de ventas al encontrar mas fácilmente los materiales requeridos y a través de la minimización de tiempos de procesamiento y de utilización del sistema.

Disminución de costos: resultado de la disminución de llamadas de soporte técnico y de atención a usuarios con problemas

Manejo efectivo de derechos de autor: minimización de perdidas dado el pirataje de materiales o uso de materiales piratas.

Reducción de redundancias: en recursos productivos y sistemas de almacenamiento

Cumplimiento de regulaciones: Evitar el romper reglas mercantiles, de derechos de autor, evitar demandas, etc.

Metadata y taxonomías a mediano plazo

La mejor forma de planear a futuro su estructura de metadata es dejar espacio para cambios, permitir la flexibilidad y prever el crecimiento. Mantener su estructura, las especificaciones de su metadata y las relaciones taxonómicas no es todo lo que hay que hacer. Los vocabularios (o tesauros) deben actualizarse para mantenerse vigentes, esto implica nuevos términos que deben agregarse a los activos, así como sinónimos y/o términos informales o vocablos nuevos que aparecen. La interfaz del usuario (GUI) puede necesitar actualizaciones o adecuaciones de acuerdo con momentos históricos o con cambios en los requerimientos y costumbres de los usuarios. Una forma idónea de asegurarse que su estructura de metadata y la plataforma tecnológica está

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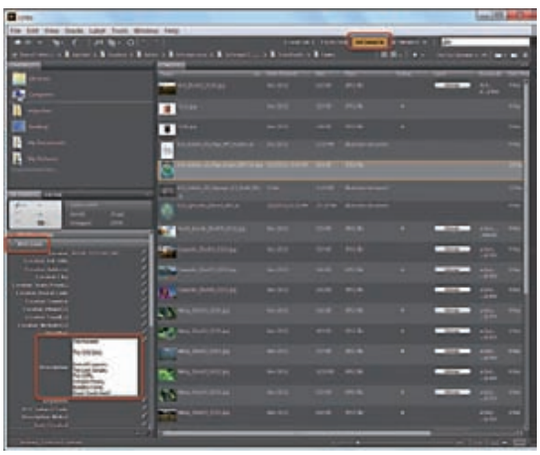
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cumpliendo con los requerimientos de los usuarios es el de ofrecer un formato de sugerencias y un procedimiento interno para aceptar o rechazar dichas sugerencias. Cualquier cambio en el sistema debe ser ampliamente notificado a los usuarios para evitar confusiones y prevenir malas experiencias en la utilización de su DAM.

Evaluando el control de calidad de su metadata y taxonomías

Frecuentemente descartados después de la puesta en marcha, los procesos de monitoreo y administración de la metadata deben ser continuos. El control de calidad y pruebas son críticos para el éxito de su implementación. Las pruebas deben empezar desde las fases más tempranas en el proceso, de hecho, deben iniciar con la primera ingesta de materiales y metadata a su sistema.
Es importante notar que la metadata y el desarrollo de taxonomías son procesos iterativos y que requerirá de retroalimentación por parte de sus usuarios. Utilice métricas cualitativas y cuantitativas y evalué con la mayor flexibilidad posible. Algunos parámetros medibles son:



- Consistencia en los datos.
- La oportunidad de etiquetar (clasificar con taxonomía).
- Tiempo para completar las tareas y/o operaciones.
- La reacción a los resultados de las búsquedas.
- La utilidad de los materiales de capacitación o instrucciones de operación.
- La satisfacción del usuario hacia la experiencia en su DAM.

Prácticas recomendadas

Utilizar la metadata en forma óptima requiere de mucho trabajo, pero una vez que lo consiga, esto se convertirá en su mejor activo. Algunas prácticas recomendables son:

1- Inicie con pocos campos de metadata que sean relevantes para todos sus archivos y gradualmente etiquételos dentro de grupos o aplique campos que no sean tan universales (aquellos específicos para algunos formatos de archivo, productos específicos y aplicables a grupos de usuarios especialmente definidos.
2- Evite sobrecargar a sus usuarios con campos de metadata
3- Pida el apoyo de un experto en la materia para analizar y decidir acerca de las categorías, las etiquetas y los grupos
4- Pida retroalimentación a los usuarios para asegurar que su experiencia este siendo satisfactoria y esté dispuesto al cambio y a la mejora continua
5- Prepárese para ajustar la estructura de su metadata y sus taxonomías a medida que el archivo crezca.

Reglas prácticas para la metadata

Aquí algunas reglas que debe seguir con su metadata:
a. Desarrolle un proceso incremental que permita al identificar y empoderar al usuario, que los «enganche» con el propósito de recibir comentarios, realizar pruebas y evaluaciones. Este proceso puede iniciarse con el registro de los usuarios en línea, e incluso con estrategias utilizando las redes sociales.
b. Haga una rápida implementación que le provea de resultados medibles tan pronto como le sea posible y deles seguimiento.
c. Acepte que su esquema inicial no sea perfecto, la estructura de su metadata siempre será mejorable. Asegúrese que su diseño inicial cumpla con sus requerimientos y parta de ahí para hacer los ajustes pertinentes.
d. Defina su filosofía y políticas operacionales. ¿Quién decide los cambios? Basados en que métricas?
e. Reutilice sus activos tan frecuentemente como le sea posible.

El contenido no es rey, el usuario sí que lo es…

Si usted tiene grandes contenidos pero nadie los encuentra, el valor de sus contenidos se ve disminuido. Usted debe entender como sus usuarios y clientes quieren interactuar con sus activos antes de iniciar el diseño de su estructura de metadatos. Si lleva esta definición de requerimientos de los usuarios hacia la base del diseño estructural de su metadata, usted ofrecerá las facilidades que el usuario requiere, como las categorías, etiquetas y atributos del contenido que usaran para filtrar los datos y encontrar los contenidos que necesitan.
El diseño estructural no debe apresurarse, tómese el tiempo para aprovechar las recomendaciones y practicas recomendadas para su metadata y taxonomías. Recuerde que la metadata es dependiente del tiempo, manténgala actualizada y déjela crecer y enriquecerse. Mantenga su foco en sus objetivos, una vez que el mejor diseño de su estructura de metadatos será el que increméntela utilización de su sistema de DAM y maximice el poder de los datos acerca de sus datos.



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Desarrolla plataformas junto a Aspera

La empresa de producción, postproducción, distribución y exhibición generó la aplicación DCP Box, en conjunto a las herramientas Aspera. La idea es que a futuro sea su partnership para promocionar la nueva plataforma.



Benkis Gómez.

Con más de 40 años en la evolución de la industria cinematográfica, **Labodigital** comprendió que el mercado se dirige hacia la desmaterialización del contenido digital y comenzó a imaginar una plataforma y herramienta para los distribuidores y exhibidores de México, para luego expandirlo al resto de América, inclusive Estados Unidos.

Si bien existe la desmaterialización de contenido digital a través de tecnologías satelital, la compañía pensó en una tecnología más abierta, mucho más rápida, eficiente y con menos costos de development. **Labodigital** ya trabajaba con **Aspera** para transferir contenido fílmico digital entre los estudios de Estados Unidos y México, con regionalización de películas, trailers, subtítulos, doblaje y gráficos, y utilizando un flujo de trabajo en duplicado sean discos y USB que se envían directamente a los cines.

«Como ya teníamos probados los productos de la firma durante varios años, quisimos montar nuestra plataforma sobre la tecnología **Aspera**. Para ello platicamos con gente de la marca y desarrollo, adquirimos el SDK y desarrollamos una plataforma: *DCP Box*» sostiene **Benkis Gómez**, Software Development Project Manager de **LaboDigital**.

DCP Box utiliza servidores de **Aspera**, con los productos *Faspex* y *Enterprise Server*, que viven en sus instalaciones y son el corazón de la plataforma en cuanto a la transferencia de contenido, razón principal de la aplicación. «Nuestra plataforma brinda confiabilidad, disponibilidad y una mejor administración de los contenidos que se pueden bajar cuando uno quiera, a diferencia de la satelital que no quedan alojados. Así unimos fuerzas con **Aspera** y ahora tenemos un gran apoyo por parte de su equipo de desarrollo para implementar todas las herramientas», declara **Gómez**.

La plataforma *DCP Box,* creada por **Labodigital**, agiliza el intercambio de material digital, pudiéndose descargar en cualquier momento películas, trailers y publicidades sin mayor problema. Todo el material cumple con las especificaciones técnicas y son validados para su correcta proyección. Con un despliegue inmediato, la plataforma cuenta en todo momento con soporte y ofrece un reporte sobre los materiales de cada título, como el número de descargas y listas de streamings, que agiliza el tiempo de intercambio y ahorra una gran cantidad de gastos técnicos. Si bien aún es una versión beta, el ejecutivo afirma que la plataforma está por realizar unas primeras pruebas con un estudio grande y con festivales de cine en México, esperando que a fines de abril estén comenzando a entregar contenido físico.

Esta plataforma en línea apunta a los tres cuadros más importantes en la industria cinematográfica: exhibidores, distribuidores y agencias de publicidad. El exhibidor y el distribuidor tienen un espacio cloud o en línea donde están alojados los contenidos, promocionales corporativos, seminarios o promociones de palomitas o cortinillas para transmitirlos a través de esta plataforma a todos los cines. De igual manera funciona para las agencias con su cine-minuto o trailers de algún producto y publicidades para cines, evitando los USB u otra red.

Gómez indica que este cambio de **Labodigital** es dar «un paso hacia ser una empresa de tecnología, al desarrollar aplicaciones y servicios en la nube». «En el mismo tenor de convertirnos en una empresa de tecnología y desarrollo de aplicaciones, tenemos otros proyectos que también irán de la mano con las herramientas de **Aspera**, contando con sus productos *Faspex*, *Enterprise Server* y utilizaremos *Cargo* para llegar directamente a los servidores de los cines», sostuvo el Software Development Project Manager de **LaboDigital**. Además, agregó que usan herramientas de administración como *Console* para automatización de procesos.

Aspera está completamente inmerso en la compañía –sostiene **Gómez**- ya que domina el contenido fílmico de las películas en una resolución 2K y con estos productos están haciendo tanto producción como posproducción en sus instalaciones de la primera serie latinoamericana en 4K, la segunda temporada de *Señor Ávila* de **HBO**.

«La idea es convertir a **Aspera** como partnership y que ambos podamos promocionar la aplicación. Estamos en una etapa de crecimiento, edificando unas nuevas instalaciones en México DF, donde habrá nuevos servidores **Aspera** y vivirá *DCP Box*. Cuando lleguemos a un caso de éxito con la plataforma, **Aspera** será nuestro partnership no solo para México sino para la región», cerró **Gómez**.

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SEMINARIO ORGANIZADO POR AMTEC

The Foundry en México

Se desarrolló en el SAE Institute de Ciudad de México, de la mano de su distribuidor local AMTEC. Juan Salazar, Creative Specialist de The Foundry, presentó la tecnología Nuke 8 y Hiero 1.8.

La presentación realizada en México por **The Foundry** viene siendo parte del Tour que la compañía está realizando por toda América Latina, cuya próxima parada será en Colombia en colaboración conjunta con naskadigital y la fecha del evento será el jueves 20 de febrero a las 18:00 horas en el Crown Casino Zona T, Carrera 13 # 82 – 85 and Carrera 14 # 82 – 66, en Bogotá, Colombia.

En México, **The Foundry** junto a **AMTEC** realizaron su presentación mostrando todas las virtudes del **NUKE 8** y del **Hiero 1.8**, realizada la conferencia por **Juan Salazar**, Creative Specialist de la compañía donde dedico gran parte de su exposición a la nueva versión de **NUKE** y la herramienta de manejo de escenas, **HIERO**, tanto para usuario de **NUKE**, como para los buscadores de soluciones para flujos de trabajo eficientes, donde en este evento se trato de brindar las mejores soluciones a las dudas de los usuarios.

Por el lado de **NUKE 8**, **Salazar** destacó que viene lleno de nuevas herramientas y depurado su funcionamiento. Esta nueva versión ofrece algo para todos los usuarios, desde los usuarios más novatos hasta los expertos, pasando por los integradores de flujos de trabajo, contando con controles para artistas creativos, herramientas innovadoras para compuestos, opciones avanzadas adaptables a los usuarios y mejoras en velocidad y rendimiento.



AMTEC y The Foundry en el seminario en Ciudad de México.

En el caso de **HIERO 1.8**, novedades como que tiene un alto rango de herramientas nuevas y mejoradas para ayudar al usuario, **HIERO** y **HIEROPLAYER 1.8** se enfocan en la integración con **NUKE** y mejoras en el flujo de trabajo. «Entre sus nuevas características se incluyen controles para el manejo de color en Quicktime, herramientas para edición de audio, lectores de imágenes adaptables y mejoras en el rendimiento de playback». También conto la presencia de **Tatiana Romero**, Licence Compliance Latin America de **The Foundry**, como también el staff de su distribuidor en México con la presencia de **Octavio Ríos**, Gerente de Ventas y **Andrés Martinez Marín**, Director General de **AMTEC**.



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Alejandro Puente Córdoba junto con Enrique Gandulfo y Señora tras recibir el premio a la innovación tecnológica otorgado por Canitec.

Este 2014, la compañía exhibirá todos sus productos en los eventos internacionales de NAB, CANITEC, Expo Cine Video Televisión, SCTE, CAPER, ABTA, y otras convenciones a nivel regional. “Esperemos tener el mismo reconocimiento de nuestra labor, ya que el año pasado obtuvimos el premio a la innovación tecnológica. Este año durante febrero y marzo sumamos a nuestros clientes más de 40 servidores VEAS, y más de 12 servidores de administración de usuarios y cacheo para redes de datos”, explica **Enrique Gandulfo**, Director de la compañía.

La compañía demostrará su servidor multicanal mulformato Veas Black, poderoso servidor de playout que incorpora nuevas prestaciones como multi-formato, HD, y un nuevo render CG (OSD). La solución -que destaca por sus funciones de inserción de logos y cintillos, delay y record- es lo más avanzado en servidores para la generación de canales HD. Además de tener un costo muy accesible, cuenta con soporte técnico local, apoyo para la instalación y monitoreo 24/7/365.

De VEAS presentará su línea de servidores para canales que implementan lo más avanzado tanto en hardware como en software.

“Hemos instalado múltiples servidores de Ad Insertion en IP, y Servidores para aplicaciones de Pay Per View multichannel en SD y Full HD en este breve comienzo de 2014”, asegura **Gandulfo**, quien sostiene que en el área de servidores de administración y cacheo “hemos agregado más features a nuestras aplicaciones, permitiendo la mejor operación y optimización de ancho de banda a usuarios”.

“Tenemos contemplado ya la instalación de más de 15 servidores de este tipo para el resto del año en conjunto con instalaciones completas de infraestructura. Estamos trabajando con Headend para RF, e IPTV, como así OTT, aplicando **Sumavision** y productos digital broadcasting devices, como de otras marcas. Este año será un año de importantes inversiones, tanto en desarrollo como en infraestructura, que nos permitirán seguir creciendo”, concluye el ejecutivo.



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Los ejecutivos de Teletec y EMC² e ISILON en el Teatro Milán

Con la presencia de todos los principales directivos de los directivos de **Teletec**, entre los cuales estaban presentes **David Alexander**, **Alfonso Vázquez**, **Enrique Lask** y **Joaquín Ávila**, se realizó en el Teatro Milán, Foro Lucerna, que recientemente fue modernizado y reestructurado por la compañía para presentar el concepto «Big Data» y de su producto **EMC² Isilon**.
El evento fue abierto por **Alfonso Vázquez**, Director Comercial de **Teletec**, destacando el nuevo concepto de la compañía, mostrando su modernización y los importantes casos de éxitos que han tenido en nuestro país, mostrando importantes proyectos en los que Teletec ha trabajado, como el **Museo de Bellas Artes**, **Televisa**, **Canal 23**, **TV Azteca**, **Concierto Emmanuel & Mijares**, **Estadio Omnilife**, el **Auditorio Nacional**, **Uxmal**, el concierto de **David Guetta**, **Plaza Carso**, **Grupo Vallas**, **Centro Cultural Mexiquense Oriente**, **Museo Memoria y Tolerancia**, como así también se mostró la expansión que está desarrollando **Teletec** en América Latina, con apertura de oficinas en países claves como Ecuador, Perú o Brasil.
Por el lado de **EMC²**, habló **Miguel Reyes** quien remarcó el compromiso de la compañía con México, siendo un país clave en América Latina con el que **EMC²** ha trabajado, para continuar y hacer la presentación, **Martin Libch** quien comenzó remarcando que con el avance de la digitalización todo esta evolucionando y cambiando, basándose este avance en 3 pilares: la experiencia de consumo digital, la monetización con el digital y la cadena de suministro digital.
Durante el evento, se remarcó la utilización del almacenamiento tanto para broadcast como para postproducción, pudiendo trabajar con distintas plataformas de almacenamiento con diferentes formatos y archivos, realizando conversiones y preservación de archivo.
El **EMC Isilon OneFS** es un sistema operativo muy poderoso que proporciona la inteligencia detrás de toda escala de sistemas de almacenamiento, combina las tres capas de almacenamiento tradicional arquitecturas sistema de archivos, gestor de volúmenes y de protección de datos, todo unificado mediante software, generado la creación de un único sistema de archivos inteligente que se extiende por todos los nodos de un clúster.
La X-series de **EMC² Isilon** escala desde pocos Terabytes (TB)hasta más de 20 Petabytes (PB) y sobre 100 gygabits por segundo (GB/s) de ancho de banda, todo en un solo file sistema. Y en el escalamiento permite rápida-

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mente crecer la capacidad de manera independiente y lineal. Con sus arquitectura modular y el software, permite hacer desplegar el sistema y manejar la administración de manera muy simple. Una vez instalado en el Rack puede llevar solo 10 minutos hacer la configuración, con un solo volumen y con herramientas globalizadas no hay necesidad de soportar multiples volúmenes.
Con **Isilon** se puede almacenar eficientemente al usar un promedio del 80% de capacidad contra el 50% que dan los sistemas de SAN o NAS tradicionales, y para hacer mas reducciones hay herramientas como Isilon SmartDedup para deduplicación de data, esto se traduce en una alta eficiencia y menor costo de adquisición y operación.
Con su capacidad de hacer encriptación de drives, permite cumplir cualquier regulamiento y necesidades para resguarar datos con herramientas como SyncIQ es muy rápido y flexible la replicación asyncronica de archivos.
A nivel de protección de datos, permite hacer niveles de protección de manera global o por carpeta desde N+1 hasta N+4 y sistemas en espejo.
Soporta protocolos de NFS v3 (UDP or TCP) SMBv1, http, FTP, NDMP,LDAP,ADS, NIS,NDFS y soporta clientes de Microsoft Windows, Linux, Apple de Macintosh.

De cara al futuro

En 2015, el 80% de toda la capacidad de almacenamiento será vendida para guardar datos basados en archivos. En este momento **EMC Isilon** tiene un claro crecimiento con más de 4000 clientes en el mundo, destacandose majors tales como **Turner Studios**, **ABC**, **Paramount**, **Technicolor**, **Pandora TV**, **NBC Sports**, **FOX Sports**, **Discovery**, **DIRECTV**, **Comcast**, **Fujifilm**, **ESPN**, **Adobe**, **Los Yankis de New York**, **Imageworks** y **NBC Universal** por nombrar algunos.
Luego **Martin Libch**, diferenció

TELETEC

los conceptos de hoy en día de archivo, dividiéndolo en dos conceptos: el de arquitectura y el de software, diciendo que el caso antiguo de arquitectura tipo SAN ya es obsoleto porque cuenta con limites en su performance de almacenaje, para EMC el concepto de almacenaje es diferente, trabajando sobre la base de distribución del material a almacenar mediante nodos, y de esta manera tener un cluster muy potente en su desempeño y muy práctico en cuanto a su administración para instalaciones dedicadas a video.
Los cambios en los flujos de trabajo realizados por los medios ya no son los clásicos, por lo que los movimientos de archivos pueden genera cuellos de botella en el trabajo, tornándose en ocasiones difícil de manejar en escala, por lo que **EMC² Isilon** plantea una solución en su escala de salida con una nueva arquitectura NAS, trabajando tanto con las plataformas **Windows**, **Linux**, **Macintosh**, siendo un perfecto sistemas de archivo, administrador de volúmenes y protección de datos
De esta manera, **Teletec** se exhibió la familia completa de productos **EMC Isilon**, contando con S-Series, x-SERIES y NL-Series.



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PANASONIC

Soluciones 4K y Full HD

Panasonic exhibirá dos personalidades de la emblemática videocámara *VariCam*. Por una parte, estará la *VariCam 35* para captura en de video con calidad de Ultra Alta Definición 4K incorpora un sensor MOS 35mm recientemente desarrollado por **Panasonic**; mientras que por otro estará la *VariCam HS* representa la tercera generación de VariCam 2/3" con captura de alta velocidad a 1080p y hasta 240 cuadros para producir extraordinarias imágenes en Alta Definición que cumplen con las condiciones más demandadas por documentalistas, realizadores de eventos deportivos y para aplicaciones específicas de cámara lenta en la generación de efectos especiales. Ambas incluyen los avanzados codecs de la familia AVC-ULTRA.

Para captura, movilidad y transmisión inalámbrica por redes 3G, 4G y LTE, la compañía exhibirá la nueva videocámara profesional compacta AJ-PX270 combina la alta calidad de imagen, eficiencia de la grabación a bajas tasas de bit y la flexibilidad de la transmisión inalámbrica por redes 3G, 4G y LTE, pero con las funcionalidades clave de su hermana mayor para grabación al hombro AJ-PX5000 con el códec AVC-ULTRA. Este nuevo modelo portátil incluye una nueva generación de sensores 3-MOS de 1/3" de alta sensibilidad y bajo ruido para producir imágenes sobresalientes incluso en condiciones de baja iluminación.

También habrá una nueva generación en el sistema P2 de estado sólido de 256GB, que está diseñada específicamente para grabación con altas tasas de cuadros, hasta 120 fps en 4K con el cuerpo VariCam 35 y de hasta 240fps con el cuerpo VariCam HS a 1080 HD. Por su parte, la tasa de transferencia de datos alcanza hasta 2.4Gbps y tiene un sistema de corrección de errores, equivalente a la recuperación RAID, para restablecer un sector, una página o un bloque completo de datos. La descarga de los archivos se podrá realizar por medio de un drive que incluye tanto ranura para tarjetas expressP2, como para P2 convencionales. El sistema estará disponible en el último trimestre de 2014.

Finalmente, también hará lo propio con el nuevo switcher AV-HS6000 2 M/E para producir en vivo, es un equipo poderoso con una relación costo-beneficio óptima. Incluye 32 entradas HD-SDI y dos más DVI-D. En cuanto a salidas tiene 16 HD-SDI, cuenta con 16 bancos para fuentes de video, cuatro independientes para visualización múltiple, almacenamiento de clips expandible y



un servidor Web, entre otras características. La diversidad de flujos de trabajo no representa ningún problema, gracias a la posibilidad de personalización para cada uno. El nuevo switcher AV-HS6000 es una herramienta ideal para la producción en eventos deportivos, espectáculos y conciertos, ceremonias religiosas, transmisión de televisión y aplicaciones educativas.

Estos avances y muchos otros estarán disponibles en el stand **C3607** dentro del Central Hall en el Las Vegas Convention Center durante NABShow 2014.





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NEWTEK

Ajusta TriCaster y 3Play para YouTube

Con más de un millón de visitas mensuales, **YouTube** juega un papel creciente como distribuidor en línea de cobertura de deportes en vivo. **TriCaster** representa la norma de la industria para producción y webdifusión multicámara de alta calidad, aunque asequible. **3Play** es un servidor profesional para repeticiones con cámara lenta, esencial para la producción deportiva, y está disponible a una fracción del precio de los sistemas de repeticiones tradicionales. Juntos nivelan el campo de juego para productores deportivos en **YouTube**.

Posibilitará difundir en vivo una gran gama de actividades competitivas mediante el servicio de webdifusión de deportes en vivo de YouTube.



«Hoy en día, los espectadores pretenden ver actividades deportivas profesionalmente producidas. No se conformarán con ver programación deportiva que carece de elementos esenciales, tales como repeticiones instantáneas y gráficos en pantalla. Los escenarios de TV que luzcan profesionales también son vitalmente importantes, y pueden lograrse con los virtuales del TriCaster» declaró **Andrew Cross**, Director de Tecnología de **NewTek**.

«TriCaster y 3Play te permiten lucir como si estuvieras en televisión al aire. La Internet ha permitido que ya no te haga falta una enorme antenna ni una licencia del gobierno. La compatibilidad con YouTube significa que los equipos de cualquier tamaño pueden alcanzar a sus fanáticos de maneras que antes sólo podían soñar», sostuvo.

Tradicionalmente, las producciones deportivas de muy alta calidad venían con precios muy altos, ya que requerían de un camión de producción que costaba decenas de miles de dólares para alquilar durante un solo juego o partido. **TriCaster** y **3Play** permiten a las instituciones deportivas mejorar la calidad de producción de sus programas, bien sea para transmisión al aire o por la web, sin requerir un gran desembolso de capital de adquirir equipos de video profesionales o del gasto operacional de un camión de producción de TV.

«En el pasado, el costo ha sido prohibitivo» dijo **Perry Tobin**, Gerente de Tecnología del Canal de Deportes de **YouTube**. «Afortunadamente, los productos como TriCaster y 3Play han bajado el costo de entrada para este espacio. Aunque antes se necesitaba contratar un camión satelital, ahora sólo se necesita una conexión internética, un TriCaster y un 3Play, y estás listo para transmitir con repeticiones instantáneas, tremendos escenarios virtuales creados con un pequeña pantalla verde, y todo lo que se pueda pretender del contenido de televisión por cable TV».

La disponibilidad de herramientas asequibles de producción como **TriCaster** y **3Play** no pudo haber llegado en un mejor momento para el canal de Deportes de **YouTube**. Una convergencia de tecnologías, economía y equipos de producción fáciles de usar lo está haciendo posible para cada liga deportiva imaginable, desde las locales del boliche, pasando por los programas deportivos colegiales y universitarios hasta las ligas deportivas profesionales y cadenas de TV para alcanzar audiencias, extender su respectiva marca y generar ingresos en línea. **YouTube** está a la vanguardia de impulsar las tecnologías necesarias para webdifundir contenido a una gama de aparatos, desde televisores inteligentes hasta teléfonos móviles.

«Creo que hemos alcanzado ese interesante punto óptimo en el tiempo, cuando el ancho de banda va bajando en precio y se está volviendo más asequible y el costo de crear una producción decente y el nivel de conocimiento también vienen bajando» destacó **Tobin**. «Creo que la producción de deportes en video es la próxima frontera aún sin explotar de la Internet. Mientras seguimos reduciendo los costos y mejorando la calidad, creo que veremos momentos cada vez más interesantes», concluyó.

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AVID

Visión estratégica con Avid Everywhere



Louis Hernadez Jr., Presidente y CEO de Avid

La compañía exhibirá el entorno de distribución y producción de media más abierto, integrado y flexible de la industria.

Con Avid Everywhere, se encontrarán maneras eficientes, colaborativas y rentables de conectar a las organizaciones de medios y a los profesionales creativos con sus audiencias. EL producto entrega flujos de trabajo dinámicos -desde la creación de medios a la monetización- con una mayor flexibilidad, posibilidad de elección y seguridad que nunca.
A través de Avid Connect, se llevarán a cabo valiosas sesiones de aprendizaje. Empresas de investigación independientes compartirán su visión de la industria y sus experiencias, asociados tecnológicos mostrarán sus últimos plug-ins y Avid y sus socios comentarán las exitosas historias de implementación de productos a gran escala. Las sesiones educativas más esperadas, que han sido anunciadas por la empresa, son Video Everywhere, Audio Everywhere y Broadcast Everywhere.

En esas sesiones, los asistentes aprenderán sobre los siguientes puntos:

Video Everywhere: las últimas innovaciones tecnológicas, inspiradas por Avid Everywhere, que han resuelto retos actuales y futuros de flujos de trabajo de postproducción. Se verá cómo acelerar y gestionar la ingesta, y cómo los avances en la orquestación del flujo de trabajo y los metadatos pueden acelerar la producción. También, cómo editar en la nube, descubriendo más formas racionales de trabajo que establecen el punto de referencia para la colaboración a distancia en tiempo real. Finalmente, se desmitificará el 4K, trabajando en alta resolución con el uso de infraestructura existente y a partir de inversiones en la más reciente tecnología.

Audio Everywhere: se advertirá cómo es posible resolver ahora y a futuro los problemas de flujo de trabajo de producción de audio. Para ello, el profesional deberá monetizar sus medios. Con Avid Everywhere, podrá aprender aquello que está disponible para ayudar a los usuarios de Pro Tools a que licencien y vendan su música con mayor facilidad. Además, la colaboración en la nube será clave. Se accederá a un repaso de cómo los usuarios de Pro Tools colaboran con otros usuarios en ese entorno. Incluso, se conocerá cómo se realizará la mezcla del futuro, con las últimas tecnologías que han mejorado la mezcla para los formatos de televisión y de cine de la próxima generación.

Broadcast Everywhere: se obtendrá una mirada en profundidad de la forma en que Avid Everywhere resuelve los desafíos asociados con el flujo de trabajo broadcast. Primero, se conoce la plataforma, recibiendo una descripción técnica completa de la plataforma en la que se construye la visión del Avid Everywhere. Además, se lleva al dispositivo móvil, permitiendo conocer cómo las últimas soluciones permiten a los periodistas crear un contenido de noticias convincente allí donde las noticias se están produciendo. A la vez, se entrega en todas partes, y se aprende a simplificar la complejidad de llegar al actual público multipantalla a través de la distribución multiplataforma.



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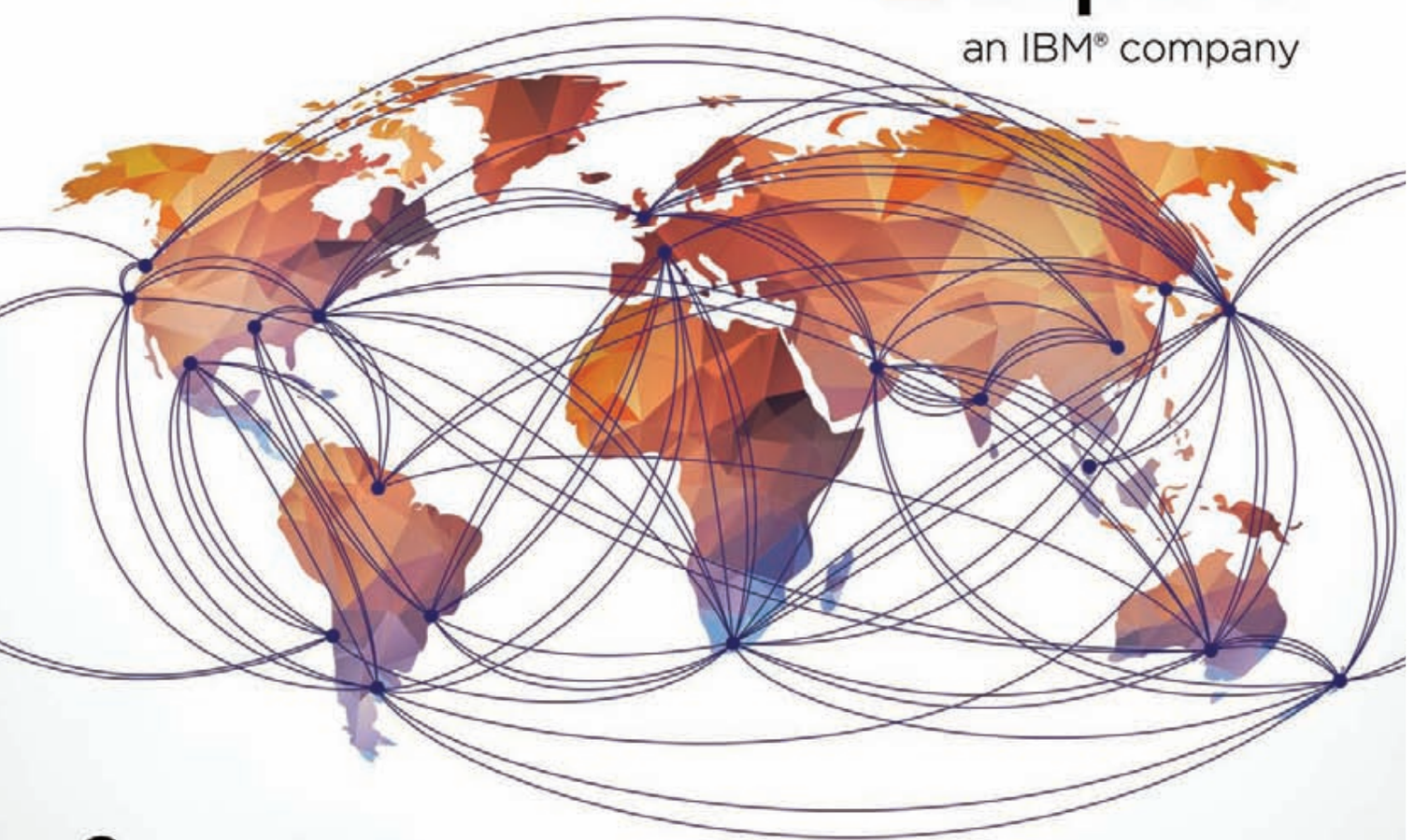
Donde quiera que este tu contenido: en la nube, en tus instalaciones o al otro lado del planeta, el software de Aspera permite el acceso, ingesta, conversión, almacenamiento, sincronización, entrega y distribución con la mayor rapidez, y sin restricciones.

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25º ANIVERSARIO SONY PSLA

Desde Miami para Latinoamérica

La empresa surgió como una división de Sony Corporation de Panamá. El 2 de mayo de 1988 fue trasladada a Miami para centralizar sus operaciones en Latinoamérica y el Caribe, siendo bautizada con el nombre de Sony Broadcast Export Corporation (SOBEC). Inicialmente, la compañía se concentró únicamente en productos tecnológicamente avanzados para el mercado de transmisiones radiales y de televisión. La distribución se realizaba a través de representantes autorizados en el continente.

Sin embargo, con el transcurso de los años extendió su oferta al mercado profesional con un acercamiento más diversificado, conocido como Empresa & Aplicación (Business & Application), lo cual trajo como resultado la ampliación de sus operaciones, requiriendo el establecimiento de un nuevo canal de distribución especializado.

Debido a la gran importancia de los productos profesionales de Sony, a partir de 1998 se la denominó como Sony Broadcast & Professional Latin America (BPLA); y ya a partir del 2011 se recibió su nombre actual Sony Professional Solutions Latin America (PSLA), que refleja de una manera más fiel los productos y servicios ofrecidos, al igual que identifica más claramente los países donde opera la empresa.

En la actualidad, con 25 años de trayectoria y oficinas centrales en Miami, Florida, es el proveedor líder de equipo de tecnología avanzada para teledifusores y otros usuarios profesionales. Como parte de Sony Latin America Inc. (SOLA), Sony PSLA se dedica a la venta, la comercialización y la atención al cliente de una amplia gama de productos profesionales, que son distribuidos a través de toda Latinoamérica y el Caribe.

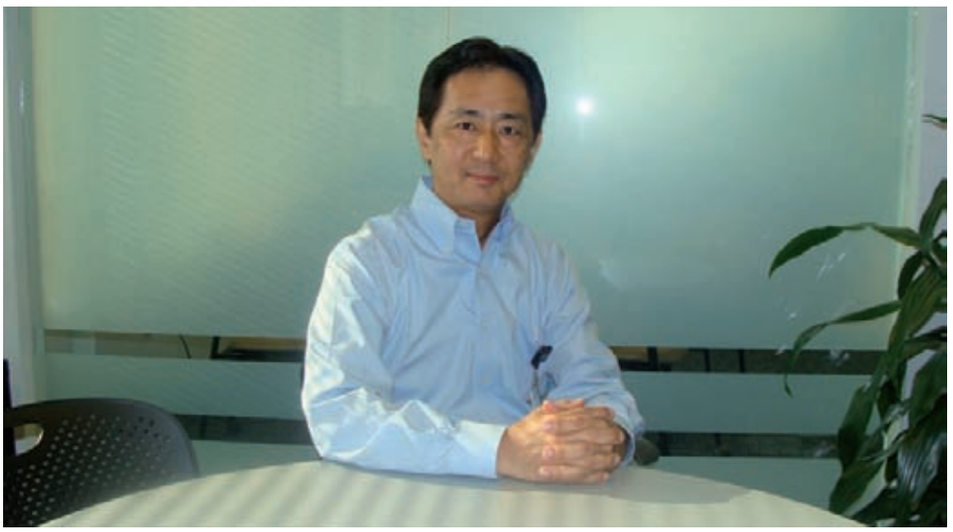



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SEIICHI YAMAMOTO, PRESIDENTE DE SONY LATINOAMÉRICA

«Proporcionaremos las mejores soluciones y servicios también en los próximos 25 años»



Sostiene que el negocio de la televisión en América Latina ofrece oportunidades de crecimiento, que Sony continuará proveyendo a sus clientes del equipamiento que necesitan y que Sony PSLA continuará profundizando la confianza para continuar siendo el mejor socio del mercado profesional.

¿Cuál es su reflexión sobre el 25º aniversario de Sony en América Latina?

Es una fecha para celebrar. Nuestra historia en América Latina se basa en nuestro poderoso canal de distribución, incluyendo nuestros representantes y distribuidores locales. Al mismo tiempo, estamos orgullosos de la relación continua que hemos establecido con nuestros clientes, que vienen utilizando nuestros productos profesionales en estos últimos 25 años. **Sony** ha liderado y continuará siendo el líder del mercado a partir de la confianza que nuestros clientes nos depositan. Proporcionaremos las mejores soluciones y servicios también en los próximos 25 años.

¿Cómo se está preparando la empresa para enfrentar los retos tecnológicos que genera la distribución de contenidos a través de múltiple plataformas?

Seguimos ofreciendo no sólo productos de alta calidad, sino también tecnología innovadora que permite a nuestros clientes ubicar contenidos en diversas plataformas. Este año, por ejemplo, estamos avanzando en nuevos codecs de video (XAVC) tanto para aplicaciones de video profesional como de consumo. Eso permitirá a nuestros usuarios disfrutar de contenido de video 4K en la producción de cine y televisión de alta gama. A la vez, podrán deleitarse con estas producciones en sus viviendas entregadas a través de múltiples plataformas con cuatro veces la resolución del HD, todo mediante nuestra promesa 'Lens to Living Room' (De la lente a la sala de estar). Estos usuarios buscan la máxima calidad. Incluso a los clientes que usan los productos del equipo profesional de **Sony** les seguimos brindando una solución rentable y fácil de usar. Así, las plataformas múltiples para la entrega, tales como multi-en TV/BD y DVD/WEB, y la transición a HD desde SD en el pasado, está disponible en nuestras soluciones 4K 'Lens to Living', que, desde **Sony**, se combinarán con el equipamiento del consumidor.

¿Cuál es su proyección respecto a las oportunidades de negocio para PSLA de cara al futuro?

Durante los últimos 25 años, el negocio de **Sony** ha crecido con la expansión de nuestro mercado. El negocio de la televisión en América Latina ofrece oportunidades de crecimiento a medida que la transmisión digital terrestre se acelera en muchos países. Esto nos dará oportunidades de entregar al mercado productos adicionales de producción HD y hasta 4K, y de generar una mayor apertura del mercado en el lado de los consumidores. **Sony** tomará esta oportunidad como una gran chance de colaborar con el negocio de los consumidores.

¿Cuál es su visión de Sony a nivel global para los próximos años?

En el ámbito de los negocios profesionales, **Sony** continuará proveyendo a sus clientes del equipamiento que necesitan. Asimismo, estamos ampliando los servicios que requieren para mejorar sus negocios ahora y en el futuro. **Sony PSLA** seguirá construyendo a partir de la asociación y la confianza que hemos establecido con nuestros clientes. Siempre estaremos del lado del mercado y de los consumidores. Procuraremos continuar siendo buenos socios en el mercado profesional.

Desde Bolivia

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LUIZ PADILHA, VP EJECUTIVO DE MARKETING Y VENTAS PROFESIONALES DE SONY PSLA Y SONY BRASIL

«La compañía ha sido muy seria y comprometida con su labor profesional»

¿Qué reflexión le merecen estos 25 años de vida de Sony PSLA?

Si bien no he estado en **Sony PSLA** desde sus inicios, siempre estuve muy próximo en todo lo que respecta al trabajo estratégico de mercadeo desarrollado desde Miami. Este 25 aniversario encuentra a la compañía en una etapa donde ha alcanzado un desarrollo y un crecimiento muy fuerte en toda la industria profesional. Recuerdo que cuando conmemoramos el 20 aniversario, estaba al frente reportándome a la estructura americana que por entonces conducía ***John Scarcella***. Desde entonces **Sony PSLA** se propuso ultrapasar sus límites con una fuerza muy grande basada en la altísima competencia profesional de sus integrantes. Muchos de ellos formados en la compañía, lo que constituye una demostración inequívoca del gran legado que tiene y que constituye su potencial de trabajo. A lo largo de todos estos años, y pese a los diversos cambios de la conducción, la compañía ha sido muy seria y comprometida con su labor profesional. Y esto siempre se ha visto reflejado no solo en la relación con los clientes, sino también con nuestros representantes, que son los verdaderos socios de los negocios de **Sony** en la región.

A lo largo de todos estos años en los que estuvo al frente del mercadeo de Sony PSLA, ¿qué línea de productos y qué hitos fueron los que marcaron el rumbo de los negocios?

Sony tiene una historia y una tradición vinculada al desarrollo de tecnología de vanguardia, razón por la cual fue quién definió el padrón y los formatos del mercado internacional. Esto se ha visto reflejado también en América Latina donde ciertos padrones de formatos de video fueron estandarizándose para toda la región. A la hora de puntualizar productos recuerdo hitos como el U-Matic, el Betacam SP, el Betacam digital, el formato de una pulgada, el XDCAM EX, todos ellos rápidamente se fueron transformando en estándar de la industria. Sin embargo, creo que uno de los hitos más significativos quedó marcado a fuego con la entrada de **Sony** como un gran *player* en el área de cámaras, que por entonces eran de tres tubos. Otro vuelco importante lo tuvimos con la entrada al mundo de los switchers, que implicó grandes cambios incluso dentro de la propia estructura de la compañía por lo que implicó su seguimiento en el mercado.

Destaca esto siempre se ha visto siempre reflejado no solo en la relación con los clientes, sino también sus representantes, a los que reconoce como los verdaderos socios de los negocios de Sony en la región.



Evidentemente, si hay algo que no se puede soslayar es que la revolución digital marcó un punto trascendental en esta última década para toda la industria de la televisión mundial. Y de su mano, el gran momento de HD que ya comienza a establecerse con gran propiedad en todos los países.

Ahora el nuevo desafío es la tecnología 4K y **Sony** vuelve a tomar la iniciativa. Como anunciáramos durante **SET Broadcast & Cable**, ya está definido que algunos partidos de la **Copa FIFA 2014** serán transmitidos en 4K. Todavía no sabemos cuántos y cuáles, pero las pruebas fueron superadas con éxito. Por eso, la empresa lanzó recientemente al mercado su línea de televisores para consumo doméstico; resta ahora que los productores de contenido comiencen a adoptar la tecnología, que es fantástica. Hasta ahora, la receptividad del 4K está muy por encima de lo que nosotros esperábamos ya que ha logrado un impacto y un retorno por parte de los consumidores muy alto, pese a que no existe mucho contenido en 4K.

¿Cómo avizora el futuro a Sony en la región?

Sony está muy bien posicionado en Latinoamérica no solo en cuanto al volumen de operaciones y de negocios, sino que también está cumpliendo muy satisfactoriamente con su labor de mercadeo. Este es un factor fundamental para poder brindar a sus clientes soluciones tanto a nivel de tecnología, como de negocios y diseño. Soluciones completas, de eso se trata, porque la tecnología ha avanza muy rápidamente y su renovación es constante y muy dinámica. Sobre este tipo de enfoque se basa el reconocimiento de los clientes y el claro liderazgo que mantiene en la región.


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HUGO GAGGIONI, CTO DE LA DIVISIÓN BROADCAST & SISTEMAS DE PRODUCCIÓN DE SONY ELECTRONICS

«El 4K será uno de los pilares fundamentales de los próximos años»



Sostiene que el futuro de la TV por aire es creíble y esperanzador en Latinoamérica; mientras en Norteamérica y Europa avanza la distribución por IP. Afirma que el contenido seguirá siendo el rey y esto creará nuevas oportunidades para las casas de producción y creación de contenido como nunca se ha visto antes.

¿Qué reflexión le merecen estos 25 años de vida de Sony PSLA?

Muy orgulloso de estos 25 años, en un entorno con una fuerte competencia. Tenemos productos en todas las instalaciones de Latinoamérica con un continuo crecimiento, penetraciones más profundas, servicios más completos y soluciones mucho más amplias. Mientras los mercados norteamericano y europeo están siendo saturados, el mercado latinoamericano sigue creciendo muy rápidamente con oportunidades como el Mundial de Fútbol y los Juegos Olímpicos, que representan niveles de negocios bestiales para presentar las nuevas tecnologías. El 4K será uno de los pilares fundamentales de los próximos años; también las operaciones basadas en archivo para tener sistemas de televisión HD y la transmisión IP. Estamos muy contentos de trabajar con los grandes broadcasters.

¿Qué línea de productos le ha dado más satisfacciones a lo largos de todos estos años en la compañía?

Es difícil de contestar porque en ese período hubo muchos cambios tecnológicos. Puedo argumentar que el Betacam SP fue el producto que más alegrías dejó a **Sony** dentro del mundo analógico, junto al Triniton de televisión, tanto casera como profesional. Al realizarse en 1992 la transición al digital, el Betacam Digital se convierte en nuestro caballo de batalla y lo mismo hace el HDCAM SR en el traspaso al HD. Depende la tecnología, hubo diferentes productos en este período que nos dieron muchas alegrías.

¿Cómo avizora el futuro a Sony en la región?

Hay un cambio en el mundo bastante incierto como el futuro de distribución de las señales de entretenimiento y media en general. Sin embargo, los eventos deportivos son fundamentales ya que atraen una gran masa de espectadores. El futuro de la televisión por aire es creíble y esperanzador en Latinoamérica; mientras en Norteamérica y Europa avanza la distribución por IP. Al haber varios caminos de distribución, el contenido seguirá siendo el rey y esto creará nuevas oportunidades para las casas de producción y creación de contenido como nunca se ha visto. Ahora la transición hacia sistemas de cinematografía 4K creará otras fuentes de oportunidades.



Felicidades por estos primeros 25



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ANDREW NELLS, GERENTE DE VENTAS SÉNIOR DE SONY PSLA PARA AMÉRICA CENTRAL, AMÉRICA DEL SUR & CARIBE

«Sony seguirá avanzando tanto en cine como en producción»



Avizora que la evolución vendrá de la mano del 4K, a la que considera una realidad en cine, y destaca que en los próximos años se generarán muchas más producciones para televisión.

¿Qué reflexión le merecen estos 25 años de vida de Sony PSLA?

En estos 25 años en **Sony** he hecho muchos amigos con los que compartí buenos tiempos y de los que tengo buenos recuerdos. También realizamos buenos negocios en la parte de tecnología en este tiempo comenzando por la Betacam, que era el rey de la tecnología, y hoy ya estamos hablando de productos 4K. En este proceso en el tiempo se redujeron mucho los presupuestos que fueron un beneficio para la industria, ya que aportaron enormes cambios tecnológicos y grandes prestaciones. Esto generó mejoras en las producciones alcanzando una alta calidad y democratizaron el terreno con equipos económicos y buenas prestaciones al alcance de más compañía y personas.

¿Qué hitos de la compañía recuerda y cuáles marcarán el rumbo del futuro a nivel tecnológico?

De la mano de los productos de bajo costo, la revolución llegó con la introducción de la línea HDV que dio comienzo a la era de la alta definición. Muchos productores pequeños comenzaron a trabajar con esta línea, realizando producciones increíbles a bajos costos tecnológicos. La evolución vendrá de la mano del 4K, que ya es una realidad en cine y en los próximos años se generarán muchas más producciones para televisión. Este será en gran salto de tecnológico.

¿Cómo avizora el futuro a Sony en la región?

Si bien es difícil pronosticar el futuro, **Sony** seguirá avanzando tanto en el área de cine y producción con la creación de más herramientas para la industria. El próximo salto para la producción estará en televisión y la expansión en el área de cine latinoamericano.



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Felicitamos a Sony PSLA por sus 25° aniversario

y le damos las gracias por continuar
con su visión histórica de atender
al mercado de Latinoamérica con recursos propios,
capacitando a sus representantes y distribuidores.

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1) ¿Qué reflexión le merecen estos 25 años de vida de Sony PSLA?
2) ¿Qué producto de Sony le ha provocado mayor atractivo?
3) ¿De qué manera ve el futuro para Sony?

Daniel Mc Donald
Gerente de Soluciones de Sistemas de Sony PSLA



1) Para **Sony PSLA** es un gran honor poder tener una presencia tan fuerte en el mercado de broadcast y contar con un equipo de representantes que tienen hasta más años en la industria de cuando Sony tenía su matriz principal en Panamá. Para mí, en lo personal, estoy muy orgulloso trabajar desarrollando soluciones con tecnología nueva y liderar la industria.
2) Indudablemente, el Walkman.
3) **Sony** continuará siendo un gran líder de tecnología e innovación.

Juan Pablo Garza,
Gerente de Cuentas para la Región Sur de Sony PSLA



1) Me considero actor y testigo de estos 25 años de intenso trabajo en donde **Sony** siempre se ha destacado por su gran innovación y calidad.
2) Definitivamente, el deck modelo DVWA500 Betacam Digital el cual vi nacer dentro de la empresa; y también el Jumbo Tron que me dio la oportunidad de manejar proyectos muy diversos en la industria.
3) **Sony** seguirá trabajando en base a los últimos desarrollos tecnológicos para crear productos y soluciones únicos pero lo más importante es que seguirá con su política de estar siempre cerca del cliente.

Fernando Cruz
Gerente de Cuenta para la Región Norte de Sudamérica de Sony PSLA



1) He estado 15 de estos interesantes 25 años que cumple la compañía en la región, y he visto tecnologías muy interesantes para la región, que han estado a la vanguardia tecnológica.
2) Varios productos han cambiado la tecnología. Al estar muy involucrado en el producto, el disco óptico ha sido clave por la manera de grabar y poder ser manejado como casi una cinta, causando una sensación y aceptación en América Latina. Esto me generó mucho orgullo al ser gerente de ese producto en la región.
3) **Sony** está muy bien posicionado en el mercado del broadcast y tecnología. Estamos con productos muy interesantes en las líneas de 2K y 4K y otros productos próximamente a ser lanzados para muchos usuarios. Tecnológicamente y tras el lanzamiento del disco óptico, cambiará de manera total en que se archiva con productos que modificarán la regulación y será una generación muy interesante para el usuario.

Beatriz Pineda
Gerente de Producto de Producción en Vivo y Monitores de Sony PSLA



1) En estos 25 años nos hemos mantenido como líderes en la industria y seguimos en el tope en todos los países de Latinoamérica, al igual que en el resto del mundo.
2) Si bien estoy en **Sony** hace cinco años, llevo más de 15 años en televisión. Desde que estoy en la industria el cambio más importante es la transición hacia el HD, que fue un proceso muy largo en que **Sony** se ha mantenido a la vanguardia con la incorporación de nuevas tecnologías: HD, 3D, 2K, 4 y 8K. Por eso la compañía siempre ha estado en el tope de la tecnología, creando nuevos productos para mantenerse en primera fila.
3) **Sony** es una compañía como ninguna otra que está en todas las áreas abarcando muchos y diferentes mercados. Ofrece todas las áreas como ingesta, producción y display, por lo que se puede equipar una compañía brindando equipos de la mejor tecnología y calidad en todas las áreas: profesional, video e industrial, en que cada uno pueda realizar exitosamente el trabajo o proyecto.

Felicia Travaillot
Marketing & Comunicación de Sony PSLA



1) No me sorprende que estamos celebrando los 25 años de Sony. Es una marca emprendedora que lleva mucha historia en todo el mundo. El trabajo arduo de la personas que han estado y contribuido, tanto como empleados de Sony como nuestro canales, desde el principio se demuestra y la misma marca se destaca por si misma por ser tan valiosa. Estoy segura que vamos a seguir teniendo muchos años más de éxito.
2) Para mí las nuevas cámaras innovadoras son las que me captan la atención. Las cámaras 4K de cinema digital están cambiando el panorama de Broadcast. No sólo en la parte de digitalización, sino también en la parte de calidad de imagen. Es increíble ver las tecnologías que Sony saca siempre. Empezando en sus primeros anos, siempre estuvo Sony delante de la tecnología con lo más avanzado.
3) Sony seguirá siendo una marca que no descansa. Siempre estará el frente de las nuevas tecnologías para ofrecer a nuestros clientes los mejores productos y soluciones. Lo más importante para Sony es mantener una relación excepcional con sus clientes y estoy segura de que si lo continuara.



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Tres ingenieros
que destacaron en los inicios

Eran jóvenes profesionales que hace 25 años ingresaron como Ingenieros de Soporte del Departamento de Ingeniería de Sony Broadcast Export Corp.

Edel García



«Inicie mi carrera profesional en **SOBEC** al graduarme de la universidad (FIU) como ingeniero electrónico. Entre a **Sony** como Ingeniero de soporte cuando ellos mudaron su operación desde Panamá a Miami. Junto a **Alfredo Vincenty** y **Juan Punyed** entramos a montar el departamento de ingeniería debajo de **Armando Inshirmaru**, quien comenzó su carrera en **Sony Brasil**. Nuestro rol fue el apoyo e entrenamiento técnico de los resellers.

Sony me dio la oportunidad de entrar a esta industria al igual que a muchos otros profesionales de la industria hoy basados en Miami. En esos entonces muy pocas empresas en nuestra industria tenían sus operaciones para Latinoamérica en Miami. **Sony** fue líder en establecer a Miami como el lugar ideal para operar una sede principal para la región. La experiencia que obtuve y amigos profesionales que conocí durante mis 10 años en **Sony** me permitió crecer profesionalmente. Debo mi carrera a **Sony**.

Desde iniciar sus operaciones en Miami **Sony** le dio grande importancia al soporte técnico dedicado a la región. El éxito en Latinoamérica para cualquier empresa en nuestra industria depende mucho del nivel de apoyo técnico que pueda ofrecer a sus clientes y resellers. En mi opinión, **Sony** mostró desde el fin de los 80's que Latinoamérica no era solo una región más de los EE.UU. si no una región con sus propias necesidades y forma de trabajar que merecían una inversión importante en tener recursos dedicados a ella.»



Uno de los primeros entrenamientos con REPS en Miami. Se Juan Punyed, Edel García, Alfredo Vincent, Eduardo De Nucci y Ricardo Ríos, entre otros.



Armando Ishimaru, Juan Punyed y Michael Chin con sus esposas; la esposa de Edel los hijos de Juan, el hijo mayor de Edel, Alfredo Vincent y Edel García.

Juan Punyed



SONY

LA REVOLUCIÓN EN AUDIO PROFESIONAL HA COMENZADO

La nueva generación de la serie UWP incorpora un novedoso sistema de procesamiento digital de señal de alta calidad desarrollado por Sony, garantiza un sistema estable de transmisión inalámbrica utilizando un sistema de recepción de diversidad real y opera en un ancho de banda de hasta 72 MHz permitiendo mayor cobertura y mayor disponibilidad de canales. Además contiene características importantes como: ajuste automático de canales, alimentación y carga de baterías vía USB, entrada de línea, chasis de metal y salida de auriculares para monitores.





Serie UWP





Juan Pablo Garza, Edel García, Carlos Agusto Yhama, Alfredo Vincenty, Juan Punyed y Peter Hendrix durante NAB 2012.

«Los 25 años de Sony en Latinoamérica son especiales puesto al ser mi primer empleo y unos de los primeros que trabajó en la empresa, que se denominaba ***Sony*** **Broadcast Export Corporation** (**SOBEC**). Comencé como ingeniero de soporte dedicado a toda la parte de audio y estando a cargo de productos como las primeras máquinas *U-matic* y los primeros equipos *Betacam*, en que quería expandir el conocimiento que había traído de Japón a toda Latinoamérica, mientras la tecnología cambiaba fuertemente. Teníamos mucho trabajo y tuvimos la oportunidad de trabajar con excelentes colegas de la industria, donde vimos crecer, madurar y expandir los formatos que se hicieron estándares en la industria. Las cosas cambiaban cada 20 años pero se redujeron los tiempos drásticamente en los últimos años y ahora se avanza tecnológicamente cada dos o tres años, dependiendo de la industria. Hemos sido parte del grupo que estuvimos en una empresa que es sólida y lidera Latinoamérica. Es difícil mantenerse en primer lugar porque tener la marca no garantiza la venta sino que se debe estar detrás del producto, los servicios y ofreciendo los mejores precios para salir adelante. Haber visto los formatos nos han marcado en todo estos años. Luego en la empresa, personalmente di un salto hacia el área de sistemas el paso por la empresa pasó a sistemas, donde realicé una venta de un sistema de televisión en las islas del Caribe y estuve a cargo de llevar un listado de productos y asegurarme que todo quedara en marcha. Por último, el paso a ventas donde siempre es complicado generar importantes acuerdos comerciales y mucho peor cuando los clientes son amigo, pero uno se lleva una gran impresión al ganar una negociación con estos, al igual que aquellos que se los convence pasar a utilizar **Sony** y dejar otra marca.»

Alfredo Vincenty



«Mi estadía en **Sony** fue una gran experiencia laboral y personal. Fue mi entrada a esta gran industria de television y radio. Aprendí de las personas que me rodearon y con los cuales compartimos. Entramos aprendices y salimos ejecutivos. Viajamos mucho y conocimos personas extraordinarias que indudablemente quedan en mis memorias. Han pasado muchos años desde que me fui, pero nunca olvido.



La mirada de los REPS de América Latina

Son los representantes de Sony en diversos países de Latinoamérica, representan la fuerza de venta que la compañía posee en la región. Lo que sigue es la palabra de los hacedores de negocios de la compañía.

1) ¿DESDE CUÁNDO REPRESENTA A SONY EN SU PAÍS? ¿QUÉ RELACIÓN UNE A SU EMPRESA CON SONY PSLA Y QUÉ SIGNIFICA PARA SU EMPRESA SER RESELLER EN SU MERCADO?

2) ¿QUÉ REFLEXIÓN LE MERECE ESTE 25 ANIVERSARIO DE LA COMPAÑÍA EN LA REGIÓN?

3) A TRAVÉS DE TODOS ESTOS AÑOS, ¿CUÁL HA SIDO LA LÍNEA DE PRODUCTOS SONY QUE MÁS SATISFACCIONES LE HA DADO?

4) ¿CUÁL ES EL SHARE DE NEGOCIOS QUE TIENE CON LA MARCA SONY EN SU TERRITORIO?

ARGENTINA
Eduardo De Nucci de Videtec



1) Para nosotros es muy difícil hablar de Sony porque hay una historia de familia. Sony fue la excusa a través de la cual nació Viditec como su representante hace más de 30 años, cuando su línea profesional estaba integrada por unos diez productos. Desde que estaba en Panamá, el presidente Takamatsu tenía la visión de estar en Latinoamérica, atender al mercado con recursos propios y capacitar a sus representantes y distribuidores. Esa visión se ha prologado hasta nuestros días, también desde que Sony se instaló hace 25 años en Miami.

2) A lo largo de todos estos años la compañía creció exponencialmente tanto en variedad como en complejidad de productos, pudiendo pasar de ocupar la tercera o cuarta posición en el mercado broadcast a liderarlo indiscutidamente. Esto fue así tanto en cámaras, switchers, y camcorders, como en monitores y media de grabación; lo mismo ocurrió con las tecnologías de compresión, de grabación y display, donde si no fue líder único, ha estado en el pelotón de los líderes. Entonces, aquí el éxito parece venir de la mano de dos factores combinados: la visión de Sony y el talento de la fábrica. Para Viditec, los años de trabajo con Sony han sido muy buenos ya que hemos aprendido mucho a nivel de tecnología, nos han capacitado mucho a nivel técnico y por eso seguimos muy firmes manteniendo una relación que no solo es la más antigua sino también la más fuerte.

3) A nivel de mi propia experiencia, considero que hubo muchos hitos en Argentina. Recuerdo que en su momento hubo una batalla muy grande en torno al formato de una pulgada analógico, cuyos players eran AMPEX y Bosh, mientras que Sony aparecía como un producto secundario. Se trataba de una máquina compleja como la BVH-1100; después sacó la BVH-2000 y la BVH-3100, que no solo lideraron el mercado sino que se transformaron en best sellers. Por entonces, tuve la suerte de estar en la parte técnica, recibir todas las capacitaciones y ser el responsable de la venta técnica del producto. En la era del U-Matic también hubo mucha competencia con JVC y Panasonic, pero cuando Sony salió con el Betacam SP para el mercado argentino explotó. Otro de los productos que dio muchas satisfacciones ha sido el Betacam Digital, que en la Argetina vendió 600 máquinas que valían unos US$50 mil. Fueron momentos donde las propuestas tecnológicas de alto nivel de Sony tenían muy buena aceptación en el mercado. También fuimos los que vendimos más el Betacam SX en todo el país. En lo que respecta a cámaras de estudio, recuerdo que en los inicios los fabricantes que lideraban el mercado ofrecían cámaras con tubos de una pulgada y Sony siempre estuvo en 2/3, pero cuando sacó la primera cámara práctica y económica, comenzó a darse vuelta el mercado y de nuevo pasó de ser de segundo o tercero a ser el primero en todo el marcado de cámaras y en todas las categorías.

Otro muy buen producto fue el primer editor A/B BvE-900 de Sony en un momento en el que el mercado empezó a incorporar islas de tres máquinas y empezó a ser común que eso fuera así tanto en los canales como en las productoras. Con los switchers hubo una pelea atroz, Sony no existía porque solo tenía para producción



de bajo costo y de repente lanzó la familia 2000 y la 5000 en componentes digitales y a partir de ahí y hasta hoy con 5 generaciones de switchers que ganaron el mercado. También hubo algunos fracasos, algunos productos que no cumplieron las expectativas, pero por suerte fueron pocos. Hay anécdotas con los editores no lineales de Sony como el Destiny que nunca funcionó en nuestro mercado; hubo un switcher generador de efectos, DME-450 que era muy económico y tenía muchos efectos pero eran en un solo sentido, siempre se iban pero nunca volvían.
Hay algo que ocurre claramente con Sony: cuando el cliente compra percibe claramente que adquiere un producto de calidad, y por lo tanto no acepta que tenga fallas. Esta es una exigencia muy grande para Sony.

4) Respecto al futuro inmediato, Sony se impondrá con la tecnología 4K. Más allá de que los productos son muy recientes, está claro que el mercado ha comenzado a verlos, a probarlos y a realizar sus primeras experiencias con un nuivel de aceptación muy importante. De manera que la expectativa es alta, tal es así que estimo que en un lapso de tiempo no mayor a los doce meses Sony va a estar liderando el mercado.

BOLIVIA
Luis Fernando Arze Chavez de Arze Asociados S.R.L.



1) **Arze** Asociados S.R.L. trabaja en Bolivia junto a Sony desde el año 2001 y durante todos estos años nos une una relación tecnológica y comercial del más alto nivel; con los desafíos constantes y continuos del desarrollo tecnológico de Sony y la responsabilidad empresarial que significa seguir esas tareas, con la preparación de nuestros profesionales y la transferencia de conocimiento a nuestros clientes en el país. Ser un Reseller de Sony en Bolivia, al margen del respaldo de la marca, significa una responsabilidad con nuestro mercado.

2) Para toda empresa es un desafío cumplido el poder llegar a los 25 años de vida, que muestran la responsabilidad asumida en la fundación, que en el caso de Sony PSLA a pesar de los cambios de nombre durante estos 25 años, la esencia de la empresa se a mantenido en el servicio a Latinoamérica y el Caribe.

3) Para nuestro mercado los productos que siempre han estado presente en Bolivia, son las cámaras de estudio, camcorders y videograbadoras, en los diferentes formatos que la tecnología ha manejado durante estos años. En algunos años también fueron muy usados los monitores de video.

4) Para Arze Asociados S.R.L. todas las empresas que representamos tienen la misma importancia y responsabilidad, sin embargo en términos comerciales Sony representa el 50% de los negocios realizados por nosotros en el mercado boliviano.

CHILE
Francesco De Ambrogio de Videocorp



1) Videocorp representa a Sony en Chile desde 1983. La división Broadcast & Profesional de Videocorp es una de las más importantes entre todas sus áreas de trabajo, porque fue justamente con ésta con la cual se dio inicio a la compañía hace 30 años, gran parte de los cuales ha sido representante de Sony para Chile.

2) Para Videocorp representa todo un orgullo, un desafío, una oportunidad y una enorme responsabilidad.

3) Es muy difícil, pero no hay dudas que tres de los más importantes hitos han sido el Betacam y las líneas DVcam y HDV.

4) Se sabe que anualmente, en el marco de NAB, Sony hace un reconocimiento al mejor distribuidor de América Latina. Este año, Videocorp y su división Broadcast fueron galardonados con el Premio Shogun. Es que en Chile estamos a los canales en el proceso de digitalización no solo como proveedores de tecnología, sino también a la hora de escoger cuáles son las mejores opciones para la empresa. El premio reconoce justamente la relación del proveedor con sus clientes. En los últimos años, Videocorp se ha preocupado por profesionalizar todas sus áreas de negocio, para ya no solo dedicarse a la venta de equipos sino ofrecer un servicio postventa, con personal calificado que permita a los clientes contar con un acompañamiento en sus proyectos, además de contar con servicio técnico.

COLOMBIA
Carlos Cuadros de La Curacao



1) Somos representantes de Sony para el mercado broadcast desde hace 35 años aproximadamente.

2) La reflexión que tenemos para el aniversario 25 de Sony consiste en la necesidad de reacomodarse a las nuevas reglas del mercado donde la presión de nuevas tendencias tecnológicas de bajos costos de producción están cautivando los mercados tradicionales, adicionando el hecho que también los cambios generacionales exigen mantener variables de calidad, movilidad y precios competitivos, al igual mantener un servicio altamente profesional y de reacción casi que inmediata.

3) En realidad todas las líneas de productos Sony han sido exitosas y generan una enorme satisfacción en sus respectivas épocas pasando desde 3/4",1",DVCAM, BETACAM y XDCAM, las cámaras tanto de reportería y de estudio han sido absolutamente exitosas, sin olvidar la línea de monitores y micrófonos. Nos sentimos muy orgullosos de ser participes activos en todo este proceso a lo largo de estos 25 años, donde es notoria la creatividad e ingenio que aporta tecnologicamente Sony a la industria del broadcast.

4) En la globalidad de cámaras, que incluyen reportería y de estudio, se estima una participación entre el 85 y 90 %.

COSTA RICA
Enrique Somogyi de Sonivision



1) Representamos a Sony desde el año 1977. Han sido 36 años de continuo trabajo de ambas empresas en pro del desarrollo del mercado de video profesional en Costa Rica. Para Sonivisión ha sido un orgullo trabajar con una empresa como Sony que en sus inicios tenía una gama limitada de productos, pero que ha ido creciendo año con año y desarrollando soluciones integrales para nuestros clientes lo que nos ha puesto en una situación de liderazgo en el mercado costarricense.

2) Nosotros formamos parte de región de CEACA (Centro América y el Caribe). Sin lugar a dudas representan 25 años de brindar no sólo productos, sino de haber establecido una red de revendedores y soporte postventa que sin lugar a dudas es la mejor de toda Latinoamérica. Nuestros clientes valoran este nivel de soporte y es lo que ha posicionado a Sony PSLA como un líder en la región.

3) Sin lugar a dudas la línea de Betacam tanto SP como Digital ha sido la línea de productos que ha dejado mayor satisfacción no sólo a los resellers de PSLA sino que a nuestros clientes. Se trató de una línea de productos de excelente calidad y que prácticamente nadie dudaba de la superioridad del producto respecto a lo ofrecido por cualquiera de nuestros competidores. Las diferentes líneas de Betacam se caracterizaron por contar con un nivel de calidad insuperable que permito a Sony y a sus reseller colocarnos como líderes indiscutibles en los diferentes mercados.

4) Actualmente podemos indicar que Sony tiene en promedio un 70% de participación de mercado a nivel de broadcast y profesional en Costa Rica. Las principales estaciones de televisión en Costa Rica depositan su confianza en Sony para la selección de sus cámaras de estudio así como en sus diferentes formatos para ENG y EFP como XDCAM y DVCAM. A nivel institucional el formato NXCAM se ha impuesto gracias a su amplia línea de productos que permite brindar una solución para cada nivel de presupuesto.

ECUADOR
Fabián Landivar de Telecuador C.Ltda.



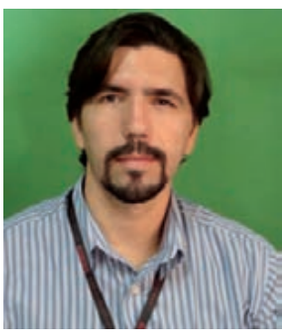
1) Nuestra Empresa Telecuador Cia. Lta., es fundada en el año de 1952 y desde sus inicios ha estado ligada con el desarrollo y avances de la tecnología electrónica, en especial en el área de las comunicaciones, constituyéndose en una de las empresas pioneras en nuestro País en la distribución de equipos para la industria de la televisión. Hemos estado juntos a PSLA desde sus inicios por lo cual nos sentimos muy complacidos y orgullos de representar en nuestro país a una marca tan reconocida y prestigiosa como Sony y nos unimos en esta felicitación a Sony PSLA al cumplir sus Bodas de Plata y les deseamos junto a sus integrantes toda clase de éxitos en el futuro.

2) Podemos afirmar que durante todo este tiempo Sony PSLA ha contribuido y apoyado a todos sus clientes, para el desarrollo sostenido de la Industria de las comunicaciones en la región, incluyendo un servicio de alta calidad a través de una selecta red de distribuidores y ahora contribuyendo y apoyando fuertemente para el cambio tecnológico a la nueva era digital de la televisión.

3) Sony tiene varias líneas de productos exitosos, y las que más satisfacciones nos han dado en nuestro mercado a lo largo de este tiempo han constituido los equipos de grabación y reproducción, y por supuesto los equipos de producción. Las cámaras profesionales Sony se han constituido estándares de la industria en nuestra región.

4) Podemos afirmar que gracias al esfuerzo conjunto con PSLA hemos mantenido un buen porcentaje del mercado profesional en nuestro país.

EL SALVADOR
Jaime Punyed de AVP Broadcast Solutions



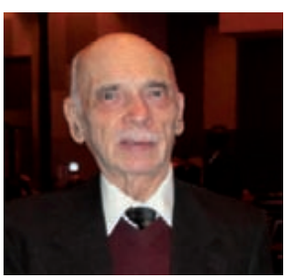
1) Tenemos 8 años de ser representantes de Sony en El Salvador. La marca está muy posicionada a nivel mundial, sus productos son y siempre han ido a la vanguardia de la tecnología. El poder representarla en nuestro país nos compromete con nuestro mercado ya que siendo una marca líder, debe de ser respaldada por una atención al cliente líder también.

2) 25 años dentro de la región significa que no es coincidencia su liderazgo dentro del mercado. Sus productos son de primera clase y sus servicios no se quedan atrás. Son muy conscientes del buen trato con el cliente final, pues son al final del día los referentes primordiales de sus productos.

3) Las cámaras han sido nuestro día a día, sin olvidar todos los productos que gozan de un excelente respaldo por fabrica (PSLA).

4) La marca Sony dentro del share de negocios en El Salvador tiene una posición solida y se mantiene como referencia dentro de nuestro mercado, y es líder en su ramo, su excelente labor de mercadeo, gran satisfacción al cliente y soporte es inigualable.

GUATEMALA
Federico Licht de Broadband Solutions



1) Trabajamos con Sony desde 1982.

2) Para Centro América, que un sistema de Distribución dure 28 años es para celebrar.

3) Sin lugar a dudas, los productos broadcast, especialmente las cámaras de HD.

4) Nuestro share de negocios con la marca Sony en su territorio es del 85%.



HONDURAS
Allen Maldonado de Cocatel



1) Cocatel representa a Sony desde el 2003, año en el cual la compañía nos dio la oportunidad de representar tan prestigiosa marca para el territorio de Honduras. Este acuerdo de representación y distribucion entre Sony y Cocatel, nos permitió crecer más rápidamente, pues se nos abrieron otras oportunidades con clientes importantes en nuestro país, quienes confían en los productos Sony por su calidad y sobre todo por el servicio post venta que Sony - Cocatel brindan. Estamos orgullosos y contentos de representar Sony PSLA en Honduras y todo el team Cocatel se esmera ano con año para satisfacer las necesidades de nuestros clientes y así mantener el estándar de calidad en el soporte post venta que es una tradición en Sony.

2) Nos unimos a las felicitaciones a Sony PSLA por este 25 aniversario, son 25 años de ser líderes en la región y esto demuestra que los productos Sony unen calidad, Innovacion, durabilidad y variedad, pues llegar a ser líderes tiene mucho merito pero lograr mantenerse 25 años siendo líderes demuestra que Sony es una empresa con cultura y tradición de calidad y que continuamente se está reinventando e innovando.

3) Honduras es un país en vías de desarrollo y por tanto los presupuestos que manejan las estaciones de televisión y productoras de video son moderados, por lo que la línea de productos que mas hemos vendido son los productos PVNON, como ser las cámaras HXR-NX5, la HXR-MC2000, y en cámaras de Estudio Con Sony tenemos 2 Cámaras de batalla: la HXC-100 y la HXC-D70, las cuales están siendo solicitadas para los principales canales de television de nuestro país.

4) Cocatel se dedica al suministro, instalación y mantenimiento de equipos de televisión, radio y tecnologías de educación en Honduras y actualmente Sony representa el 35% del total de ventas de la empresa, lo cual es un valor sustancial. Honduras es un país Sony.

MÉXICO
Juan Carlos Medina, Director de Viewhaus



1) Viewhaus es representante de Sony desde el año 2004. Viewhaus es un distribuidor autorizado por Sony Professional Solutions Group división de Sony de México, además de ser un Centro de servicio autorizado para la línea de equipos profesionales. Para Viewhaus desde un inicio representar a Sony ha sido un reto y un orgullo, cuando te dan la confianza de ser socio de la marca líder en la industria y a la que todos aspiran a competirle supone una responsabilidad con el servicio, la excelencia y la calidad que una firma como Sony busca en sus negocios.

2) 25 años se dicen fácil pero lo primero de lo que habla es de Solidez, de ser una empresa que asumió el compromiso de desarrollar su portafolio de soluciones en américa latina y que a la vuelta de estos años lo ha hecho de una manera correcta, buscando no solo generar negocios sino alianzas, de cuidar la continuidad en la región y de ofrecer a sus clientes el soporte local tan necesarios para esta industria. También Sony esta hoy en día ante el reto de seguir demostrando que el líder es aquel que crea, desarrolla y pone a la mano tecnologías de nueva generación y estoy seguro que como en estos 25 años Sony continuará marcando la pauta de la industria tanto en América latina como a nivel mundial.

3) Viewhaus es una empresa relativamente joven y por ello nuestros logros van de la mano con los formatos digitales, Sony dio el gran paso del HDV y nunca podremos olvidar el camcorder que revolucionó y democratizó el formato de alta definición, estoy hablando de la HVR-Z1, más adelante podemos hablar del formato que se convirtió en un estándar y que hoy está muy consolidado, Viewhaus ha sido líder en ventas por varios años de XDCAM EX, cámaras como la PMWEX3 han hecho que Sony deje clara su posición en el mercado. Hoy en día NXCAM y las nuevas apuestas de Sony para el mercado de Cine Digital y 4K nos han dado muchas nuevas oportunidades.

Antonio Casado, Director de Ingenieria de Magnum Soluciones Digitales

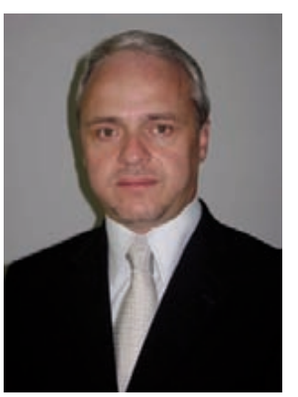


1) Con magnum hace unos anos que estamos trabajando con Sony, pero anteriormente con el Ing. Camacho desde los anos ochentas trabajaban con la marca, por lo que llevamos con mucho tiempo conociendo los productos Sony y ahora con la nueva generación de productos hemos venido realizando un gran trabajo, Sony es una empresa muy grande generadora de tecnología innovadora y ese es el nicho en el que estamos nosotros.

2) Sony se convierte en un parteaguas tecnológico, muchas marcas siguen las tendencias que impone Sony, para nosotros tener esta marca punta de lanza en la region, nos da ese avance tecnológico en Latinoamerica, poniéndonos al dia con todos los nuevos desarrollos en nuestra industria.

3) En la historia y con relación con Magnum, el producto más destacado de Sony fue el DAT, que fue la punta de lanza del audio analógico al mundo digital. Yo creo en la actualidad el producto insignia es el Proffesional Disc, que es una tecnología de grabación de video en un formato profesional de Blue Ray, en el mercado es un producto probado, tiene más de diez años funcionando.

PANAMA
Alessio Gronchi de Dataserve S.A.



1) Representamos a Sony desde el mes de diciembre del año 1999.

2) Representar a Sony le da estatus a nuestra empresa ya que podemos ligar nuestro nombre con un líder en soluciones broadcast a nivel global como lo es SONY. Manejar esta marca en Panamá nos da la oportunidad de ofrecer en nuestro mercado productos de tecnología avanzada y de ser los primeros en traer al país los distintos adelantos que SONY propone contínuamente para beneficio de toda su base instalada y potenciales nuevos clientes.

3) El porcentaje de mercado que logramos con la marca SONY varía según el producto pero podemos hablar de que en el mercado broadcast abarcamos entre un 50% y 60% del mercado de video profesional.

4) Por nuestra entrada relativamente reciente al selecto grupo de representantes de SONY, hasta el momento el producto más exitoso para nuestra empresa ha sido la línea XDCAM HD.

PARAGUAY
Washington Curbelo de Man/pizzo Paraguay



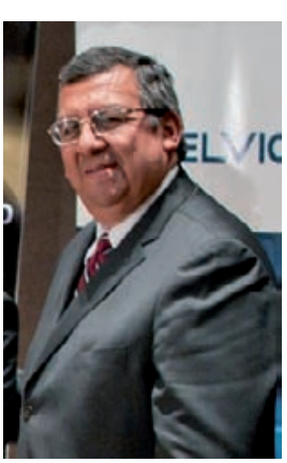
1) Representamos a Sony desde 2004 y sin dudas, es la marca más importante entre nuestras representadas. Desde ese entonces y hasta hoy, ha impulsado un crecimiento constante de Manpizzo Paraguay SRL en nuestro país y nos ha permitido consolidarnos como referentes en nuestro mercado Broadcasting.

2) Haber formado una red de Representantes con empresas serias y de gran prestigio en cada uno de los países, es la demostración de la importancia que la marca le ha dado a Latinoamérica y a sus clientes de esta parte del mundo. Asegurándoles, no solo productos de la más alta calidad, sino también un servicio de Garantía y soporte técnico local, con los que ninguna otra marca cuenta.

3) Dadas las características de nuestro mercado, la línea de cámaras de bajo precio ha sido lo más comercializado, sin embargo estamos ya trabajando para el cambio tecnológico que se viene en Paraguay y pensamos que con nuestras soluciones de Broadcast, vamos a poder seguir dando tranquilidad y confiabilidad a todos nuestros clientes.

4) Hasta hoy contamos con el 70 % del mercado. Pero tomando en cuenta el trabajo que venimos desarrollando con Sony durante casi una década y el de Manpizzo Paraguay SRL con casi 20 años de permanencia en el mercado, tenemos la confianza y la seguridad de que este porcentaje se incrementará en el futuro inmediato.

PERU
Carlos Anciburo de Telvicom



1) Nuestra empresa mantiene una relación comercial con Sony desde el año 1999, cuando comenzamos en calidad de Reseller. Luego fuimos Systems Integrator y finalmente desde el año 2004 somos los únicos Representantes Oficiales de Sony PSLA para el Perú. Para Telvicom representar a Sony PSLA significa tener la confianza y el respaldo una de uno de los fabricantes más importantes de la industria a nivel mundial y al mismo tiempo un compromiso de liderazgo y una responsabilidad que nos compromete a brindarle a nuestros clientes un servicio que supere todas sus expectativas.

2) La presencia de Sony PSLA durante 25 años continuos en América Latina le han permitido marcar un estándar de calidad insuperable en la región, siendo en nuestro caso y para el mercado peruano haber logrado suministrar los mejores equipamientos para producciones en Alta Definición (HD) en todas las estaciones de televisión, casas de producción, cableras, universidades, videografos e instituciones de prestigio. Asimismo la amplia gama de soluciones ofrecidas nos han permitido segmentar a nuestros clientes y ofrecerles un producto casi personalizado y a la medida de las necesidades de cada usuario en video y audio profesional, optimizando las ventajas diferenciales que solo Sony puede ofrecer.

3) Para Telvicom han sido varias las líneas de productos que nos han dado grandes satisfacciones entre las cuales podemos mencionar las cámaras digitales de estudio, camcorders, switchers de producción, monitores profesionales de video, archivo digital, etc.

4) Telvicom conjuntamente con Sony hemos logrado una participación en el mercado profesional y broadcast de aproximadamente 60% en promedio, con niveles más altos en algunas líneas de productos como por ejemplo en cámaras de estudio con alrededor del 90% del mercado local.

PUERTO RICO
David Castillo de Caribbean Broadcast Suppliers Inc.



1) Caribbean Broadcast Suppliers Inc. representa a Sony desde el año 2005. Para nosotros ha sido de gran beneficio la relación con PSLA, pese a que nuestro mercado es un mercado hibrido con mucha influencia Norte Americana, el poder relacionarnos con una empresa multinacional, la cual ha dedicado una oficina exclusiva para nuestro mercado, ha creado una confianza en los clientes que los pone en primer plano y no son un número de cuenta más en una cartera de ventas. Para Caribbean Broadcast Suppliers el trabajar con una empresa que ha marcado los estándares de la industria broadcast mundialmente, ha sido una experiencia única, ya que con sus productos y nuestro amplio conocimiento de la industria y la confianza que nuestros clientes han depositado en nosotros nos ha convertido en la combinación perfecta, para poder ofrecer a nuestros clientes soluciones completas a sus necesidades.

2) Para nuestra región, Puerto Rico, estos 25 años de Sony PSLA se han convertido en una garantía, una solidez empresarial incomparable, esto nos da la seguridad, a nosotros los representan-



tes y a los clientes de que Sony no piensa solo en la ventaja económica de la región si no, que también tiene ese toque personalizado para ella, que además de tener un producto de calidad tenemos un servicio un apoyo incondicional de una empresa del calibre de Sony, sin dejar a un lado la tecnología que nos dejan como legado, que ha sido y sin lugar a duda será el estándar de la industria por muchos años. Cabe mencionar que todo esto no sería posible sin el personal que PSLA posee para brindarnos todo lo antes mencionado, no los menciono uno a uno para que no se me quede ninguno, pero a todos ellos nuestros saludos y felicitaciones en estos 25 años de arduo trabajo. Sigan hacia adelante y mucho éxito en los años venideros.

3) Para nosotros, el formato XDCAM HD y XDCAM EX han sido los formatos que han venido a sentar la diferencia en los formatos de grabación en nuestro mercado y han hecho que muchos cliente fijen su interés en los Productos Sony. Sin dejar a un lado las cámaras de estudio, que se han convertido en el estándar de la industria en todos los aspectos, la serie HXC y la HSC han sido de rotundo éxito en nuestro mercado en el formato HD, con todos los principales canales de nuestro territorio utilizándolas.

4) Actual mente nuestro margen de mercado con Sony es de un 75%, pero todavía queda mucho por hacer, todos los años Sony nos sorprende con nuevas tecnologías y equipos para cubrir estos porcientos de mercado que antes no podíamos llegar por cuestiones de presupuesto.

URUGUAY
Mariano Elzaurdia y Enrique Frider de Ridel





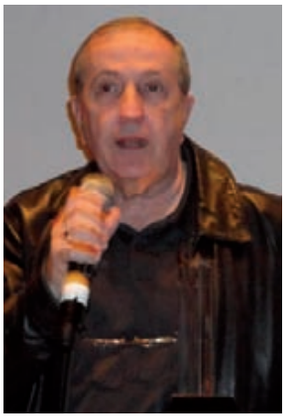
1) Ridel S.A. representa a Sony desde 1992 en el área de consumers, y desde 2002 en el área de PSLA. Previamente el personal incorporado para el área broadcast tenía contacto con Sony desde el año de fundación de SOBEC.

2) En Uruguay la penetración de Sony Broadcast es muy importante, tenemos una penetración de cerca del 95% en el área de cámaras de estudio y por encima del 60 % en el resto de las líneas que manejamos.

3) Considerando los inicios de SOBEC, el U-matic y la penetración del Betacam fueron fundamentales.

4) Nuestra división de Ridel comercializa Sony únicamente y complementa con equipamiento complementario las marcas necesarias.

VENEZUELA
José I. Cadavieco S. de Corporacion Video Carrillo



1) Nuestra empresa representa los productos profesionales de Sony desde hace casi 40 años. Nos cupo el honor de introducir los equipos de video en los mercados educativos y corporativos y luego fuimos la primera empresa autorizada por Sony para vender los productos Broadcasting. Hemos visto nacer, crecer y desarrollarse el uso del video a todo nivel, siempre de la mano de Sony, y siempre como líderes. Nuestra relación inicial fue directamente con Japón, a través de Sony de Venezuela. Después de la devaluación de 1983, pasamos a trabajar a través de Sony Panama. Y posteriormente, al establecerse la operación Miami, originalmente llamada SOBEC, hemos estado trabajando en ellos. En todos estos años hemos disfrutado de una relación saludable, basada en polcas claras, fluidez en la comunicación bidireccional y la participación en el diseño de estrategias exitosas. También hemos disfrutado del reconocimiento que los clientes tienen hacia Sony y particularmente a su tradicional soporte técnico en toda la región que es tal vez nuestro acervo más importante. Ser representante y reseller de Sony es por una parte una gran responsabilidad, por las altas expectativas a que están acostumbrados sus clientes. Por la otra es una fuente de satisfacciones al recibir testimonio de parte de estos, de que los productos han llenado y excedido lo esperado de ellos. Y también la grata experiencia de ir creciendo juntos a medida que el mercado se ha ido desarrollando.

2) Como era de esperar, las condiciones del mercado han venido cambiando gracias a los nuevos desarrollos tecnológicos. **Sony** ha sido una empresa que ha ido llevando a sus clientes a lo largo de este proceso, sin saltos bruscos, sino más bien proporcionando v de continuidad, que les han permitido una evolución sin traumas y sin que sus inversiones se hayan tornado obsoletas en forma prematura. El compromiso de Sony con sus clientes es, junto con su constante vanguardia tecnológica lo que más apreciamos en estos años de convivencia.

3) Es difícil optar por una, en detrimento de las otras. Tengo un profundo aprecio por el venerable U-MATIC, que realizó la primera revolución en los videograbadores. Y por el Betamax, que sirvió de origen al formato profesional más exitoso, como es toda la familia Betacam, y su sucesora XDCAM. Pero las cámaras, han sido tan exitosas, han sido la base de partida de tantas empresas y han merecido tanta aceptación en nuestro país, que probablemente son tan apreciadas como los grabadores. ¿Y dónde dejamos a los monitores y a nuestros medios magnéticos? ¿O los micrófonos inalámbricos? Es muy difícil decidir, porque el reto de Sony en Video, desde el principio, fue permitir al cliente obtener todo lo necesario para integrar su sistema, en una sola marca.

4) Nosotros podemos decir que Venezuela es una País Sony. El liderazgo de la marca es compartido en el mundo de consumidor y en el profesional. Tenemos el mayor share de mercado en cámaras, grabadores, monitores, mixers de video, entre otros. La relación de Sony con Venezuela ha sido siempre de mutua afecto y de una probada lealtad por parte de los usuarios.

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Oficinas, depósitos y agentes propios en diferentes países de Latinoamérica -incluyendo Argentina y Brasil- nos permiten tener la **flexibilidad** para adaptarnos a los procesos de cada mercado, y **trabajar cerca** de cada uno de nuestros clientes. En **Aerodoc** podemos satisfacer sus necesidades de **distribución**, tanto a nivel operativo como cultural. Si su empresa no tiene un área de logística, podemos convertirnos en ella. Si la tiene, podemos darle todo el soporte que ésta necesite.



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NUEVA PLATAFORMA MULTIMEDIA

El Financiero y Bloomberg TV

El Financiero, empresa filial de Grupo Lauman, y Bloomberg L.P, presentaron un servicio de noticias de negocios a través de una multiplataforma en español.



El Museo del Cárcamo, de Chapultepec, en la ciudad de México, fue el escenario escogido por el **Grupo Lauman, y Bloomberg** para el lanzamiento del servicio de noticias multiplataforma producto de la alianza entre **El Financiero – Bloomberg TV**.

Enrique Peña Nieto, Presidente de los Estados Unidos Mexicanos, fue el invitado de honor de un evento que tuvo como anfitriones a **Manuel Arroyo**, Presidente y Director General de **El Financiero**, y a **Andrew Lack**, Presidente de **Bloomberg Media Group**.

Tras felicitar a los directivos de ***El Financiero*** por el nuevo proyecto y desearles éxito, **Peña Nieto** dijo que las reformas estructurales son importantes pero no son suficientes porque se tiene que dar el siguiente paso. Aseguró que hoy vivió dos contrastes, por un lado el relanzamiento de *El Financiero* y por otra la visita que realizó a Michoacán en donde la gente está preocupada por la situación, y pese a ello son personas que tienen el compromiso y la voluntad de salir adelante.

«La región está creciendo en un contexto económico, político y social clave, y ahora más que nunca los jugadores requieren de información precisa, analítica y de última hora que les permita tomar decisiones informadas» declaró **Manuel Arroyo**, Presidente y Director General de **El Financiero**.

Por su parte **Andrew Lack**, Presidente de **Bloomberg Media Group**, sostuvo que esta alianza ayudará a las empresas mexicanas a conectarse aún más con el mercado global. «Juntos ofreceremos a los profesionistas del ámbito financiero y de negocios análisis y perspectivas de aquellos acontecimientos globales y regionales que realmente importan y que mueven los mercados».

El Financiero Bloomberg (TV) es el único canal de noticias en español orientado a los negocios, y el primero de este tipo en HD, que transmitido para México y Centroamérica (Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica y Panamá). Empezando con cuatro horas de programación original local en español, el canal emite a nivel nacional a través de los principales operadores de televisión paga. Asimismo, ofrece también contenido de noticias financieras y económicas en inglés a través de **Bloomberg TV**.



Empezando con 4 horas de programación original local en español, el canal cuenta con los más destacados periodistas en México como **Enrique Quintana**, **Carlos Mota**, **Alejandro Cacho** y **Leonardo Kourchenko**. El canal, que será transmitido a nivel nacional a través de los principales operadores de televisión de paga, ofrecerá también contenido de noticias financieras y económicas en inglés a través de **Bloomberg TV**.

La alianza también incluye la renovación de la versión impresa de **El Financiero**, así como de la aplicación móvil a través de las nuevas Apps de IOS y Android, más la versión digital, desarrollada en una plataforma de diseño innovador, con la última tecnología de programación en HTML y una amplia experiencia multimedia.



HARRIS BROADCAST

Reorganiza su estructura operativa y se transforma



Charlie Vogt, CEO de Imagine Communications y GatesAir

Harris Broadcast anunció lo que será a partir de ahora su nueva identidad corporativa bajo las marcas **Imagine Communications** y **GatesAir**. La primera de ellas tiene sede en Dallas, con Centros de Excelencia en Denver, Toronto, Los Angeles, Tel Aviv y Beijing; en tanto que la segunda está basada en Cincinnati, con su centro de fabricación, cadena de suministro y desarrollo en Quincy. «Con vibrantes nuevas identidades y enfoque, **Imagine Communications** y **GatesAir** están bien posicionados para servir a nuestra industria y clientes. Nuestra visión, dirección y estrategia se alinean en ambas marcas con las actuales tendencias de transformación, las redes del futuro y nuestros clientes y socios. Hemos creado dos compañías que están innovando en diferentes áreas del espectro tecnológico. **Imagine Communications** liderará los mercados de medios y entretenimiento hacia un futuro definido por IP, software, Internet y TV Everywhere, con una visión de arquitectura para la entrega y monetización de contenido multipantalla. Del mismo modo, **GatesAir** seguirá al frente de la próxima generación de mercados over-the-air para radio y televisión, con el enfoque puesto en proveer innovaciones inalámbricas que reduzcan el consumo de energía y la huella de carbono, mientras se aprovecha el crecimiento de la transmisión de TV y la radio digital en todo el mundo» declaró **Charlie Vogt**, CEO de **Imagine Communications** y **GatesAir**.

Se divide en dos nuevas empresas, Imagine Communications y GatesAir. La primera se enfocará en la entrega y monetización del contenido multipantalla; la segunda tendrá su eje en proporcionar innovaciones inalámbricas que reduzcan el consumo de energía.

En lo estrictamente ligado al próximo show de la NAB, en Las Vegas, **Imagine Communications** hará demostraciones en vivo su stand N2503; en tanto que **GatesAir** hará lo propio en su stand N609.



EL LIBRO FUE PRESENTADO EN EL MARCO DEL FICG 2014

Anuario estadístico de Cine Mexicano

El 23 de marzo se llevó a cabo la presentación del libro "Anuario estadístico de cine mexicano" de IMCINE. La introducción de la conferencia la dio el presidente del FICG, Iván Trujillo y en seguida, la moderadora Gabriela Warkentin introdujo a la mesa que explicó la importancia del libro.



José Woldenberg fue el primero en hablar, explicó en dos grandes rubros la publicación: **Los avances** (que se componen del aumento y mejora que ha habido en la producción, avances y taquilla del cine mexicano) y los nudos (que consisten en que el porcentaje mayoritario de películas mexicanas no alcanzan a terminar su ciclo: ser vistas). También mencionó que la televisión, o pantalla chica, es una ventana para el cine.

Édgar San Juan tocó los temas del acercamiento y la conexión con la audiencia que debe tener la industria. Agradeció las herramientas que existen hoy en día para conocer al consumidor y cerrar el ciclo comunicativo: saber qué quieren y que ellos sepan qué es para ellos. Mencionó como maravilla la ventana de consumo que identifica las preferencias del público, Netflix.

En tercer lugar, **Lorenzo Hagerman**, fotógrafo cinematográfico, expuso la importancia del valor agregado en la experiencia del cine. Habló sobre las salas de cine independiente y de la importancia de conocer y registrar el número de asistentes.

David Maciel habló del cine mexicano en Estados Unidos y de la trascendencia que tiene no sólo para los estadounidenses, sino para los latinos nacidos allá. Mencionó un convenio de la UCLA con IMCINE y aplaudió los esfuerzos de cintas a cerca de las comunidades de *chicanos*, como es la cinta más reciente de **Diego Luna**.

Jorge Sánchez, aparte de reafirmar la información de los demás colaborativos, dio la noticia de que los próximos días estarán aplicaciones y iBook del libro, para una actualización de la estadística del cine mexicano más frecuente y a la mano. También hizo referencia a que la edición de este año del libro ya tiene registro ISBN.

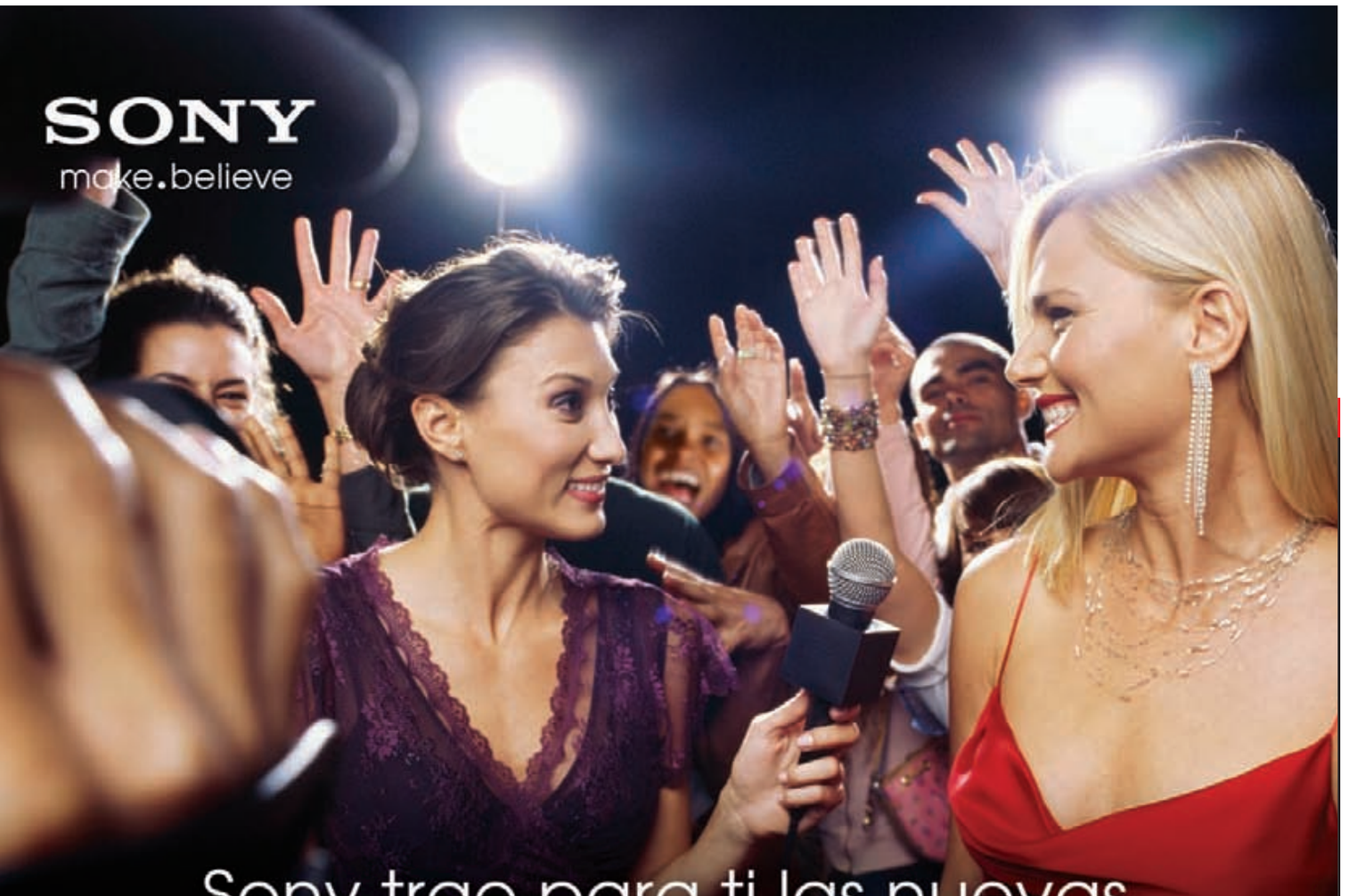
El dato

- 12% de ingresos en taquilla han sido para películas mexicanas.
- 60% de películas expuestas en México son de Hollywood.
- 5,500 pantallas son las que existen en el país.
- 44% de mexicanos no tienen cine en su localidad.
- 4 ó 5 cintas mexicanas se transmiten a diario en la televisión abierta del país.


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EXHIBIT 11

Friday, June 4, 2021 at 23:18:27 Eastern Daylight Time

Subject: RE: Breach of contract notification
Date: Thursday, April 24, 2014 at 4:48:58 PM Eastern Daylight Time
From: Melanie McCool
To: Edwin Hernandez, PhD, Jim McFelea, Dodd Haynes
CC: alcidesh@eglacorp.com, Cory Meltzer, Robert Strandberg
Attachments: image001.png, EGLA Termination Letter 4-24-14.pdf

Hi Dr. Hernandez, attached please find a letter officially terminating the Term Sheet between DMX and EGLA as we no longer require your products and services. To respond to your other points below, DMX did not ultimately deliver its service to Encompass TV via the EGLA platform. Also, we are not aware that there were marketing materials used by DMX to promote the DMX cable service. While we maintain that DMX did not breach the Term Sheet, it no longer has need of the EGLA platform. As such, I hope that our companies can part ways on good terms. Many thanks.

--
MELANIE McCOOL
Vice President, Legal & Business Affairs
MOOD:
T: 512.380.8560 / M: 512.671.0215
facebook.com/moodmedia / @moodmedia
www.moodmedia.com

From: Edwin Hernandez, PhD [mailto:edwinhm@eglacorp.com]
Sent: Tuesday, April 15, 2014 12:31 PM
To: Melanie McCool; Jim McFelea; Dodd Haynes
Cc: alcidesh@eglacorp.com; Cory Meltzer; Robert Strandberg
Subject: Re: Breach of contract notification

Hi Melanie,

Thanks for your reply, there were other items in our letter, for example proof that "Powered by EGLA COMMUNICATIONS" has been shown in all marketing materials used by MOOD MEDIA, among other issues from the NDA. **We still have no access to the system in ENCOMPASS TV, we suspect that system is compromised**.

Also, when you installed the MEDIA PLUG specially the one in Encompass you accepted the use of all terms in the licensing agreement found inside the box. An except of the licensing agreement is shown here:

"**GENERAL LIMITATIONS**
This is a license, not a transfer of title, to the Software and Documentation, and EGLA CORP retains ownership of all copies of the Software and Documentation. Customer acknowledges that the Software and Documentation contain trade secrets of EGLA CORP or its suppliers or licensors, including but not limited to the specific internal design and structure of individual programs and associated interface information. Except as otherwise expressly provided under the Agreement, Customer shall have no right and Customer specifically agrees not to:
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based upon the Software, or permit third parties to do the same;
(C) reverse engineer or decompile, decrypt, disassemble or otherwise reduce the Software to human-readable form, except to the extent otherwise expressly permitted under applicable law notwithstanding this restriction;
(D) publish any results of benchmark tests run on the Software;
(E) use or permit the Software to be used to perform services for third parties, whether on a service bureau or time sharing basis or otherwise, without the express written authorization of EGLA CORP; or
"

Best Regards,

Edwin

From: Melanie McCool <melanie.mccool@moodmedia.com>
Date: Tuesday, April 15, 2014 12:29 PM
To: Edwin Hernandez <edwinhm@eglacorp.com>, Jim McFelea <jim.mcfelea@moodmedia.com>, Dodd Haynes <dodd.haynes@moodmedia.com>
Cc: Edwin Hernandez <alcidesh@eglacorp.com>, Cory Meltzer <cory@meltzermathis.com>, Robert Strandberg <rstrandberg@edc-tech.org>
Subject: RE: Breach of contract notification

Hi Dr. Hernandez, I'd like to respond to your points below.

- AEI Collingham Holdings Co. Ltd. d/b/a DMX ("DMX") remains a wholly owned subsidiary of Mood Media Corporation ("Mood"). While Mood sold certain assets of its DMX business, DMX remains a customer of EGLAs.
- Attached please find a fully executed copy of the Term Sheet. DMX didn't assign the Term Sheet to Stingray, even though assignment is not prevented by the Term Sheet.
- To our knowledge, DMX has paid all invoices from EGLA. If there are invoices that you believe remain unpaid, please forward those to us.
- Mood has no reason to believe that anyone at DMX/Mood, including former employees, has violated the non-disclosure agreement. Mood has asked that Gustavo, Alejandro and any other individuals employed by Stingray cease all communication with EGLA. DMX/Mood will handle all communication with EGLA from this point forward.
- Fewer than 10 cable operators are receiving the EGLA solution.

DMX does not agree with your assessment that we've breached the Term Sheet; however, even if we had breached, the Term Sheet provides for thirty days' written notice and opportunity to cure prior to termination. As such, we ask that EGLA continues to perform its obligations under the Term Sheet while we work through these issues. Thank you.

--
MELANIE McCOOL
Vice President, Legal & Business Affairs
MOOD:
T: 512.380.8560 / M: 512.671.0215
facebook.com/moodmedia / @moodmedia
www.moodmedia.com

From: Edwin Hernandez, PhD [mailto:edwinhm@eglacorp.com]
Sent: Tuesday, April 15, 2014 9:43 AM
To: Jim McFelea; Melanie McCool; Dodd Haynes
Cc: alcidesh@eglacorp.com; Cory Meltzer; Robert Strandberg
Subject: Breach of contract notification

Hi Jim and all,

There are a few items we believe are in breach from MOOD's part that EGLA is by this means is notifying you. EGLA first refers to the Software as a Service/Licensing TERM SHEET with MOOD MEDIA:

- End User Licensing Agreement to the EGLA MEDIA PLUGS are not transferrable. Are exclusive used to MOOD MEDIA, now in use by DMX
- Licenses to all software platforms are not yet renewed for the devices in CABLEVISION MEXICO and ail be due renewal AXTEL TV
- We have not received payments and MOOD is not current to the payments, we believe MOOD is behind by 60 to 90 days.
- We need proof that "Powered by EGLA COMMUNICATIONS" has been shown in all marketing materials per our contract dates Jan 2012
- The contract recites support for up to 10 cable operators, but MOOD MEDIA and now STINGRAY stated that there are more than 80 in service at the moment.
- We don't have a signed agreement from the term sheet that originally expired,

We will continue our internal investigation to determine any other issues to be notified to you in writing.

EGLA also believes that MOOD MEDIA is in breach of our confidentiality agreement, signed by Gustavo Tonelli on March 8th, 2012 at least in the following elements and agreement sections:

- Two MOOD MEDIA executives are now employed by STINGRAY MEDIA . Those employees hold confidential and proprietary information, and continue directing communications to EGLA COMMUNICATIONS and making decisions with the same product/services that EGLA is offering and disclosed to them directly in a daily basis.
- What provisions has MOOD MEDIA followed to honor, in our NDA Seciton 9 reads :"This Agreement shall become effective as of the date first written above and shall automatically

  Expire three (3) years thereafter, provided, however, that prior to such expiration, either Party may terminate

  this Agreement at any time by written notice to the other. Notwithstanding such expiration or termination, all

  of the receiving Party's nondisclosure obligations pursuant to this Agreement shall survive with respect to any

  Confidential Information received prior to such expiration or termination"
- What provisions has MOOD MEDIA followed to honor in Section 16 "The Recipient shall not at any time prior to the expiration of three (3) years from the date of thisAgreement, without the prior written consent of the Company, which consent the Company may withhold inits sole discretion, (a) attempt in any manner to deal directly or indirectly in any manner with any of thedontact Persons or other individuals or companies related to the Business Opportunity including by havingvany part of or deriving any benefit from the Business Opportunity or any aspect thereof, or (b) by-pass,vcompete, avoid, circumvent, or attempt to circumvent the Company relative to Business Opportunity including by utilizing any of the Confidential Information or by othe exploit1 or deriving any benefit from the Confidential Information."

Best Regards,

Edwin A. Hernandez, PhD

Chief Technology Officer - Founder
EGLA COMMUNICATIONS
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skype: edwinhe eglacomm

From: Jim McFelea <jim.mcfelea@moodmedia.com>
Date: Tuesday, April 15, 2014 7:05 AM
To: Edwin Hernandez <edwinhm@eglacorp.com>, Melanie McCool <melanie.mccool@moodmedia.com>, Dodd Haynes <dodd.haynes@moodmedia.com>
Cc: Edwin Hernandez <alcidesh@eglacorp.com>
Subject: RE: EGLA + MOOD

Dr. Hernandez

Please call me first thing on my cell phone to discuss.

I understand that you discontinued service yesterday.

I thought we agreed to discuss on Tuesday when Melanie returned to the office?

JIM MCFELEA
EVP - Global Operations

MOOD:

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www.moodmedia.com

From: Edwin Hernandez, PhD [mailto:edwinhm@eglacorp.com]
Sent: Friday, April 11, 2014 3:25 PM
To: Melanie McCool; Jim McFelea; Dodd Haynes
Cc: alcidesh@eglacorp.com
Subject: Re: EGLA + MOOD

HI All,

Thanks Jim for the call. We have prepared an agreement that will amend the current one and will resolve most of the issues raised by EGLA in previous emails.

As part of such agreement, you may include any dates and timelines needed for the time period that you need the services that EGLA will offer to STING RAY and for your transition dates to be completed.

Unfortunately, we cannot open any communication channel with STINGRAY as there are intellectual property issues

that still need to be resolved. As we have an NDA signed,
This agreement is confidential and all terms are deemed confidential.

As such, I am attaching our proposal for your review,

Best Regards,

--
Edwin A. Hernandez, PhD

Chief Technology Officer - Founder
EGLA COMMUNICATIONS
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skype: edwinhe eglacomm

From: Melanie McCool <melanie.mccool@moodmedia.com>
Date: Thursday, April 10, 2014 5:58 PM
To: Edwin Hernandez <edwinhm@eglacorp.com>, Gustavo Tonelli <gtonelli@stingraydigital.com>, Jim McFelea <jim.mcfelea@moodmedia.com>, Dodd Haynes <dodd.haynes@moodmedia.com>
Cc: Edwin Hernandez <alcidesh@eglacorp.com>
Subject: RE: EGLA + MOOD

Hi Dr. Hernandez, it was good to speak with you this afternoon. I've copied Jim McFelea and Dodd Haynes on this email so that you have each other's contact information. I'll be out of the office tomorrow and Monday, but please let me know if you need anything. Thank you.

From: Edwin Hernandez, PhD [mailto:edwinhm@eglacorp.com]
Sent: Thursday, April 10, 2014 12:59 PM
To: Gustavo Tonelli; Melanie McCool
Cc: alcidesh@eglacorp.com
Subject: Re: EGLA + MOOD

Hi Gustavo,

We were verbally notified a few days ago (Tuesday) after coming back from assisting the DMX/Cablevision Mexico project, that our services were going to be officially terminated in June 1st and that our server in ENCOMPASS was in the process of being replaced by another server from Stingray Media. As a consequence, EGLA will then make effective the termination of all services with SKY TUNES, SKY MUSIC, CABLEVISION MX, AXTEL TV, and ENCOMPASS effective today at 5pm.

Not withstanding this outage, EGLA remains interested in maintaining a good relationship with MOOD MEDIA. EGLA needs a long-term relationship where MOOD guarantees that our intellectual property, trade secrets, and software are kept protected and confidential from any unauthorized 3rd party. We have not authorized any disclosure or

waiver of any NDAs with MOOD to any other entity.

EGLA remains interested in fortifying and strengthening this relationship/partnership with MOOD MEDIA.

However, we request "Stringray Digital" to take a platform license for the Mediamplify Music Platform, and cease and desist any use of any competitor products that circumvent our products starting today.

I believe a conference call with MOOD would be beneficial, we are making ourselves available this afternoon. Please forward to me a meeting request at your earliest convenience.

Best Regards,

--
Edwin A. Hernandez, PhD

Chief Technology Officer - Founder
EGLA COMMUNICATIONS
"Your media streaming and cloud storage provider"

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Office: 561.869.4446 * Cell: 561.306.4996 | +504 95222554 * Fax: 954.919.1494
skype: edwinhe eglacomm

From: Gustavo Tonelli <gtonelli@stingraydigital.com>
Date: Thursday, April 10, 2014 10:41 AM
To: Edwin Hernandez <edwinhm@eglacorp.com>, Melanie McCool <melanie.mccool@moodmedia.com>
Cc: Edwin Hernandez <alcidesh@eglacorp.com>
Subject: EGLA + MOOD

Hi Edwin, I'm going to try to be brief. Alejandro shared with me the conversation you two had earlier today, and I cannot say that I fully understand the matter. In any case, and because your contracted obligation is with Mood, I'm bringing in Melanie McCool, Mood's Business Affairs VP, who can take it from here. I have briefed her on a separate email, and I would like to take the opportunity here to make a few comments on what you shared with Alejandro:

EGLA has a standing contract and confidentiality agreement with MOOD. NOTHING of that has changed by Alejandro and I now working for Stingray. You continue to be paid by MOOD, as I have confirmed, your obligations continue to be as they were, and none of your information has been jeopardized, as Stingray has not been made aware of any material information, or used your services in any way if not through MOOD.

On the basis of this, I don't understand your threat to default on the contract if you don't hear from MOOD by 5p today.

Personally I don't understand why you would chose to breach a service contract that you are being paid for, forfeiting all future revenues and burning good business relations in the process, but then again, to kamikaze your business is your prerogative. I only wanted to bring to your attention that MOOD has an obligation with Stingray to maintain a number of services - including EGLA's - for a period of time. You failing or neglecting to provide the service will put MOOD in breach of this obligation. Stingray may choose to seek compensatory damages against MOOD, and MOOD may very well do the same with you.

Please do not construct my words as a threat. I am only trying to make sure we both understand what it is at stake,

given my inabilities to comprehend what it is that you're trying to achieve. If you no longer want the MOOD contract, there are ways in which I can assist you to broker an earlier termination that don't involve you getting sued.

Gustavo Tonelli
stingraydigital | **General Manager, Latin America**

404 Washington Avenue, Suite 620 | Miami Beach | FL 33139

Tel : 786.348.0152 **Mobile** : 917.348.9655
gtonelli@stingraydigital.com

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EXHIBIT 12

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EXHIBIT 13

Sunday, April 18, 2021 at 15:13:47 Eastern Daylight Time

Subject: Re: [FWD: Re: STINGRAY TRANSITION FROM MOOD MEDIA]
Date: Monday, April 14, 2014 at 8:21:35 PM Eastern Daylight Time
From: Edwin Hernandez, PhD
To: alcidesh@eglacorp.com
Category: Emails
Attachments: icon_sm_twitter.gif

Si esta claro, no hay que responderle. Ya el EDC, Rob, me tiene una reunión con unos abogados de calibre de acá para verificar lo que ha dicho ALDA y Cory.

No se puede usar ni usufructuar de una plataforma ajena que solo se le dio acceso a alguien, ni Google deja eso ni nadie, nadie puede darle acceso a una cuenta de email o un pase de ir al gimnasio a otro que no es el del contrato y solo "traspasarlo" porque es momentáneo. El contrato es EGLA – MOOD MEDIA, y cable operadores, asi como lo dice el contrato, hasta 10 CABLE OPERADORES y hay cientos, en fin.

Saludos,

Edwin

From: Edwin Hernandez <alcidesh@eglacorp.com>
Date: Monday, April 14, 2014 8:16 PM
To: Edwin Hernandez <edwinhm@eglacorp.com>
Subject: [FWD: Re: STINGRAY TRANSITION FROM MOOD MEDIA]

Edwin, porque no le sacas la noticia publicada en Internet, donde se anuncia la compra de la Division de America Latina por Stingray Digital. Ahi esta claro y a raiz de la venta ascienden a varios de ellos, incluso Alejandro sube a Vice Presidente y este Gustavo asume otro cargo importante en la Compañia. No se trata de acuerdo de cooperacion. Estos creen que pueden engañar....

Alcides Hernandez, PhD
CEO and President
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Twitter

> -------- Original Message --------
> Subject: Re: STINGRAY TRANSITION FROM MOOD MEDIA

From: Gustavo Tonelli <gtonelli@stingraydigital.com>
Date: Mon, April 14, 2014 4:05 pm
To: PhD Edwin Hernandez <edwinhm@eglacorp.com>
Cc: <alcidesh@eglacorp.com>

Dear Edwin:

As I repeatedly expressed to you last week, you continue to misunderstand the situation. STINGRAY DIGITAL has effectively acquired certain contracts from MOOD MEDIA - and it certainly has not done so 'unilaterally' as you claim. It purchased them from MOOD MEDIA with MOOD MEDIA's willing cooperation. It has, however, NOT acquired any physical assets, operations, technology or any know-how related in any way, shape or form to EGLA's trademarked property. In fact, the purchase agreement very specifically EXCLUDES any such assets - because, as you correctly state, those were not MOOD MEDIA's to sell.

Thus, until such time that it is ready to fulfill the acquired contracts by implementing its own technology - technology that it itself developed and which has been in place for years in over 60 headends all over the world - STINGRAY DIGITAL has contracted MOOD MEDIA to continue providing the service as it was, by whatever means it was already using.

STINGRAY DIGITAL has no knowledge of, nor involvement on, the specifics of MOOD MEDIA's content delivery technology - EGLA's or otherwise - nor has the intention of acquiring or learning such technology.

Further, STINGRAY DIGITAL can not possible violate the confidentiality of an agreement it did not enter. If you suspect that MOOD MEDIA has disseminated confidential information or done anything improper, I suggest that you address this issue with MOOD MEDIA. I can however reassure you that no information on this matter was ever shared with STINGRAY DIGITAL, and further, that both companies have gone to extremes to ensure that any rights belonging to third parties remain at all times duly protected.

Sincerely,

Gustavo Tonelli
stingraydigital | **General Manager, Latin America**

404 Washington Avenue, Suite 620 | Miami Beach | FL 33139
Tel : 786.348.0152 **Mobile :** 917.348.9655
gtonelli@stingraydigital.com

LOS ANGELES LONDON MEXICO MIAMI MONTREAL TEL AVIV

On Apr 14, 2014, 8:59:36 AM, Edwin Hernandez, PhD <edwinhm@eglacorp.com> wrote:

Hi Gustavo,

I would like to notify you that STINGRAY DIGITAL does not have any rights to EGLA's platform which is under MOOD MEDIA's contracts. From all emails it seems STINGRAY has unilaterally transferred benefits and rights from the contractual obligations to itself from MOOD MEDIA without requesting a license to EGLA. Hence, STINGRAY effectively has been making use and gaining access of EGLA's intellectual property assets and trade secrets

without proper authorization. Likewise, the NDA in place with MOOD MEDIA has been breached with side effects to STINGRAY. EGLA's Intellectual Property has been exposed and we are very concerned.

Therefore, any further use of EGLA's assets requires a proper license and payments made to EGLA, due immediately.

Thru this email I am putting STINGRAY on notice that EGLA has provided no right, implied or explicitly derived from any prior contractual obligations with MOOD MEDIA. STINGRAY has not been granted any right to use/manage/sell/monetize from any of the trademarks, copyrights, trade secrets, and confidential information that has been shared with MOOD MEDIA now in possession of STINGRAY DIGITAL. **All usage, communications, business deals, or related actives to our technology must cease and desist immediately.**

However, we understand that STINGRAY DIGITAL wants to expands its markets by the DMX acquisition. We have not yet been briefed from the parties all details and timelines, except verbally and informally last week.

EGLA would like to provide an avenue for STINGRAY DIGITAL to cure this unfortunate event and assist their new customer needs, as such we can offer STINGRAY a non-exclusive licensing agreement whereby STINGRAY DIGITAL will effectively be in good standing with EGLA COMMUNICATIONS.

For any communications please reach me at my mobile: 561-306-4996.

Best Regards,

--
Edwin A. Hernandez, PhD

Chief Technology Officer - Founder
EGLA COMMUNICATIONS
"Your media streaming and cloud storage provider"

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EXHIBIT 14



Detail by Entity Name

Foreign Profit Corporation
STINGRAY MUSIC USA INC.

Filing Information

Document Number	F23000000463
FEI/EIN Number	77-0681442
Date Filed	01/25/2023
State	DE
Status	ACTIVE

Principal Address

730 RUE WELLINGTON
MONTREAL, QC H3C-1T4 CA

Mailing Address

730 RUE WELLINGTON
MONTREAL, QC H3C-1T4 CA

Registered Agent Name & Address

CORPORATION SERVICE COMPANY
1201 HAYS STREET
TALLAHASSEE, FL 32301-2525

Officer/Director Detail

Name & Address

Title President, Director

Boyko, Eric
201 Chemin Du Golf, #1405
Montreal, QC H3E 1Z4 CA

Title Director

Menard, Jacques
730 RUE WELLINGTON

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Title Director

Tonelli, Carlos Gustavo
730 RUE WELLINGTON
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Title Director

Decker, Brian
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Annual Reports

Report Year	Filed Date
2024	01/27/2024

Document Images

01/27/2024 -- ANNUAL REPORT	View image in PDF format
01/25/2023 -- Foreign Profit	View image in PDF format

EXHIBIT 14.1

Saturday, April 17, 2021 at 15:27:41 Eastern Daylight Time

Subject: FW: Personal
Date: Wednesday, June 12, 2019 at 8:04:37 PM Eastern Daylight Time
From: Dr. Edwin A. Hernandez
To: Edwin Hernandez

On 3/22/16, 11:44 AM, "Gustavo Tonelli" <gustavo.tonelli@mac.com> wrote:

Edwin, while my legal team prepares an official response to your email, I think it's fair that I write to you this email personally.

Firstly, you are making a dangerous gamble based on information you don't know. You have NO idea of the terms of the agreement betweesn MOOD and STINGRAY. These term refer only to the acquisition of certain contracts, NOT the operation (including technology, licenses and software). That is precisely why STINGRAY is paying MOOD for a transition service, so that we make sure that is MOOD who perfor the servic toe, without STINGRAY having to access any knowledge.

In other words, there has been no breach by any party.

But if you don't believe this, the contract you signed is very clear as to the procedures in case of breach: you have to notify MOOD by written notice of the breach, and MOOD will have 30 days to defend itself or cure the breach.

Even if MOOD has breached your agreement (and I reassure you, they have not) you have no right to terminate your service: read your contract! If you terminate without written notice and 30 days period tate, YOU will be in breach, no matter whether MOOD did.

So I urge to consider your position.

You have a standing contract with MOOD. If MOOD wants to terminate, they have to give you 60 days notice (2 months of revenue for you). If you believe they are in breach, you can send a written notice with 30 days to cure (1 month of revenue plus damages, if you get any).

What you are doing will get you ZERO revenue AND will cause a chain reaction of enormous proportions:

STINGRAY will withhold a lot of money it owes MOOD in escrow, AND it will sue MOOD for failure to deliver under the transition services agreement. I will personally ensure this.

MOOD will sue you for breaching the agreement without proper notice, and it will seek (and most likely get, because you don't have a case) damages for all the money STINGRAY will sue them for.

I am asking Maria to reach out to you so you can talk about it. I also advise that you get some legal advise - you really are taking some major

steps based on information (the characteristics of Stingray's acquisitio.

of certain Mood's .
That is very risky.

Sent with Mail Pilot.

EXHIBIT 15

Maxtrax - Eclectic Electronic stuck on same song

in list Closed

Description

Ubimetaserver seems to be pushing fine:

{code}

2016-05-13 19:51:33,875 INFO [request] - Received successful response: 200, AWS Request ID: 4dd46a14-4c1a-586e-9136-25a426df6766

2016-05-13 19:51:48,699 INFO [SQSMetadataPush] - Pushing file to SQS!

2016-05-13 19:51:48,700 INFO [request] - Sending Request: POST https://queue.amazonaws.com //008306160229/GalaxieMetadataPushQueue Parameters: (MessageBody: <feff><?xml version="1.0" encoding="utf-8"?>

<Playlist DeviceId="maxtrax1" FileName="GX45_NT.xml" Now="Fri May 13 19:51:48 2016">

```
    <Entry Event="00" Type="Played" Category="200" Id="7054" Title="Stingray ID.045.Eclectic Electronic.v1.v

    <Entry Event="01" Type="Played" Category="211" Id="2467" Title="Calm Down" Artist="Katy B, Four Tet &amp

    <Entry Event="02" Type="Played" Category="201" Id="7825" Title="Blind Heart" Artist="Cazzette &amp; Terr

    <Entry Event="03" Type="Played" Category="212" Id="9133" Title="Lies" Artist="Jane XØ" Album="" Composer

    <Entry Event="04" Type="Played" Category="211" Id="7174" Title="You&apos;re Good but I&apos;m Better" Ar

    <Entry Event="05" Type="Played" Category="203" Id="7490" Title="Latch" Artist="Disclosure feat. Sam Smit

    <Entry Event="06" Type="Played" Category="211" Id="7177" Title="Castles" Artist="Project 46 &amp; Bynon'

    <Entry Event="07" Type="Played" Category="200" Id="7078" Title="Stingray ID.045.Eclectic Electronic.v2.v

    <Entry Event="08" Type="Played" Category="210" Id="1210" Title="Running Out" Artist="Matoma &amp; Astric

    <Entry Event="09" Type="Played" Category="212" Id="5230" Title="Tremble" Artist="Nicole Millar" Album="T
```

```
<Entry Event="10" Type="Played" Category="208" Id="2009" Title="Here for You" Artist="Kygo feat. Ella He

<Entry Event="11" Type="Played" Category="209" Id="1377" Title="Sorry" Artist="Justin Bieber" Album="Pur

<Entry Event="12" Type="Playing" Category="204" Id="5537" Title="This Could Be Love " Artist="Borgeous &

<Entry Event="13" Type="Not Played" Category="212" Id="9127" Title="Only 1" Artist="The Aston Shuffle fe

<Entry Event="14" Type="Not Played" Category="200" Id="7054" Title="Stingray ID.045.Eclectic Electronic.

<Entry Event="15" Type="Not Played" Category="209" Id="1941" Title="All My Friends" Artist="Snakehips fe

<Entry Event="16" Type="Not Played" Category="211" Id="5124" Title="Can&apos;t Feel My Face (Steve Void
```

</Playlist>

{code}

Need to verify the TTA machine, but I cannot access it right now. Will need to ask to reboot the software to see if it unlocks it.

#

Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-1163

Activity

D **deployment57** added this card to Closed
Jan 15, 2019 at 11:14 AM

Case 1:24-cv-21226-RAR Document 82-16 Entered on FLSD Docket 07/15/2024 Page 4 of 520

Comtech Delivery - Rainbow Communications

in list Closed

Description

Shipping Address:

Attn : Kelly Beach
1 (800) 892-0163 ext. 1102
Rainbow Communications
608 Main Street
Everest, KS 66424

#

Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-2245

Activity

D **deployment57** added this card to Closed
Jan 15, 2019 at 10:59 AM

EGLA-TRELLO-000003

Page 273 of 1912 (IPR2025-00350)
Stingray Group Inc. et al v. Hernandez-Mondragon

Herring Networks, Inc - Comtech

in list Closed

Description

{color:#1f497d}Herring Networks, Inc.{color}

{color:#1f497d}DBA WealthTV{color}

{color:#1f497d}4757 Morena Blvd{color}

{color:#1f497d}San Diego, CA 92117{color}

{color:#1f497d}Phone: 858-945-8750{color}

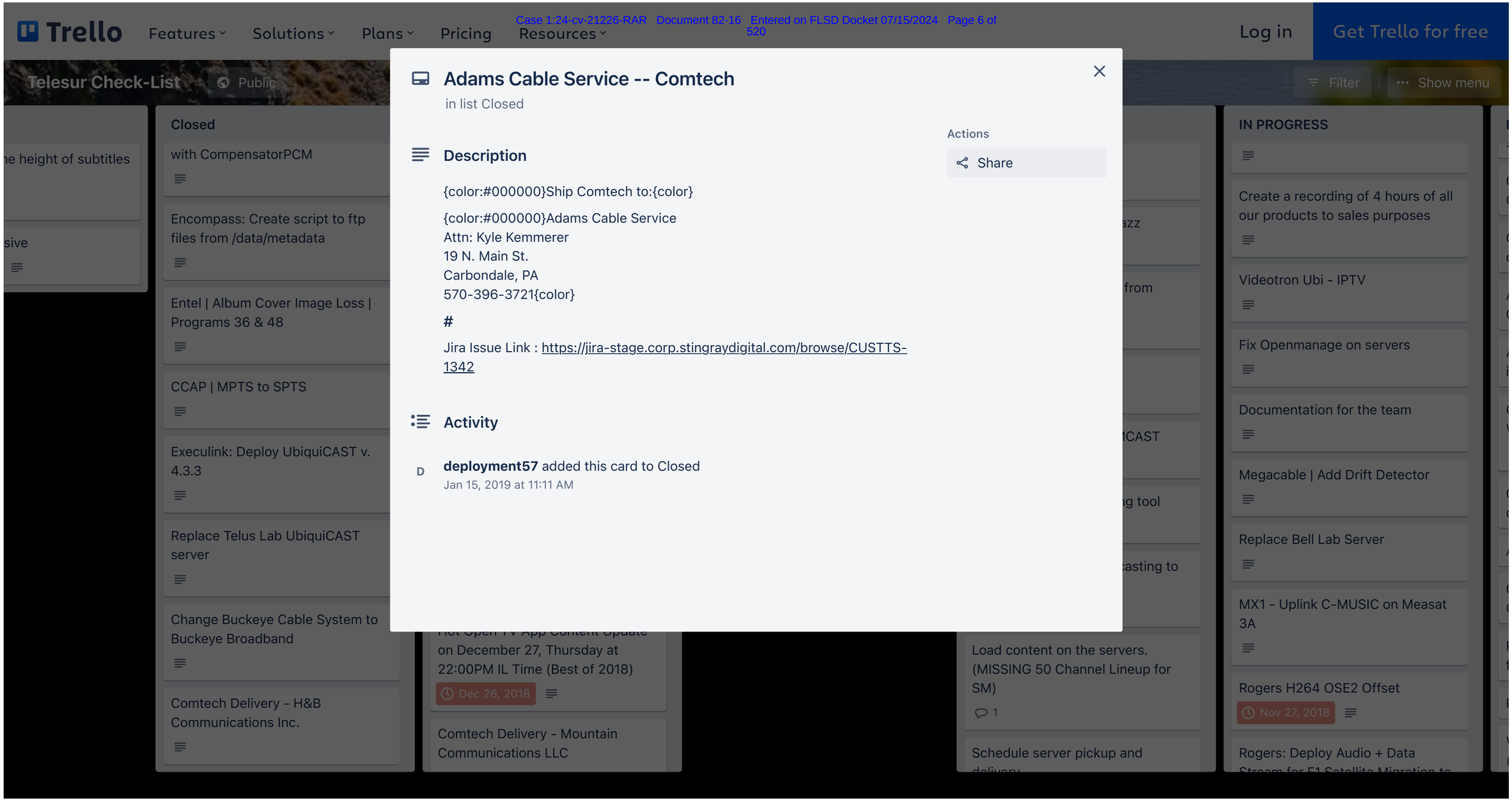
#

Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-1322

Activity

D **deployment57** added this card to Closed
Jan 15, 2019 at 11:11 AM

EGLA-TRELLO-000004


Trello
Features
Solutions
Plans
Pricing
Resources
Log in
Get Trello for free
Telesur Check-List
Public
Filter
Show menu
Closed
with CompensatorPCM
Encompass: Create script to ftp files from /data/metadata
Entel | Album Cover Image Loss | Programs 36 & 48
CCAP | MPTS to SPTS
Execulink: Deploy UbiquiCAST v. 4.3.3
Replace Telus Lab UbiquiCAST server
Change Buckeye Cable System to Buckeye Broadband
Comtech Delivery - H&B Communications Inc.
on December 27, Thursday at 22:00PM IL Time (Best of 2018)
Dec 26, 2018
Comtech Delivery - Mountain Communications LLC
Load content on the servers. (MISSING 50 Channel Lineup for SM)
1
Schedule server pickup and
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
MX1 - Uplink C-MUSIC on Measat 3A
Rogers H264 OSE2 Offset
Nov 27, 2018
Rogers: Deploy Audio + Data
Adams Cable Service -- Comtech
in list Closed
Actions
Share
Description
{color:#000000}Ship Comtech to:{color}
{color:#000000}Adams Cable Service
Attn: Kyle Kemmerer
19 N. Main St.
Carbondale, PA
570-396-3721{color}
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-1342
Activity
D
deployment57 added this card to Closed
Jan 15, 2019 at 11:11 AM

Altice NJ/TX UbiquiCAST

in list Closed

Description

(!) Configuring Fortigates on site (missing network information)
(!) Same config as the Altice NY servers (Altice 1 and Altice 2)

MPTS: 232.9.251.30

Shipping address for 2 other sites:

Attn: Chris Moscinski

6 Eastmans Road,

Parsippany, NJ 07054

Suddenlink

Attention: LUBTX1 – Joe Hernandez

6710 Hartford Ave, Lubbock, TX, 79413, US

Joe.Hernandez@AlticeUSA.com

806-241-0505

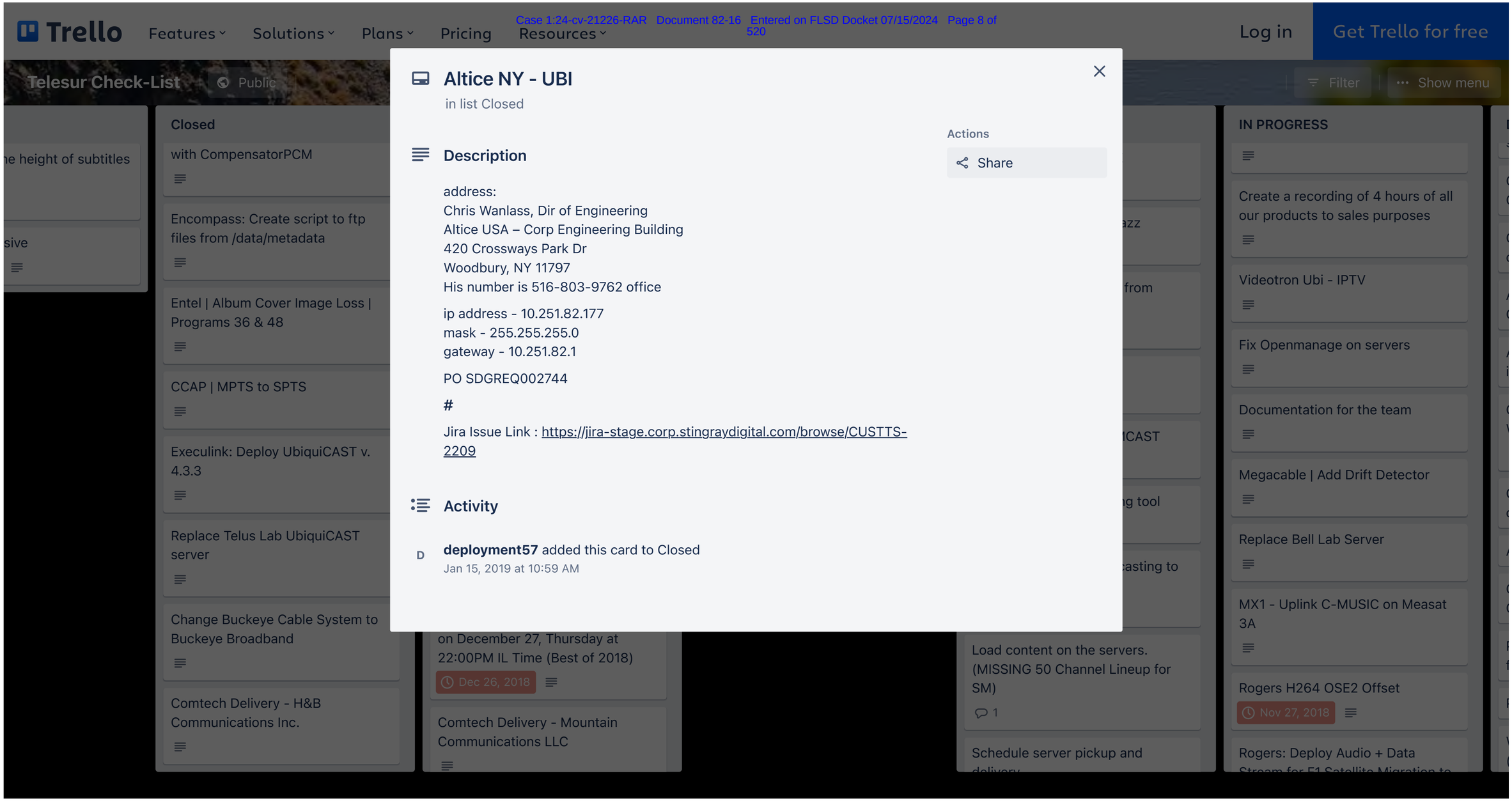
#

Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-2278

Activity

D **deployment57** added this card to Closed
Jan 15, 2019 at 10:59 AM

EGLA-TRELLO-000006


Trello
Features
Solutions
Plans
Pricing
Resources
Log in
Get Trello for free
Telesur Check-List
Public
Filter
Show menu
Closed
with CompensatorPCM
Encompass: Create script to ftp files from /data/metadata
Entel | Album Cover Image Loss | Programs 36 & 48
CCAP | MPTS to SPTS
Execulink: Deploy UbiquiCAST v. 4.3.3
Replace Telus Lab UbiquiCAST server
Change Buckeye Cable System to Buckeye Broadband
Comtech Delivery - H&B Communications Inc.
on December 27, Thursday at 22:00PM IL Time (Best of 2018)
Dec 26, 2018
Comtech Delivery - Mountain Communications LLC
Load content on the servers. (MISSING 50 Channel Lineup for SM)
1
Schedule server pickup and
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
MX1 - Uplink C-MUSIC on Measat 3A
Rogers H264 OSE2 Offset
Nov 27, 2018
Rogers: Deploy Audio + Data
Altice NY - UBI
in list Closed
Actions
Share
Description
address:
Chris Wanlass, Dir of Engineering
Altice USA – Corp Engineering Building
420 Crossways Park Dr
Woodbury, NY 11797
His number is 516-803-9762 office
ip address - 10.251.82.177
mask - 255.255.255.0
gateway - 10.251.82.1
PO SDGREQ002744
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-2209
Activity
deployment57 added this card to Closed
Jan 15, 2019 at 10:59 AM

Anvia - Holiday Lineup Change

in list Closed

Due date

Jan 3, 2017 at 7:00 PM overdue

Description

||Original Channel||Christmas Channel||
|Riddim (MC0076)|Christmas (MC0109)|

Technical Operating
Mr. Rolf Eriksson
Tel: +358 20 742 0191
Mobile: +358 44 411 3262
Email: rolf.eriksson@anvia.fi
Secondary Contact: Jan Akerholm : Content Department
? Tel: n/a
? Email: Jan.Akerholm@anvia.fi

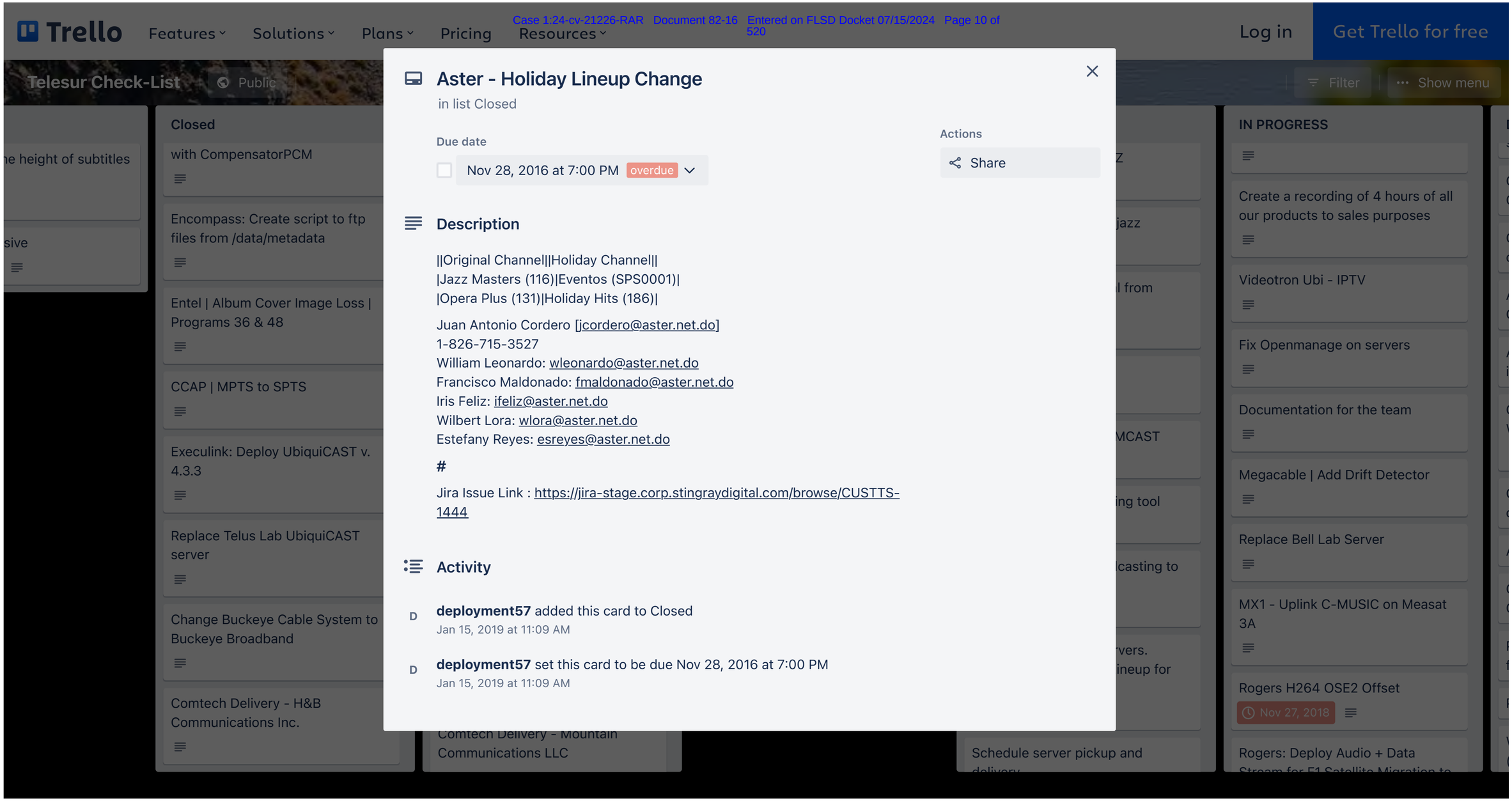
#

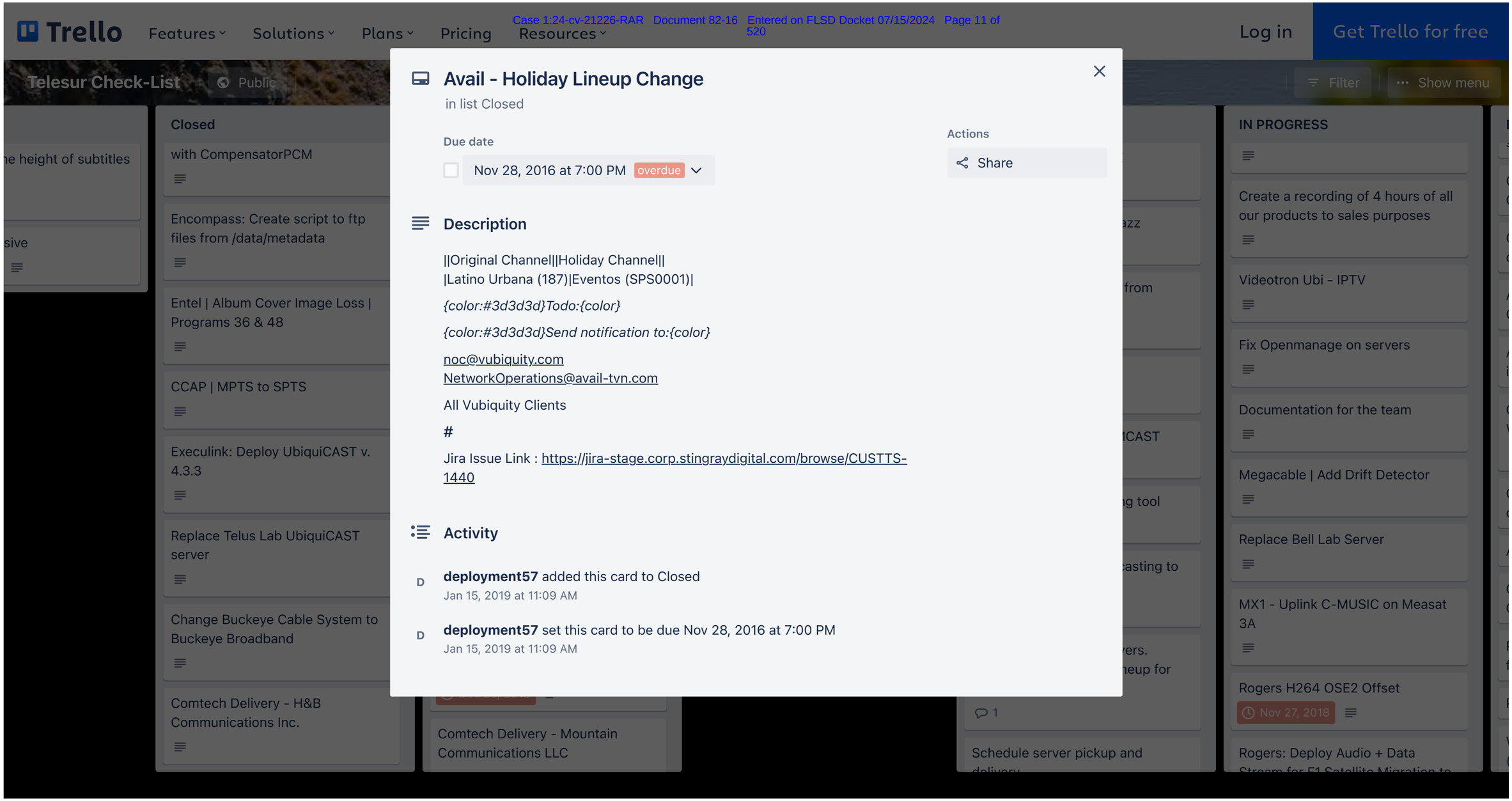
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-1459

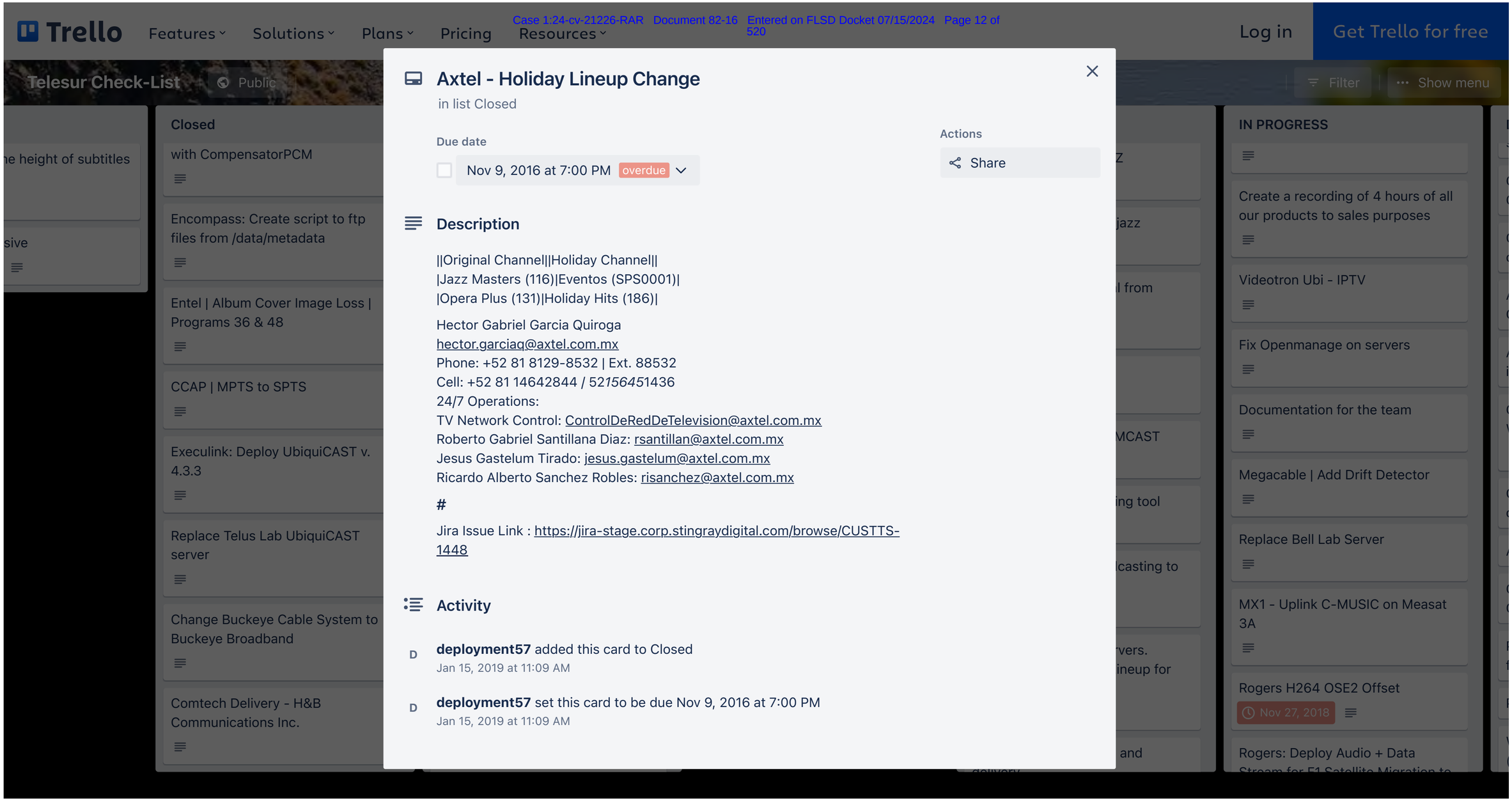
Activity

D **deployment57** added this card to Closed
Jan 15, 2019 at 11:09 AM

D **deployment57** set this card to be due Jan 3, 2017 at 7:00 PM
Jan 15, 2019 at 11:09 AM


Trello
Features
Solutions
Plans
Pricing
Resources
Log in
Get Trello for free
Telesur Check-List
Public
Filter
Show menu
Closed
with CompensatorPCM
Encompass: Create script to ftp files from /data/metadata
Entel | Album Cover Image Loss | Programs 36 & 48
CCAP | MPTS to SPTS
Execulink: Deploy UbiquiCAST v. 4.3.3
Replace Telus Lab UbiquiCAST server
Change Buckeye Cable System to Buckeye Broadband
Comtech Delivery - H&B Communications Inc.
Comtech Delivery - Mountain Communications LLC
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
MX1 - Uplink C-MUSIC on Measat 3A
Rogers H264 OSE2 Offset
Nov 27, 2018
Rogers: Deploy Audio + Data
Schedule server pickup and
Aster - Holiday Lineup Change
in list Closed
Due date
Nov 28, 2016 at 7:00 PM overdue
Actions
Share
Description
	Original Channel		Holiday Channel	
Jazz Masters (116)	Eventos (SPS0001)
Opera Plus (131)	Holiday Hits (186)
Juan Antonio Cordero [jcordero@aster.net.do]
1-826-715-3527
William Leonardo: wleonardo@aster.net.do
Francisco Maldonado: fmaldonado@aster.net.do
Iris Feliz: ifeliz@aster.net.do
Wilbert Lora: wlora@aster.net.do
Estefany Reyes: esreyes@aster.net.do
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-1444
Activity
deployment57 added this card to Closed
Jan 15, 2019 at 11:09 AM
deployment57 set this card to be due Nov 28, 2016 at 7:00 PM
Jan 15, 2019 at 11:09 AM


Trello
Features
Solutions
Plans
Pricing
Resources
Log in
Get Trello for free
Telesur Check-List
Public
Filter
Show menu
Closed
with CompensatorPCM
Encompass: Create script to ftp files from /data/metadata
Entel | Album Cover Image Loss | Programs 36 & 48
CCAP | MPTS to SPTS
Execulink: Deploy UbiquiCAST v. 4.3.3
Replace Telus Lab UbiquiCAST server
Change Buckeye Cable System to Buckeye Broadband
Comtech Delivery - H&B Communications Inc.
Comtech Delivery - Mountain Communications LLC
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
MX1 - Uplink C-MUSIC on Measat 3A
Rogers H264 OSE2 Offset
Nov 27, 2018
Rogers: Deploy Audio + Data
Schedule server pickup and
Avail - Holiday Lineup Change
in list Closed
Due date
Nov 28, 2016 at 7:00 PM overdue
Actions
Share
Description
||Original Channel||Holiday Channel||
|Latino Urbana (187)|Eventos (SPS0001)|
{color:#3d3d3d}Todo:{color}
{color:#3d3d3d}Send notification to:{color}
noc@vubiquity.com
NetworkOperations@avail-tvn.com
All Vubiquity Clients
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-1440
Activity
deployment57 added this card to Closed
Jan 15, 2019 at 11:09 AM
deployment57 set this card to be due Nov 28, 2016 at 7:00 PM
Jan 15, 2019 at 11:09 AM


Trello
Features
Solutions
Plans
Pricing
Resources
Log in
Get Trello for free
Telesur Check-List
Public
Filter
Show menu
Closed
with CompensatorPCM
Encompass: Create script to ftp files from /data/metadata
Entel | Album Cover Image Loss | Programs 36 & 48
CCAP | MPTS to SPTS
Execulink: Deploy UbiquiCAST v. 4.3.3
Replace Telus Lab UbiquiCAST server
Change Buckeye Cable System to Buckeye Broadband
Comtech Delivery - H&B Communications Inc.
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
MX1 - Uplink C-MUSIC on Measat 3A
Rogers H264 OSE2 Offset
Nov 27, 2018
Rogers: Deploy Audio + Data
Axtel - Holiday Lineup Change
in list Closed
Due date
Nov 9, 2016 at 7:00 PM
overdue
Actions
Share
Description
	Original Channel		Holiday Channel	
Jazz Masters (116)	Eventos (SPS0001)
Opera Plus (131)	Holiday Hits (186)
Hector Gabriel Garcia Quiroga
hector.garciaq@axtel.com.mx
Phone: +52 81 8129-8532 | Ext. 88532
Cell: +52 81 14642844 / 52156451436
24/7 Operations:
TV Network Control: ControlDeRedDeTelevision@axtel.com.mx
Roberto Gabriel Santillana Diaz: rsantillan@axtel.com.mx
Jesus Gastelum Tirado: jesus.gastelum@axtel.com.mx
Ricardo Alberto Sanchez Robles: risanchez@axtel.com.mx
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-1448
Activity
deployment57 added this card to Closed
Jan 15, 2019 at 11:09 AM
deployment57 set this card to be due Nov 9, 2016 at 7:00 PM
Jan 15, 2019 at 11:09 AM

BELD - Comtech

in list Closed

Description

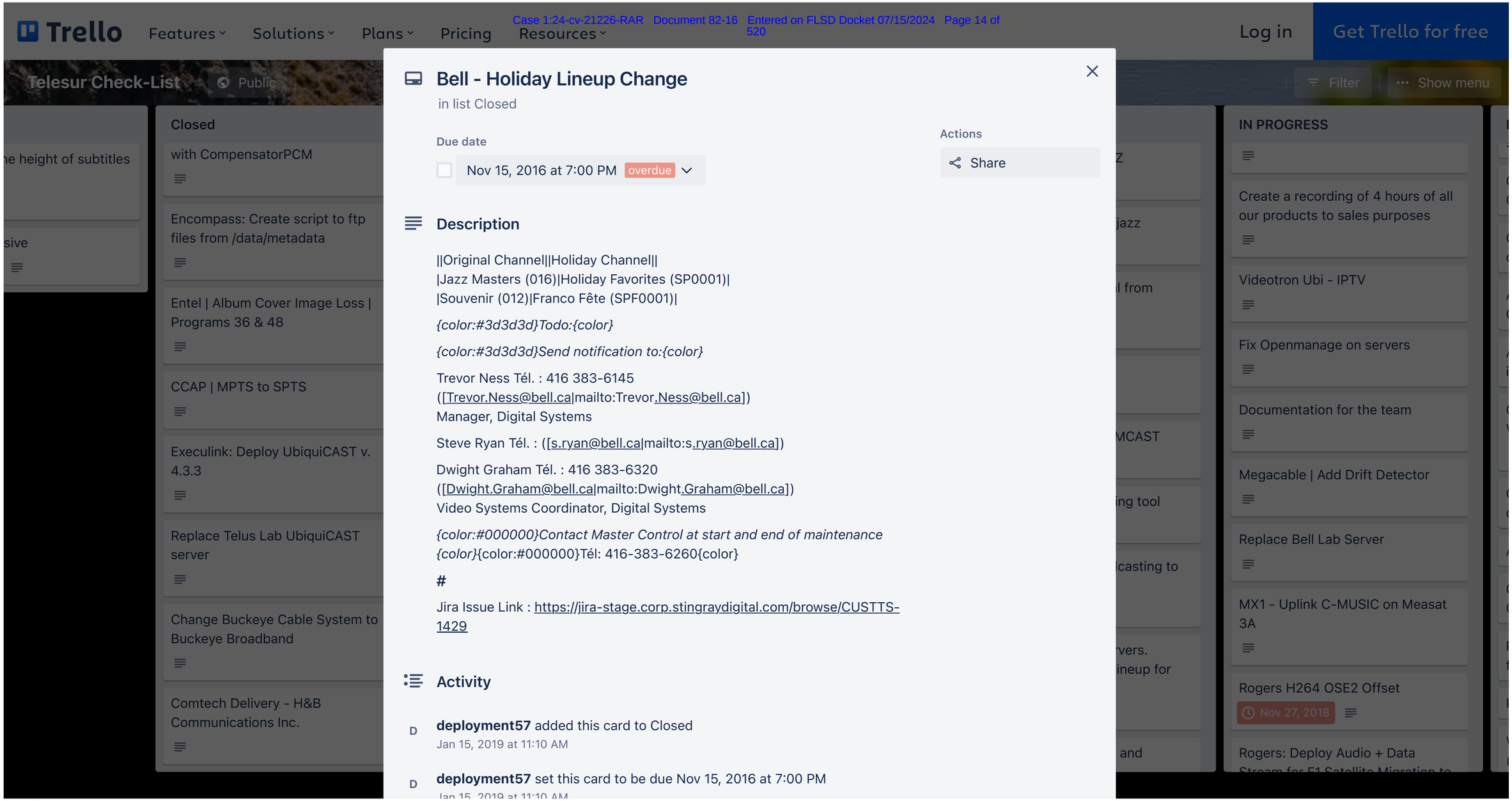
Tom Bicica
150 Potter Road,
Braintree,
MA 02184,

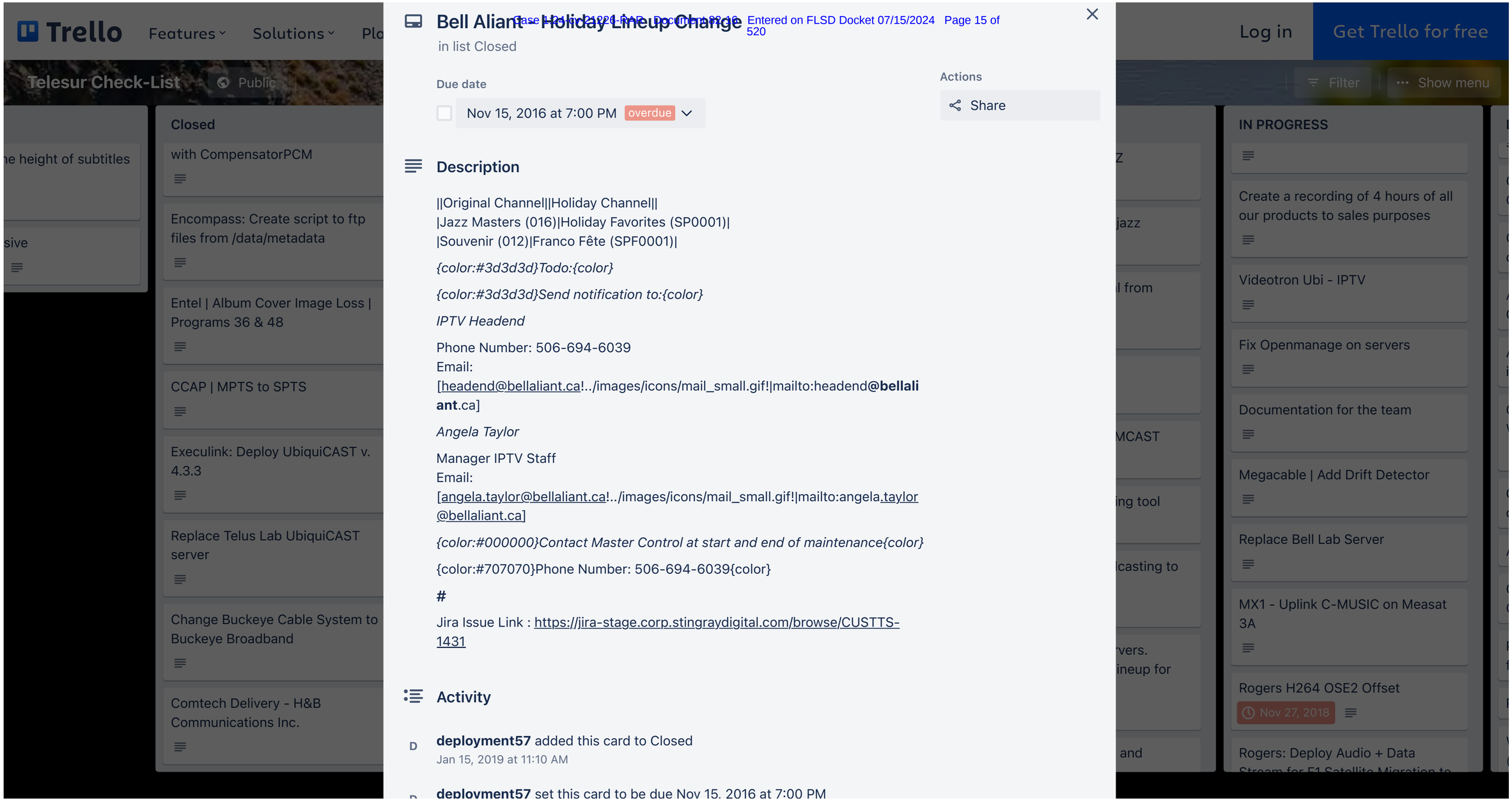
#

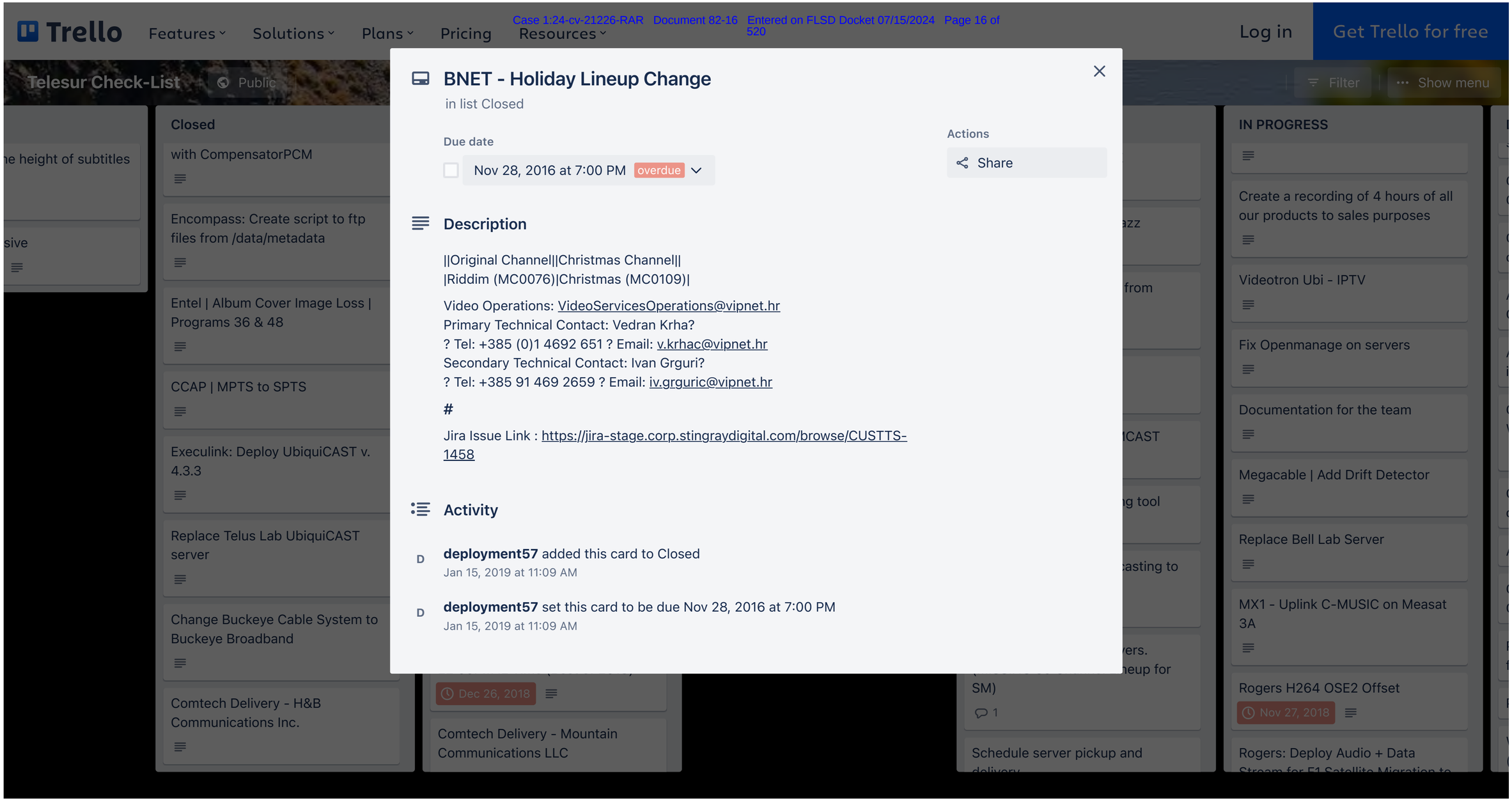
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-530

Activity

D **deployment57** added this card to Closed
Jan 15, 2019 at 11:25 AM


Trello
Features
Solutions
Plans
Pricing
Resources
Log in
Get Trello for free
Telesur Check-List
Public
Filter
Show menu
Closed
with CompensatorPCM
Encompass: Create script to ftp files from /data/metadata
Entel | Album Cover Image Loss | Programs 36 & 48
CCAP | MPTS to SPTS
Execulink: Deploy UbiquiCAST v. 4.3.3
Replace Telus Lab UbiquiCAST server
Change Buckeye Cable System to Buckeye Broadband
Comtech Delivery - H&B Communications Inc.
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
MX1 - Uplink C-MUSIC on Measat 3A
Rogers H264 OSE2 Offset
Nov 27, 2018
Rogers: Deploy Audio + Data
Bell - Holiday Lineup Change
in list Closed
Due date
Nov 15, 2016 at 7:00 PM
overdue
Actions
Share
Description
	Original Channel		Holiday Channel	
Jazz Masters (016)	Holiday Favorites (SP0001)
Souvenir (012)	Franco Fête (SPF0001)
{color:#3d3d3d}Todo:{color}
{color:#3d3d3d}Send notification to:{color}
Trevor Ness Tél. : 416 383-6145
([Trevor.Ness@bell.ca|mailto:Trevor.Ness@bell.ca])
Manager, Digital Systems
Steve Ryan Tél. : ([s.ryan@bell.ca|mailto:s.ryan@bell.ca])
Dwight Graham Tél. : 416 383-6320
([Dwight.Graham@bell.ca|mailto:Dwight.Graham@bell.ca])
Video Systems Coordinator, Digital Systems
{color:#000000}Contact Master Control at start and end of maintenance
{color}{color:#000000}Tél: 416-383-6260{color}
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-1429
Activity
deployment57 added this card to Closed
Jan 15, 2019 at 11:10 AM
deployment57 set this card to be due Nov 15, 2016 at 7:00 PM


Trello
Features
Solutions
Telesur Check-List
Public
Closed
with CompensatorPCM
Encompass: Create script to ftp files from /data/metadata
Entel | Album Cover Image Loss | Programs 36 & 48
CCAP | MPTS to SPTS
Execulink: Deploy UbiquiCAST v. 4.3.3
Replace Telus Lab UbiquiCAST server
Change Buckeye Cable System to Buckeye Broadband
Comtech Delivery - H&B Communications Inc.
Bell Aliant - Holiday Lineup Change
in list Closed
Due date
Nov 15, 2016 at 7:00 PM
overdue
Actions
Share
Description
	Original Channel		Holiday Channel	
Jazz Masters (016)	Holiday Favorites (SP0001)
Souvenir (012)	Franco Fête (SPF0001)
{color:#3d3d3d}Todo:{color}
{color:#3d3d3d}Send notification to:{color}
IPTV Headend
Phone Number: 506-694-6039
Email:
[headend@bellaliant.ca!../images/icons/mail_small.gif!|mailto:headend@bellaliant.ca]
Angela Taylor
Manager IPTV Staff
Email:
[angela.taylor@bellaliant.ca!../images/icons/mail_small.gif!|mailto:angela.taylor@bellaliant.ca]
{color:#000000}Contact Master Control at start and end of maintenance{color}
{color:#707070}Phone Number: 506-694-6039{color}
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-1431
Activity
deployment57 added this card to Closed
Jan 15, 2019 at 11:10 AM
deployment57 set this card to be due Nov 15, 2016 at 7:00 PM
Log in
Get Trello for free
Filter
Show menu
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
MX1 - Uplink C-MUSIC on Measat 3A
Rogers H264 OSE2 Offset
Nov 27, 2018
Rogers: Deploy Audio + Data


Trello
Features
Solutions
Plans
Pricing
Resources
Log in
Get Trello for free
Telesur Check-List
Public
Filter
Show menu
Closed
with CompensatorPCM
Encompass: Create script to ftp files from /data/metadata
Entel | Album Cover Image Loss | Programs 36 & 48
CCAP | MPTS to SPTS
Execulink: Deploy UbiquiCAST v. 4.3.3
Replace Telus Lab UbiquiCAST server
Change Buckeye Cable System to Buckeye Broadband
Comtech Delivery - H&B Communications Inc.
Dec 26, 2018
Comtech Delivery - Mountain Communications LLC
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
MX1 - Uplink C-MUSIC on Measat 3A
Rogers H264 OSE2 Offset
Nov 27, 2018
Rogers: Deploy Audio + Data
BNET - Holiday Lineup Change
in list Closed
Due date
Nov 28, 2016 at 7:00 PM overdue
Actions
Share
Description
||Original Channel||Christmas Channel||
|Riddim (MC0076)|Christmas (MC0109)|
Video Operations: VideoServicesOperations@vipnet.hr
Primary Technical Contact: Vedran Krha?
? Tel: +385 (0)1 4692 651 ? Email: v.krhac@vipnet.hr
Secondary Technical Contact: Ivan Grguri?
? Tel: +385 91 469 2659 ? Email: iv.grguric@vipnet.hr
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-1458
Activity
deployment57 added this card to Closed
Jan 15, 2019 at 11:09 AM
deployment57 set this card to be due Nov 28, 2016 at 7:00 PM
Jan 15, 2019 at 11:09 AM

BTC - Comtech

in list Closed

Description

My mailing address:

BTC
%Stephen Jones
159 West 2nd Street
P.O. Box 209
LaCenter, KY 42056

Just let me know what all I need to do.

Thanks!

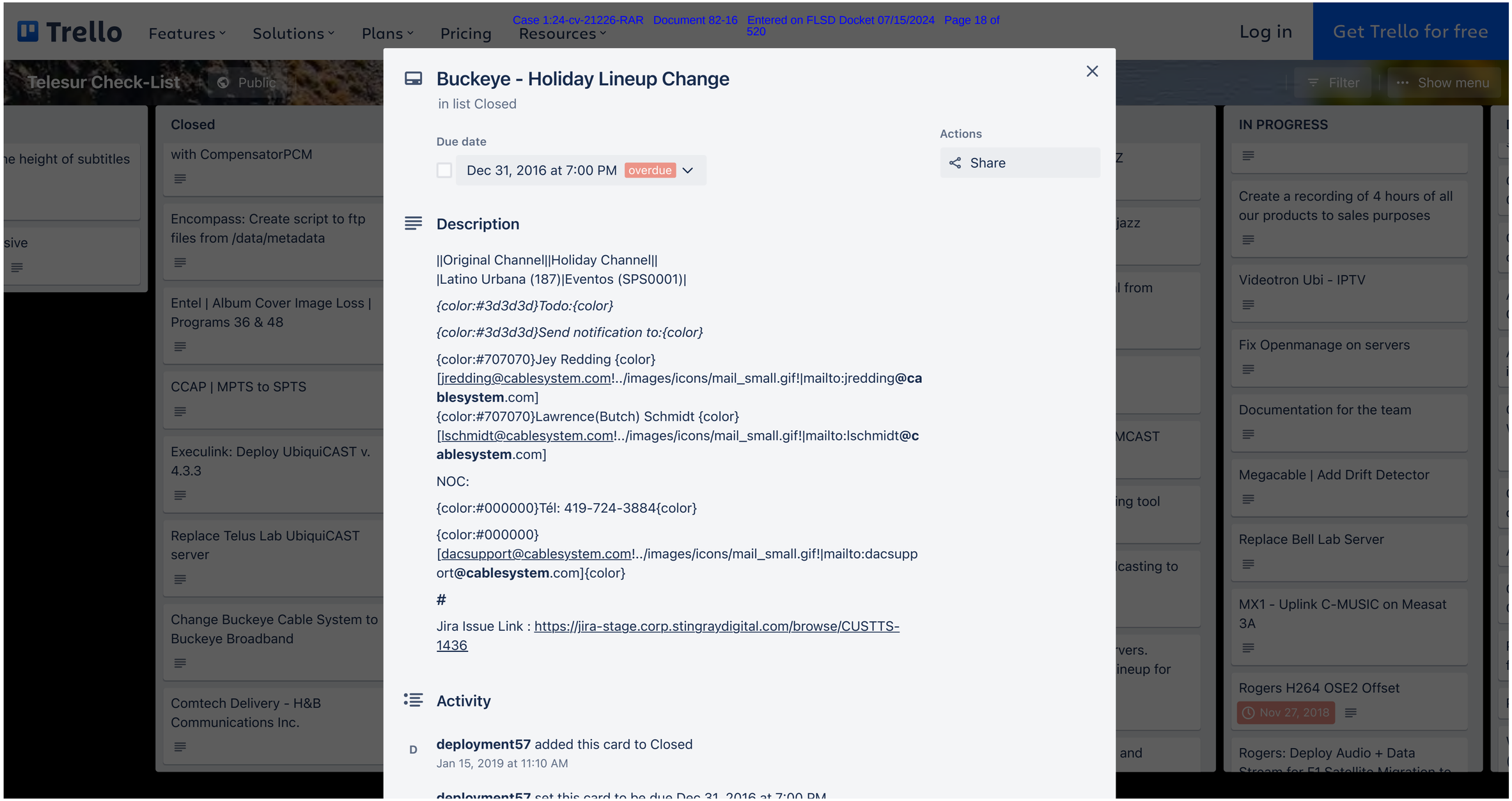
Stephen P. Jones II
Information Technology Network Manager
email: stephen.jones@btc.coop
Phone: 270.665.5186
Fax: 270.665.9186

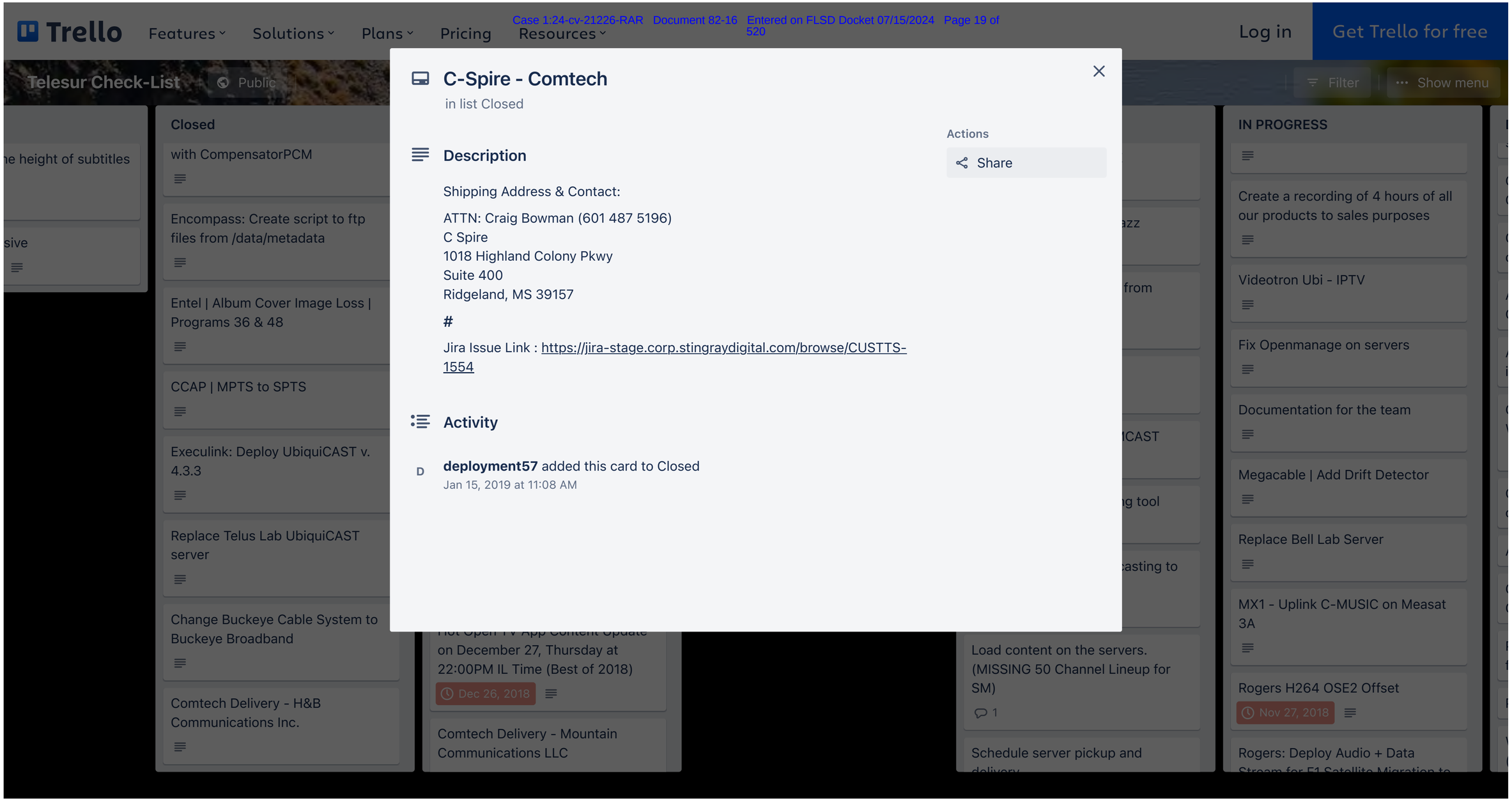
#

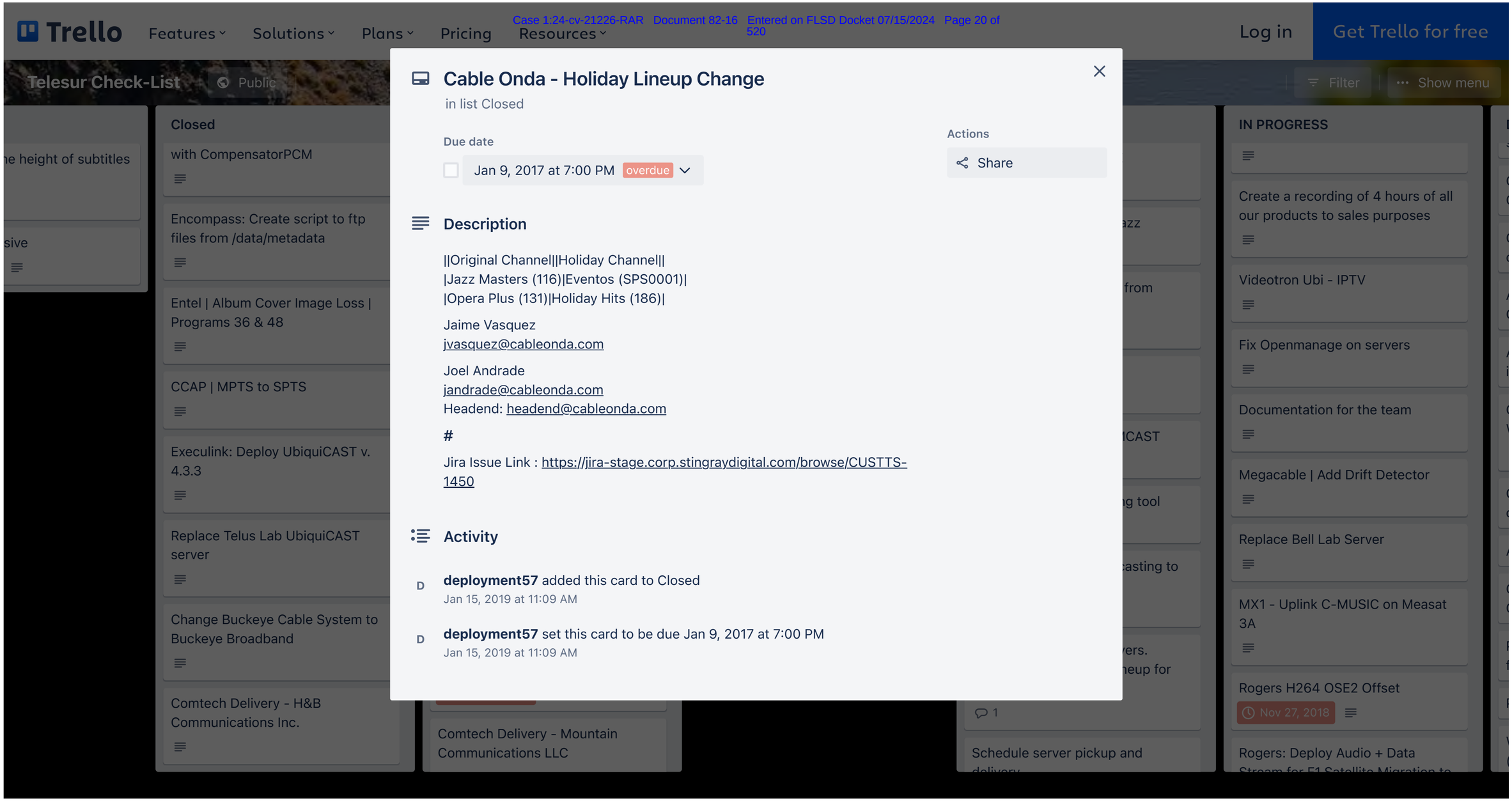
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-673

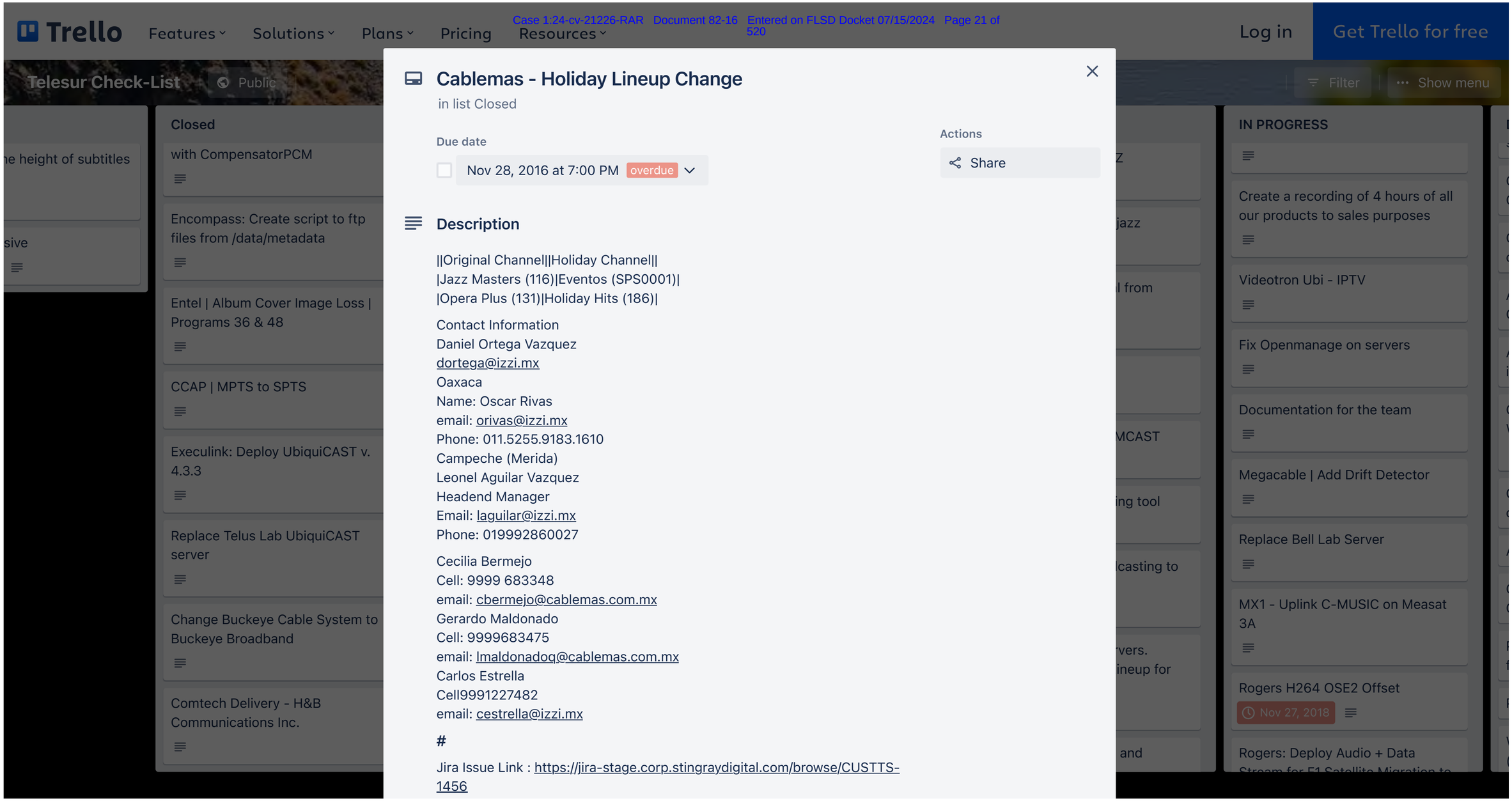
Activity

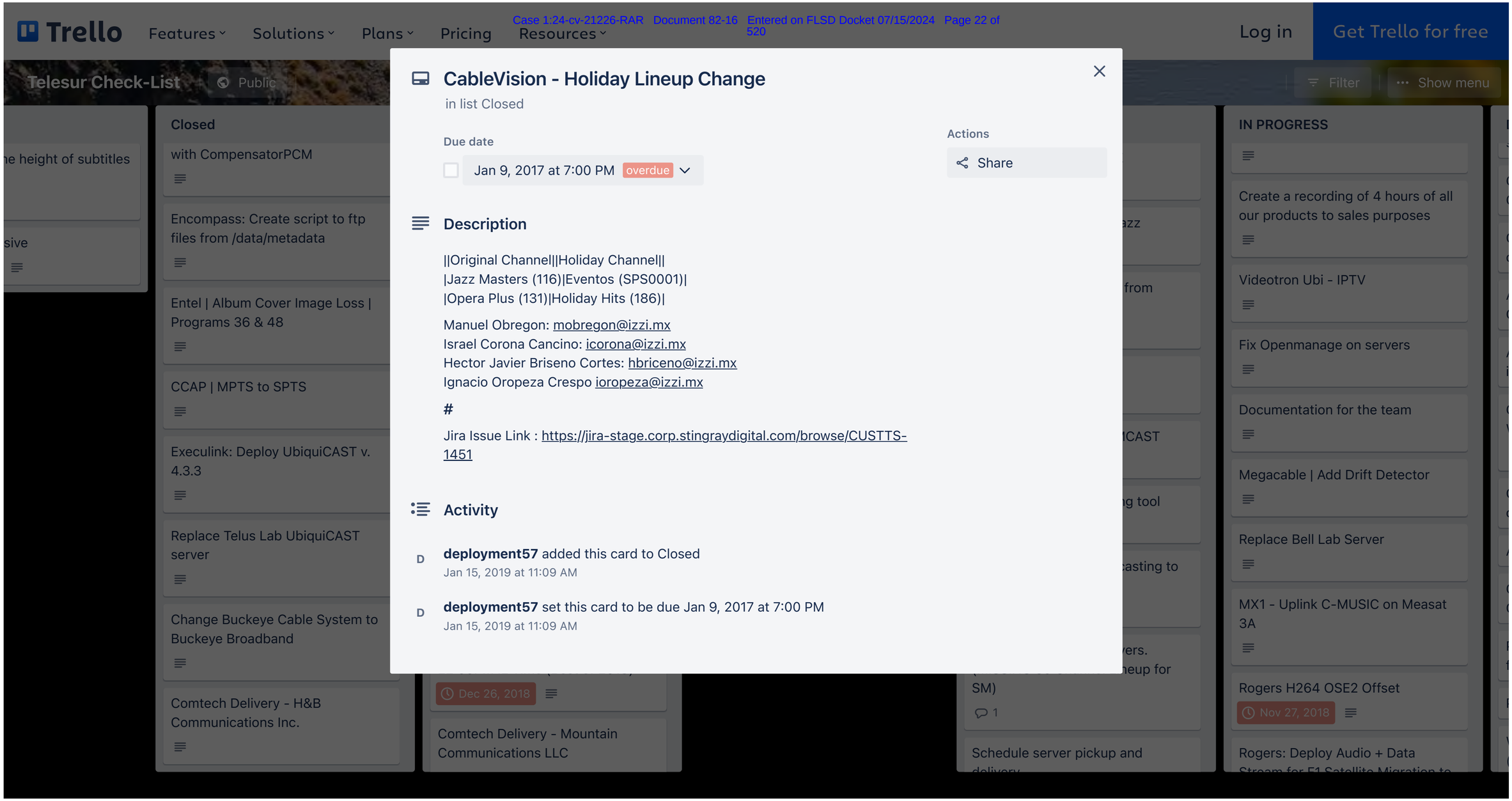
D **deployment57** added this card to Closed
Jan 15, 2019 at 11:23 AM

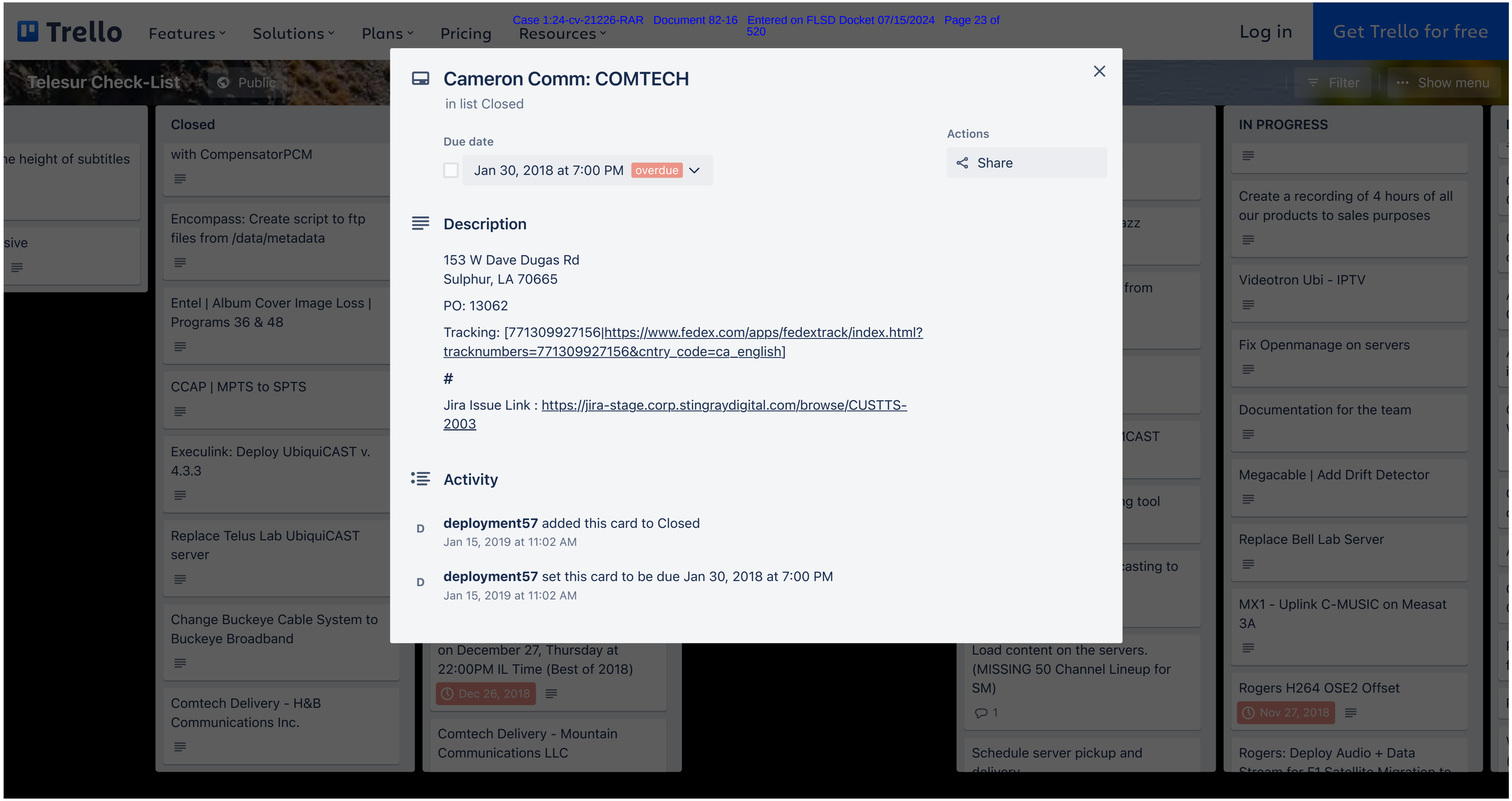

Trello
Features
Solutions
Plans
Pricing
Resources
Log in
Get Trello for free
Telesur Check-List
Public
Filter
Show menu
Closed
with CompensatorPCM
Encompass: Create script to ftp files from /data/metadata
Entel | Album Cover Image Loss | Programs 36 & 48
CCAP | MPTS to SPTS
Execulink: Deploy UbiquiCAST v. 4.3.3
Replace Telus Lab UbiquiCAST server
Change Buckeye Cable System to Buckeye Broadband
Comtech Delivery - H&B Communications Inc.
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
MX1 - Uplink C-MUSIC on Measat 3A
Rogers H264 OSE2 Offset
Nov 27, 2018
Rogers: Deploy Audio + Data
Buckeye - Holiday Lineup Change
in list Closed
Due date
Dec 31, 2016 at 7:00 PM overdue
Actions
Share
Description
||Original Channel||Holiday Channel||
|Latino Urbana (187)|Eventos (SPS0001)|
{color:#3d3d3d}Todo:{color}
{color:#3d3d3d}Send notification to:{color}
{color:#707070}Jey Redding {color}
[jredding@cablesystem.com!../images/icons/mail_small.gif!|mailto:jredding@cablesystem.com]
{color:#707070}Lawrence(Butch) Schmidt {color}
[lschmidt@cablesystem.com!../images/icons/mail_small.gif!|mailto:lschmidt@cablesystem.com]
NOC:
{color:#000000}Tél: 419-724-3884{color}
{color:#000000}
[dacsupport@cablesystem.com!../images/icons/mail_small.gif!|mailto:dacsupport@cablesystem.com]{color}
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-1436
Activity
deployment57 added this card to Closed
Jan 15, 2019 at 11:10 AM


Trello
Features
Solutions
Plans
Pricing
Resources
Log in
Get Trello for free
Telesur Check-List
Public
Filter
Show menu
C-Spire - Comtech
in list Closed
Description
Shipping Address & Contact:
ATTN: Craig Bowman (601 487 5196)
C Spire
1018 Highland Colony Pkwy
Suite 400
Ridgeland, MS 39157
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-1554
Activity
deployment57 added this card to Closed
Jan 15, 2019 at 11:08 AM
Actions
Share
Closed
with CompensatorPCM
Encompass: Create script to ftp files from /data/metadata
Entel | Album Cover Image Loss | Programs 36 & 48
CCAP | MPTS to SPTS
Execulink: Deploy UbiquiCAST v. 4.3.3
Replace Telus Lab UbiquiCAST server
Change Buckeye Cable System to Buckeye Broadband
Comtech Delivery - H&B Communications Inc.
on December 27, Thursday at 22:00PM IL Time (Best of 2018)
Dec 26, 2018
Comtech Delivery - Mountain Communications LLC
Load content on the servers. (MISSING 50 Channel Lineup for SM)
1
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
MX1 - Uplink C-MUSIC on Measat 3A
Rogers H264 OSE2 Offset
Nov 27, 2018


Trello
Features
Solutions
Plans
Pricing
Resources
Log in
Get Trello for free
Telesur Check-List
Public
Filter
Show menu
Closed
with CompensatorPCM
Encompass: Create script to ftp files from /data/metadata
Entel | Album Cover Image Loss | Programs 36 & 48
CCAP | MPTS to SPTS
Execulink: Deploy UbiquiCAST v. 4.3.3
Replace Telus Lab UbiquiCAST server
Change Buckeye Cable System to Buckeye Broadband
Comtech Delivery - H&B Communications Inc.
Comtech Delivery - Mountain Communications LLC
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
MX1 - Uplink C-MUSIC on Measat 3A
Rogers H264 OSE2 Offset
Nov 27, 2018
Rogers: Deploy Audio + Data
Schedule server pickup and
Cable Onda - Holiday Lineup Change
in list Closed
Due date
Jan 9, 2017 at 7:00 PM
overdue
Actions
Share
Description
	Original Channel		Holiday Channel	
Jazz Masters (116)	Eventos (SPS0001)
Opera Plus (131)	Holiday Hits (186)
Jaime Vasquez
jvasquez@cableonda.com
Joel Andrade
jandrade@cableonda.com
Headend: headend@cableonda.com
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-1450
Activity
deployment57 added this card to Closed
Jan 15, 2019 at 11:09 AM
deployment57 set this card to be due Jan 9, 2017 at 7:00 PM
Jan 15, 2019 at 11:09 AM


Trello
Features
Solutions
Plans
Pricing
Resources
Log in
Get Trello for free
Telesur Check-List
Public
Filter
Show menu
Closed
with CompensatorPCM
Encompass: Create script to ftp files from /data/metadata
Entel | Album Cover Image Loss | Programs 36 & 48
CCAP | MPTS to SPTS
Execulink: Deploy UbiquiCAST v. 4.3.3
Replace Telus Lab UbiquiCAST server
Change Buckeye Cable System to Buckeye Broadband
Comtech Delivery - H&B Communications Inc.
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
MX1 - Uplink C-MUSIC on Measat 3A
Rogers H264 OSE2 Offset
Nov 27, 2018
Rogers: Deploy Audio + Data
Cablemas - Holiday Lineup Change
in list Closed
Due date
Nov 28, 2016 at 7:00 PM
overdue
Actions
Share
Description
	Original Channel		Holiday Channel	
Jazz Masters (116)	Eventos (SPS0001)
Opera Plus (131)	Holiday Hits (186)
Contact Information
Daniel Ortega Vazquez
dortega@izzi.mx
Oaxaca
Name: Oscar Rivas
email: orivas@izzi.mx
Phone: 011.5255.9183.1610
Campeche (Merida)
Leonel Aguilar Vazquez
Headend Manager
Email: laguilar@izzi.mx
Phone: 019992860027
Cecilia Bermejo
Cell: 9999 683348
email: cbermejo@cablemas.com.mx
Gerardo Maldonado
Cell: 9999683475
email: lmaldonadoq@cablemas.com.mx
Carlos Estrella
Cell9991227482
email: cestrella@izzi.mx
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-1456


Trello
Features
Solutions
Plans
Pricing
Resources
Log in
Get Trello for free
Telesur Check-List
Public
Filter
Show menu
Closed
with CompensatorPCM
Encompass: Create script to ftp files from /data/metadata
Entel | Album Cover Image Loss | Programs 36 & 48
CCAP | MPTS to SPTS
Execulink: Deploy UbiquiCAST v. 4.3.3
Replace Telus Lab UbiquiCAST server
Change Buckeye Cable System to Buckeye Broadband
Comtech Delivery - H&B Communications Inc.
Dec 26, 2018
Comtech Delivery - Mountain Communications LLC
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
MX1 - Uplink C-MUSIC on Measat 3A
Rogers H264 OSE2 Offset
Nov 27, 2018
Rogers: Deploy Audio + Data
CableVision - Holiday Lineup Change
in list Closed
Due date
Jan 9, 2017 at 7:00 PM overdue
Actions
Share
Description
	Original Channel		Holiday Channel	
Jazz Masters (116)	Eventos (SPS0001)
Opera Plus (131)	Holiday Hits (186)
Manuel Obregon: mobregon@izzi.mx
Israel Corona Cancino: icorona@izzi.mx
Hector Javier Briseno Cortes: hbriceno@izzi.mx
Ignacio Oropeza Crespo ioropeza@izzi.mx
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-1451
Activity
deployment57 added this card to Closed
Jan 15, 2019 at 11:09 AM
deployment57 set this card to be due Jan 9, 2017 at 7:00 PM
Jan 15, 2019 at 11:09 AM


Trello
Features
Solutions
Plans
Pricing
Resources
Log in
Get Trello for free
Telesur Check-List
Public
Filter
Show menu
Closed
with CompensatorPCM
Encompass: Create script to ftp files from /data/metadata
Entel | Album Cover Image Loss | Programs 36 & 48
CCAP | MPTS to SPTS
Execulink: Deploy UbiquiCAST v. 4.3.3
Replace Telus Lab UbiquiCAST server
Change Buckeye Cable System to Buckeye Broadband
Comtech Delivery - H&B Communications Inc.
Comtech Delivery - Mountain Communications LLC
on December 27, Thursday at 22:00PM IL Time (Best of 2018)
Dec 26, 2018
Load content on the servers. (MISSING 50 Channel Lineup for SM)
1
Schedule server pickup and
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
MX1 - Uplink C-MUSIC on Measat 3A
Rogers H264 OSE2 Offset
Nov 27, 2018
Rogers: Deploy Audio + Data
Cameron Comm: COMTECH
in list Closed
Due date
Jan 30, 2018 at 7:00 PM
overdue
Actions
Share
Description
153 W Dave Dugas Rd
Sulphur, LA 70665
PO: 13062
Tracking: [771309927156|https://www.fedex.com/apps/fedextrack/index.html?tracknumbers=771309927156&cntry_code=ca_english]
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-2003
Activity
deployment57 added this card to Closed
Jan 15, 2019 at 11:02 AM
deployment57 set this card to be due Jan 30, 2018 at 7:00 PM
Jan 15, 2019 at 11:02 AM

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Caribbean Co-op Cable - Client requesting help with equipment

in list Closed

Description

- Name: Paul Kennedy
- Email: paul.kennedy@digicelgroup.com
- Phone: 6493331220

#

Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-557

Activity

D **deployment57** added this card to Closed
Jan 15, 2019 at 11:25 AM

EGLA-TRELLO-000023

Page 293 of 1912 (IPR2025-00350)
Stingray Group Inc. et al v. Hernandez-Mondragon

Carr Communications, Inc. - Comtech

in list Closed

Description

Carr Communications, Inc.
4325 S Masten Rd.
Branch, MI 49402 USA

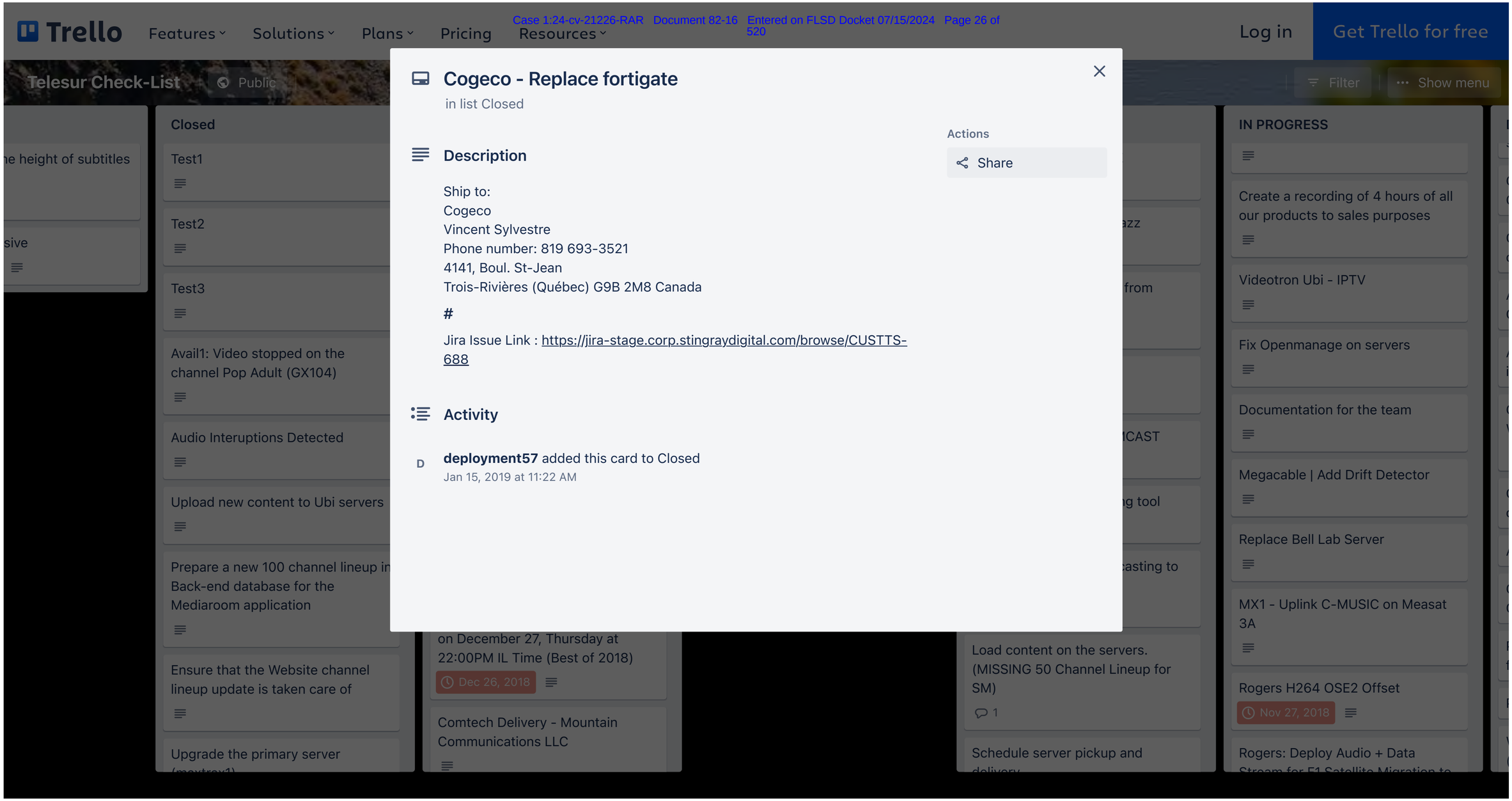
Technical Contact is:
Christopher Bogner
231-898-2244 office
231-690-6263 cell

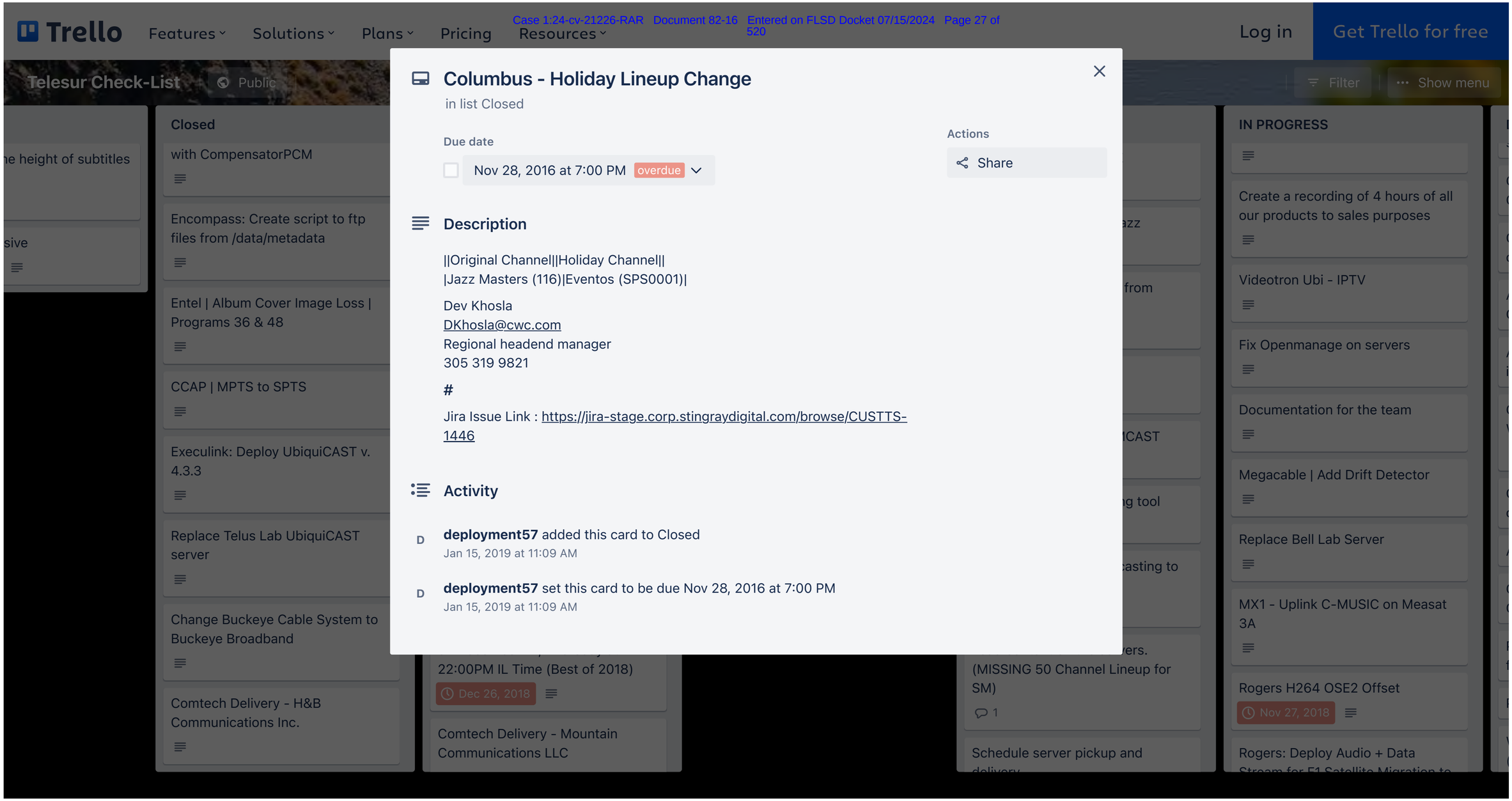
#

Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-325

Activity

D **deployment57** added this card to Closed
Jan 15, 2019 at 11:29 AM


Trello
Features
Solutions
Plans
Pricing
Resources
Log in
Get Trello for free
Telesur Check-List
Public
Filter
Show menu
Cogeco - Replace fortigate
in list Closed
Description
Ship to:
Cogeco
Vincent Sylvestre
Phone number: 819 693-3521
4141, Boul. St-Jean
Trois-Rivières (Québec) G9B 2M8 Canada
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-688
Activity
deployment57 added this card to Closed
Jan 15, 2019 at 11:22 AM
Actions
Share
Closed
Test1
Test2
Test3
Avail1: Video stopped on the channel Pop Adult (GX104)
Audio Interuptions Detected
Upload new content to Ubi servers
Prepare a new 100 channel lineup in Back-end database for the Mediaroom application
Ensure that the Website channel lineup update is taken care of
Upgrade the primary server
on December 27, Thursday at 22:00PM IL Time (Best of 2018)
Dec 26, 2018
Comtech Delivery - Mountain Communications LLC
Load content on the servers. (MISSING 50 Channel Lineup for SM)
1
Schedule server pickup and
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
MX1 - Uplink C-MUSIC on Measat 3A
Rogers H264 OSE2 Offset
Nov 27, 2018
Rogers: Deploy Audio + Data


Trello
Features
Solutions
Plans
Pricing
Resources
Log in
Get Trello for free
Telesur Check-List
Public
Filter
Show menu
Closed
with CompensatorPCM
Encompass: Create script to ftp files from /data/metadata
Entel | Album Cover Image Loss | Programs 36 & 48
CCAP | MPTS to SPTS
Execulink: Deploy UbiquiCAST v. 4.3.3
Replace Telus Lab UbiquiCAST server
Change Buckeye Cable System to Buckeye Broadband
Comtech Delivery - H&B Communications Inc.
22:00PM IL Time (Best of 2018)
Dec 26, 2018
Comtech Delivery - Mountain Communications LLC
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
MX1 - Uplink C-MUSIC on Measat 3A
Rogers H264 OSE2 Offset
Nov 27, 2018
Rogers: Deploy Audio + Data
(MISSING 50 Channel Lineup for SM)
1
Schedule server pickup and
Columbus - Holiday Lineup Change
in list Closed
Due date
Nov 28, 2016 at 7:00 PM
overdue
Actions
Share
Description
||Original Channel||Holiday Channel||
|Jazz Masters (116)|Eventos (SPS0001)|
Dev Khosla
DKhosla@cwc.com
Regional headend manager
305 319 9821
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-1446
Activity
deployment57 added this card to Closed
Jan 15, 2019 at 11:09 AM
deployment57 set this card to be due Nov 28, 2016 at 7:00 PM
Jan 15, 2019 at 11:09 AM

COMTECH -- Laguna Woods Village

in list Closed

Description

50 music channels via G28 (Mobile app support).

Deliver Comtech to:

Broadband
c/o John Nadal
23081 Via Campo Verde
Laguna Woods Ca. 92637

Tracking url:
https://www.fedex.com/apps/fedextrack/index.html?tracknumbers=772148950380&cntry_code=ca_english

(/) Create operator in stage DB
(/) Create operator in stage SVN
(!) Send logo to Andre, place in resource folder once he is done, sync resource folder
(/) Test app
(/) Push to prod

#

Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-2090

Activity

D **deployment57** added this card to Closed
Jan 15, 2019 at 11:01 AM

COMTECH -- NelsonvilleTV

in list Closed

Description

50 music channels via G28 (Mobile app support).

Deliver Comtech to:
NelsonvilleTV Cable
1 West Columbus st
Nelsonville Ohio 45764

Contact:Jim Wakefield 62765@nelsonvilletv.com

Tracking url: https://www.fedex.com/apps/fedextrack/index.html?tracknumbers=772293419879&cntry_code=ca_english

(/) Create operator in stage DB
(/) Create operator in stage SVN
(!) Send logo to Andre, place in resource folder once he is done, sync resource folder
(/) Test app
(/) Push to prod

#

Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-2111

Activity

D **deployment57** added this card to Closed
Jan 15, 2019 at 11:01 AM

EGLA-TRELLO-000028

COMTECH -- Riviera Utilities

in list Closed

Description

50 music channels via G28 (Mobile app support).

Deliver Comtech to:
Jeff Parker
251-424-8077
Riviera Utilities
108 North Poplar St. | Foley, Alabama 36535

Contact:jparker**@rivierautilities**.com

Tracking url: https://www.fedex.com/apps/fedextrack/index.html?tracknumbers=772188857993&cntry_code=ca_english

(/) Create operator in stage DB
(/) Create operator in stage SVN
(!) Send logo to Andre, place in resource folder once he is done, sync resource folder
(/) Test app
(/) Push to prod

#

Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-2096

Activity

D **deployment57** added this card to Closed
Jan 15, 2019 at 11:01 AM

EGLA-TRELLO-000029

COMTECH -- Sun Fiber

in list Closed

Description

50 music channels via G28 (Mobile app support).

Deliver Comtech to:
Sunset Fiber, LLC
Attn: Daniel Wells
333 Fraley Avenue
Duffield, Virginia 24244

Contact:Daniel Wells daniel@sunset-fiber.com + cherylsummers@leveragecableconsulting.com

Tracking url: https://www.fedex.com/apps/fedextrack/index.html?tracknumbers=772402827710&cntry_code=ca_english

(/) Create operator in stage DB
(/) Create operator in stage SVN
(!) Send logo to Andre, place in resource folder once he is done, sync resource folder
(!) Test app
(!) Push to prod

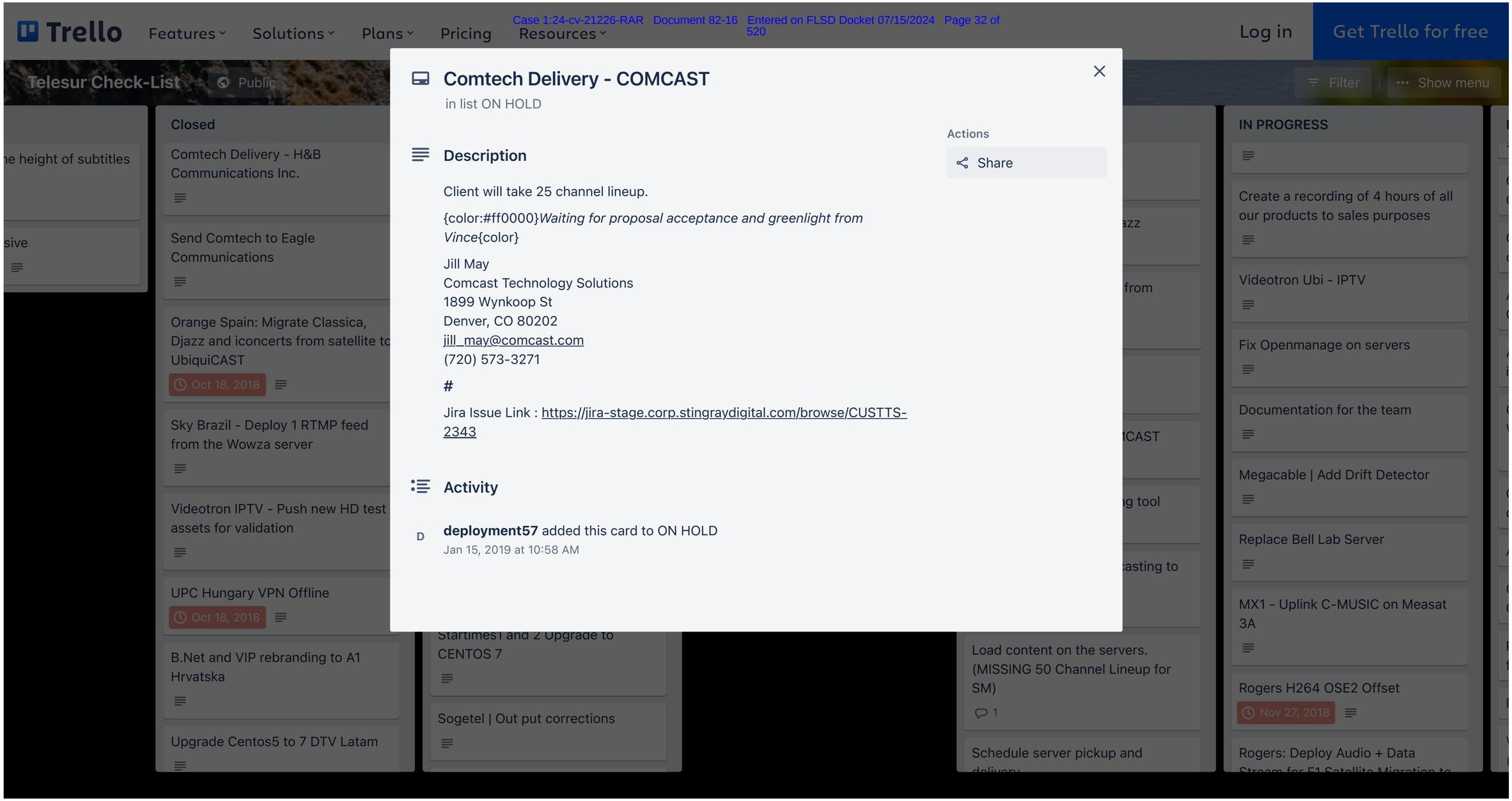
#

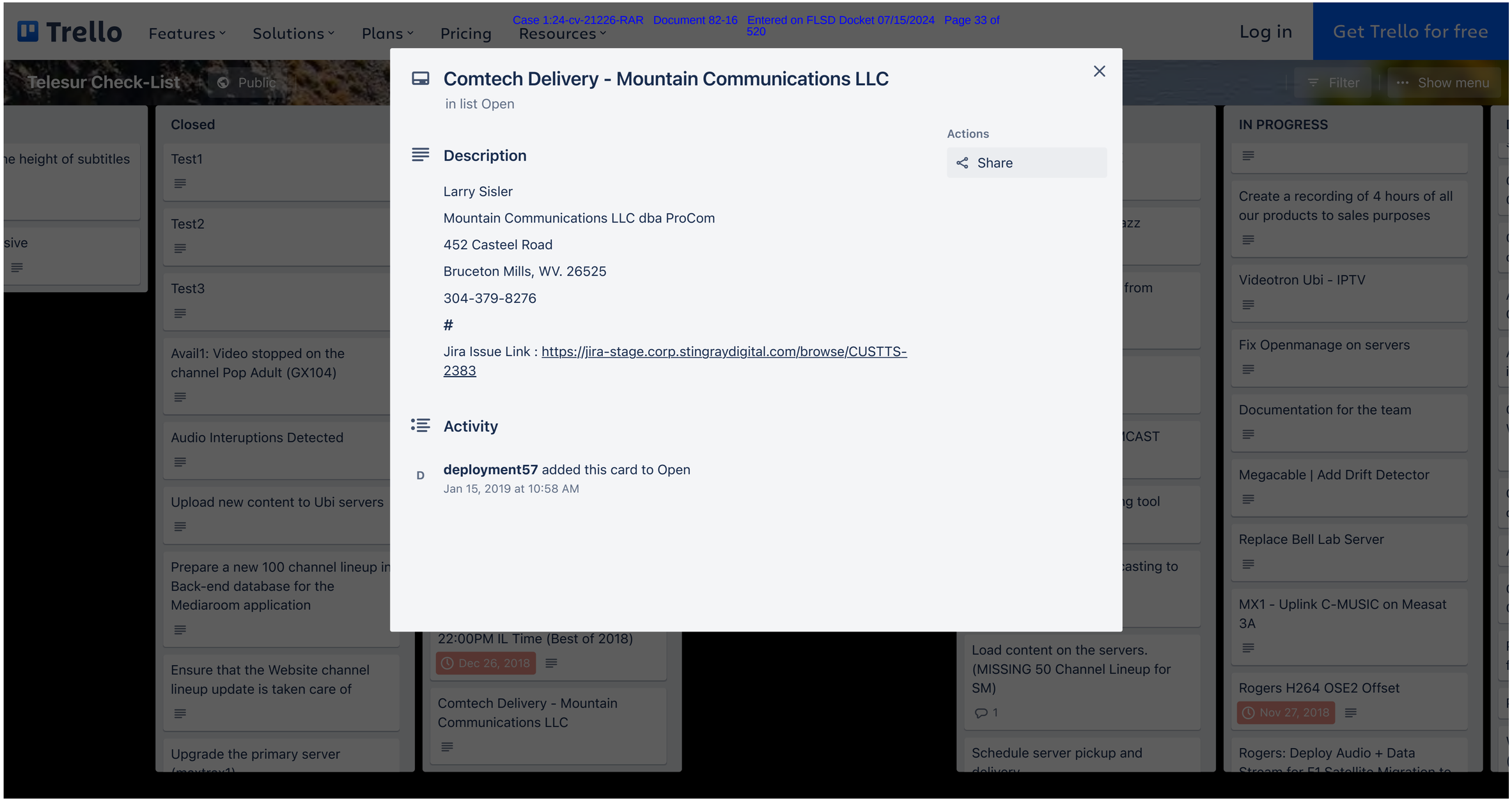
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-2133

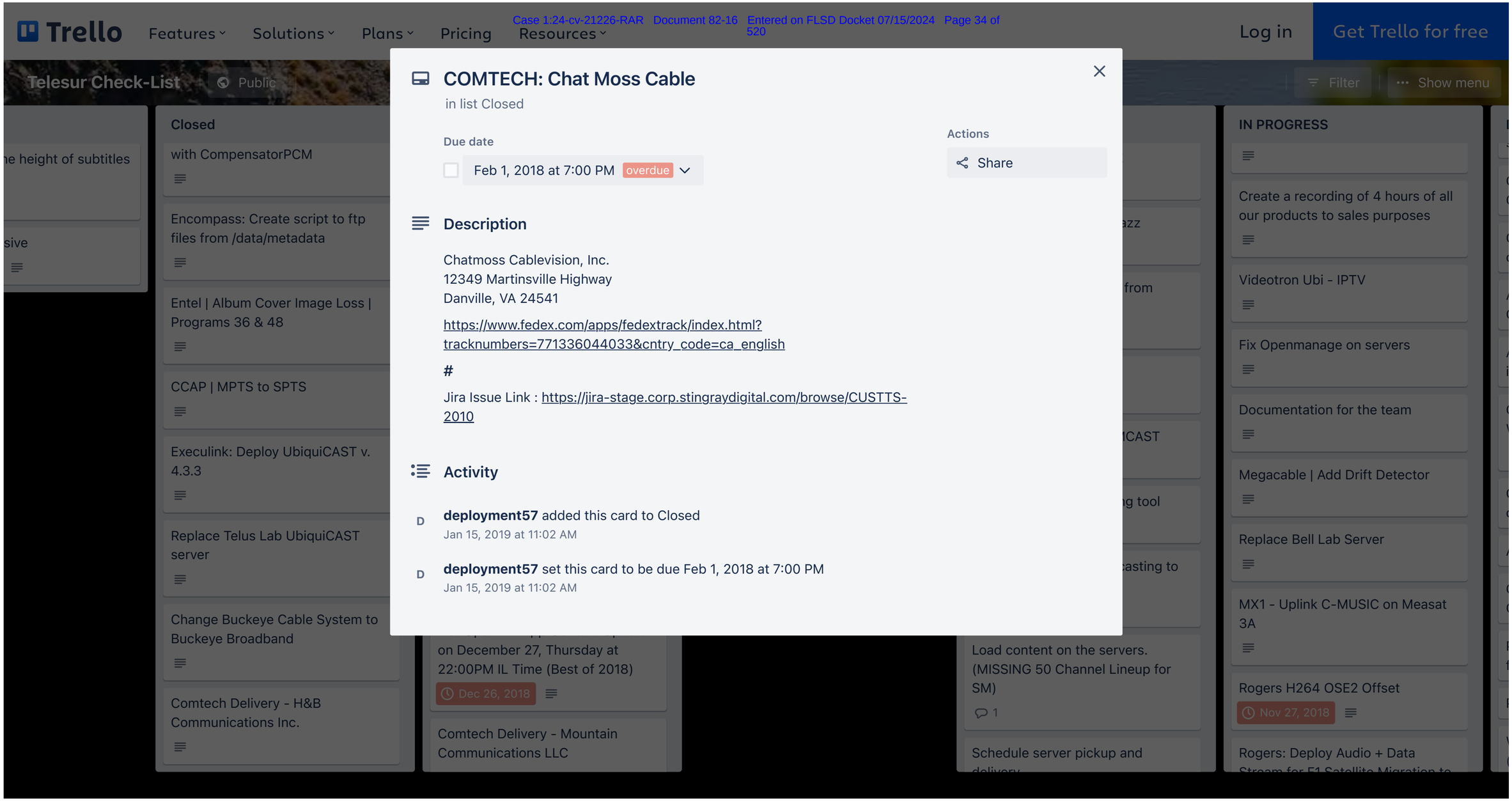
Activity

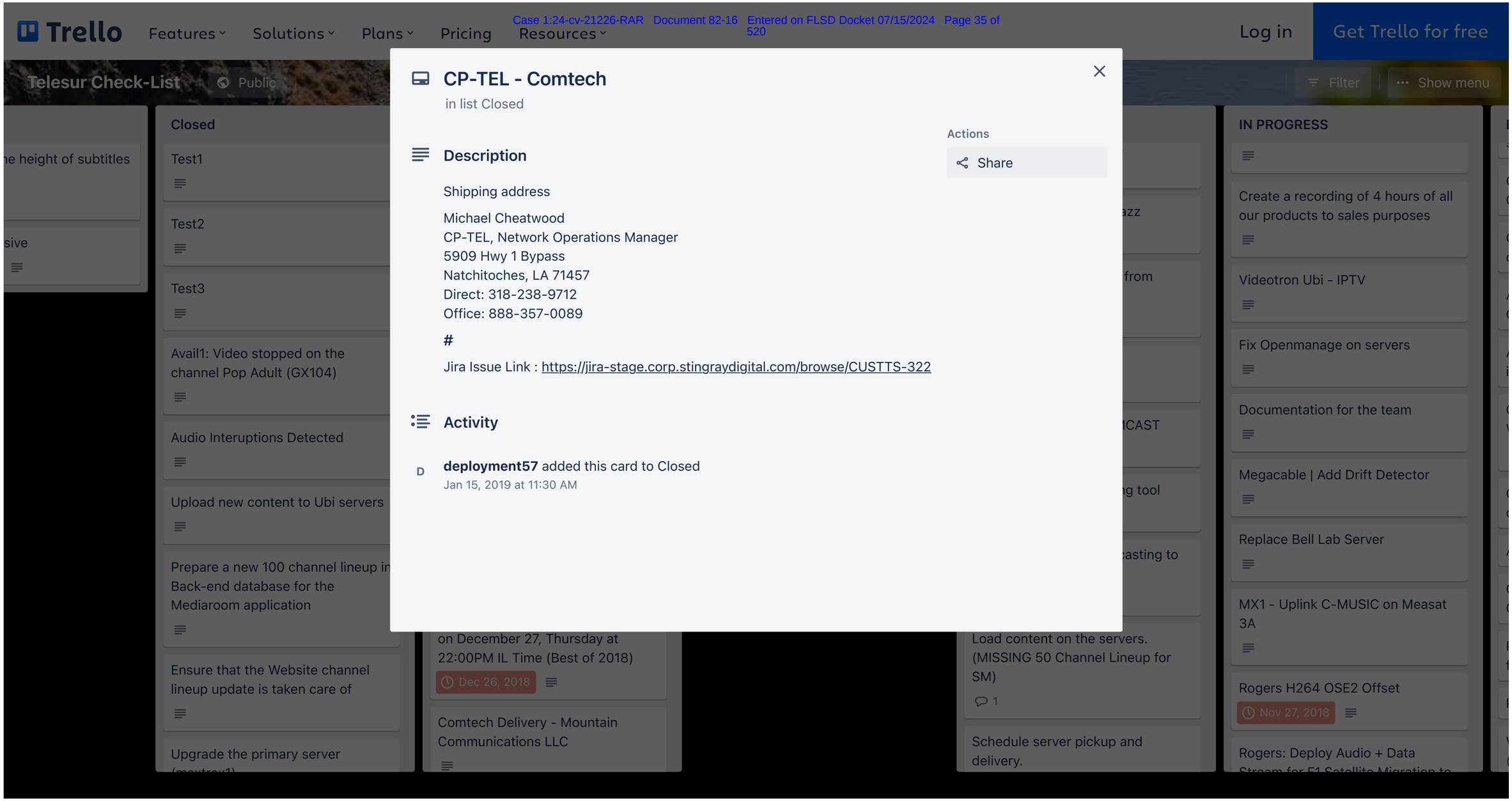
D **deployment57** added this card to Closed
Jan 15, 2019 at 11:00 AM

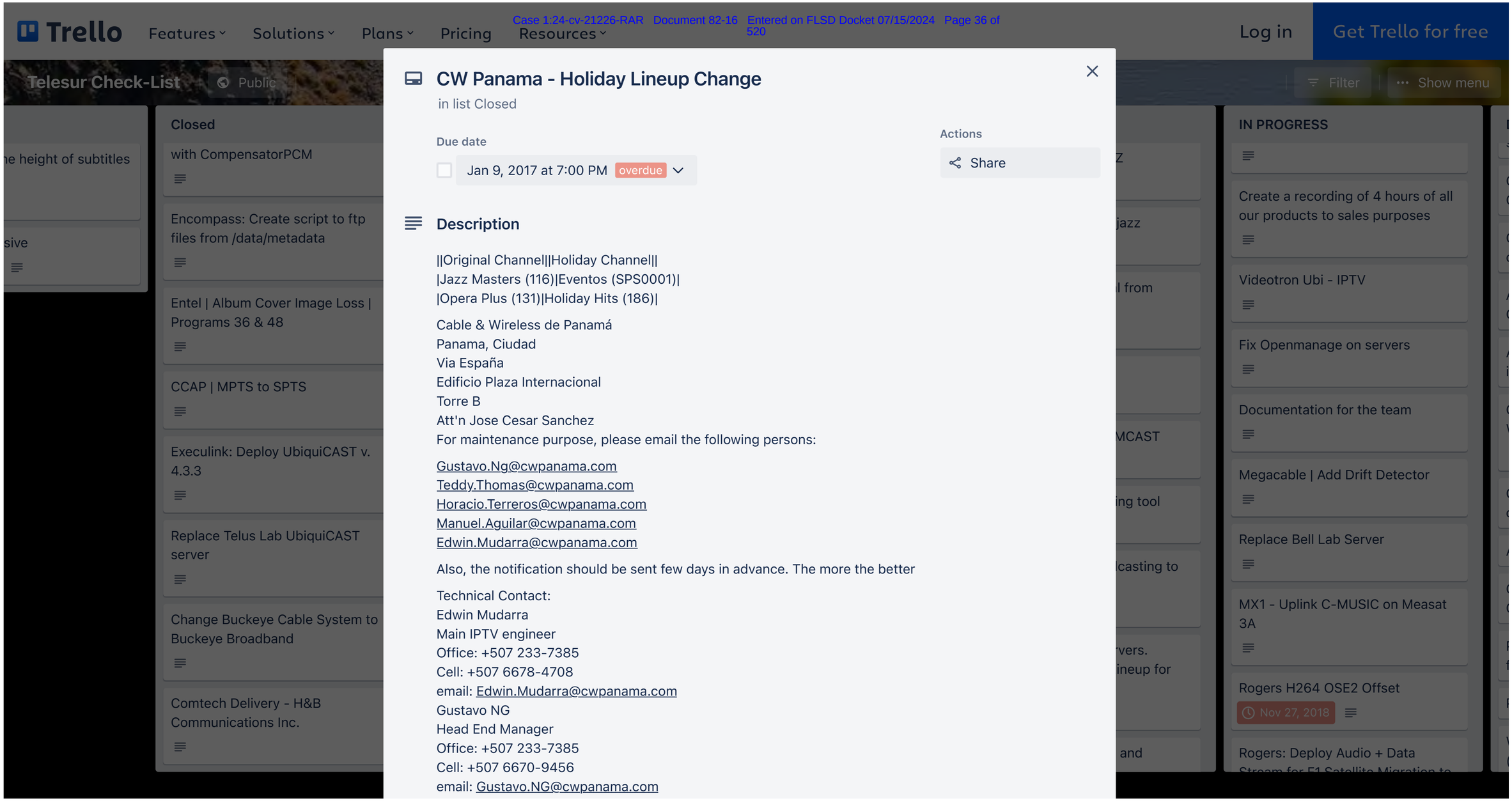
EGLA-TRELLO-000030


Trello
Features
Solutions
Plans
Pricing
Resources
Log in
Get Trello for free
Telesur Check-List
Public
Filter
Show menu
Comtech Delivery - COMCAST
in list ON HOLD
Description
Client will take 25 channel lineup.
{color:#ff0000}Waiting for proposal acceptance and greenlight from Vince{color}
Jill May
Comcast Technology Solutions
1899 Wynkoop St
Denver, CO 80202
jill_may@comcast.com
(720) 573-3271
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-2343
Activity
deployment57 added this card to ON HOLD
Jan 15, 2019 at 10:58 AM
Actions
Share
Closed
Comtech Delivery - H&B Communications Inc.
Send Comtech to Eagle Communications
Orange Spain: Migrate Classica, Djazz and iconcerts from satellite to UbiquiCAST
Oct 18, 2018
Sky Brazil - Deploy 1 RTMP feed from the Wowza server
Videotron IPTV - Push new HD test assets for validation
UPC Hungary VPN Offline
Oct 18, 2018
B.Net and VIP rebranding to A1 Hrvatska
Upgrade Centos5 to 7 DTV Latam
Startimes1 and 2 Upgrade to CENTOS 7
Sogetel | Out put corrections
Load content on the servers. (MISSING 50 Channel Lineup for SM)
1
Schedule server pickup and
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
MX1 - Uplink C-MUSIC on Measat 3A
Rogers H264 OSE2 Offset
Nov 27, 2018
Rogers: Deploy Audio + Data


Trello
Features
Solutions
Plans
Pricing
Resources
Log in
Get Trello for free
Telesur Check-List
Public
Filter
Show menu
Comtech Delivery - Mountain Communications LLC
in list Open
Description
Larry Sisler
Mountain Communications LLC dba ProCom
452 Casteel Road
Bruceton Mills, WV. 26525
304-379-8276
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-2383
Activity
deployment57 added this card to Open
Jan 15, 2019 at 10:58 AM
Actions
Share
Closed
Test1
Test2
Test3
Avail1: Video stopped on the channel Pop Adult (GX104)
Audio Interuptions Detected
Upload new content to Ubi servers
Prepare a new 100 channel lineup in Back-end database for the Mediaroom application
Ensure that the Website channel lineup update is taken care of
Upgrade the primary server
22:00PM IL Time (Best of 2018)
Dec 26, 2018
Comtech Delivery - Mountain Communications LLC
Load content on the servers. (MISSING 50 Channel Lineup for SM)
1
Schedule server pickup and
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
MX1 - Uplink C-MUSIC on Measat 3A
Rogers H264 OSE2 Offset
Nov 27, 2018
Rogers: Deploy Audio + Data


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Telesur Check-List
Public
Filter
Show menu
Closed
with CompensatorPCM
Encompass: Create script to ftp files from /data/metadata
Entel | Album Cover Image Loss | Programs 36 & 48
CCAP | MPTS to SPTS
Execulink: Deploy UbiquiCAST v. 4.3.3
Replace Telus Lab UbiquiCAST server
Change Buckeye Cable System to Buckeye Broadband
Comtech Delivery - H&B Communications Inc.
on December 27, Thursday at 22:00PM IL Time (Best of 2018)
Dec 26, 2018
Comtech Delivery - Mountain Communications LLC
Load content on the servers. (MISSING 50 Channel Lineup for SM)
1
Schedule server pickup and
IN PROGRESS
Create a recording of 4 hours of all our products to sales purposes
Videotron Ubi - IPTV
Fix Openmanage on servers
Documentation for the team
Megacable | Add Drift Detector
Replace Bell Lab Server
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COMTECH: Chat Moss Cable
in list Closed
Due date
Feb 1, 2018 at 7:00 PM
overdue
Actions
Share
Description
Chatmoss Cablevision, Inc.
12349 Martinsville Highway
Danville, VA 24541
https://www.fedex.com/apps/fedextrack/index.html?tracknumbers=771336044033&cntry_code=ca_english
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-2010
Activity
deployment57 added this card to Closed
Jan 15, 2019 at 11:02 AM
deployment57 set this card to be due Feb 1, 2018 at 7:00 PM
Jan 15, 2019 at 11:02 AM


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CP-TEL - Comtech
in list Closed
Actions
Share
Description
Shipping address
Michael Cheatwood
CP-TEL, Network Operations Manager
5909 Hwy 1 Bypass
Natchitoches, LA 71457
Direct: 318-238-9712
Office: 888-357-0089
#
Jira Issue Link : https://jira-stage.corp.stingraydigital.com/browse/CUSTTS-322
Activity
deployment57 added this card to Closed
Jan 15, 2019 at 11:30 AM
Closed
Test1
Test2
Test3
Avail1: Video stopped on the channel Pop Adult (GX104)
Audio Interuptions Detected
Upload new content to Ubi servers
Prepare a new 100 channel lineup in Back-end database for the Mediaroom application
Ensure that the Website channel lineup update is taken care of
Upgrade the primary server
on December 27, Thursday at 22:00PM IL Time (Best of 2018)
Dec 26, 2018
Comtech Delivery - Mountain Communications LLC
Load content on the servers. (MISSING 50 Channel Lineup for SM)
1
Schedule server pickup and delivery.
IN PROGRESS
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Videotron Ubi - IPTV
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CW Panama - Holiday Lineup Change
in list Closed
Due date
Jan 9, 2017 at 7:00 PM
overdue
Actions
Share
Description
	Original Channel		Holiday Channel	
Jazz Masters (116)	Eventos (SPS0001)
Opera Plus (131)	Holiday Hits (186)
Cable & Wireless de Panamá
Panama, Ciudad
Via España
Edificio Plaza Internacional
Torre B
Att'n Jose Cesar Sanchez
For maintenance purpose, please email the following persons:
Gustavo.Ng@cwpanama.com
Teddy.Thomas@cwpanama.com
Horacio.Terreros@cwpanama.com
Manuel.Aguilar@cwpanama.com
Edwin.Mudarra@cwpanama.com
Also, the notification should be sent few days in advance. The more the better
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Main IPTV engineer
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Cell: +507 6678-4708
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