



[www.envivio.com](http://www.envivio.com)

## CORPORATE BACKGROUNDER

### SUMMARY

Envivio is a leader in developing MPEG-4 streaming solutions due to the extensive engineering experience gained by the founding team during 4 years of MPEG-4 R&D at France Telecom.

The company's mission is to deliver the first end-to-end authoring, server and MPEG-4 client suite to the broadcast market and to defend that leadership through providing the most extensive middleware capabilities for enabling new revenue-generating interactions for broadcasters and the back-end business tools to manage that business.

Envivio controls 11 patents for MPEG-4 and anticipates it has additional patent-able innovations as its engineering proceeds on the third generation MPEG-4 applications. Envivio will publicly introduce its initial MPEG-4 product line at NAB2001, in Las Vegas, April 22-26, 2001.

### OVERVIEW

Today, a 20 second streaming video ad, delivered at 300Kbps on the web may cost \$75 per thousand views, just for delivery. Ad revenues of \$12.50 to \$23.50 per thousand views offset the costs but do not approach profitability. Very low quality video is not the answer to millions of consumers raised on broadcast (NTSC or better) quality audiovisuals, let alone the interactivity of the web. Today 11% of the web offers some sort of broadband experience; by 2003, 23% of US homes (~15 million households) will have broadband connections. IDC believes 32% of US homes or 21 million households will be on broadband by 2003. Forrester believes that smarter television will create a new \$25 billion revenue stream by 2005, with \$11 billion in interactive video revenues.

As broadband IP-based networks become reality, broadcast industry analysts and broadcast managements have declared that they need, and intend to offer their programming on those networks. Potential viewers have indicated their desire. The key issue is how? When? At what cost? And, is there a sustainable, profitable revenue model for broadcast over multiple independent platforms? The broadcast industry requires a platform independent standards-based solution that can cut costs and enable increased revenues, making satisfying consumer broadband demand a commercially viable project.

MPEG-4 is the solution. MPEG-4 is the only streaming media standard that is specifically written to be platform independent, scalable, interactive and broadly supported by a range of leaders in streaming technologies and potential users. MPEG-4 offers superior AV compression and edge delivery over MPEG-2, which may be enough, in and of itself to make MPEG-4 the next broadcast standard. But MPEG-4 offers a great deal more that can add profits to broadcaster's pockets. Interactivity is the single most compelling addition: in a single, non-proprietary format, broadcasters can not only meet or exceed viewer expectations for audio-visual delivery, but also create compelling interactive programming, monitor and communicate with individual users and target advertising more effectively (at higher prices per view), or even take advantage of the embedded object nature of MPEG-4 to alter the viewing experience of individuals based on accumulated demographic and purchase pattern data and embed e-commerce opportunities. MPEG-4 also offers audio, video, 2D and 3D



If the vision for MPEG-4 and new revenues for broadcasters is compelling, there is still the issue of developing the software to deliver the goods. The standard does not tell developers how to develop effective broadcast software or how to best exploit MPEG-4's extensive capabilities.

Enter **Envivio**, a multinational company with leading technology development driven by experienced MPEG-4 software developers who led the key portions of the MPEG-4 standard's development. Spun out of France Telecom in 2000, Envivio holds 11 MPEG-4 patents, believes it has considerable potential for additional proprietary patents and the invaluable experience of having previously developed two previous generations of MPEG-4 servers, clients and authoring tools. In fact, Envivio's engineers may be among the most experienced MPEG-4 development teams in the world.

**Envivio's mission is to be the first vendor to offer a complete, commerce-enabled, MPEG-4 streaming application suite to the professional broadcast community.** Envivio Broadcast Studio (EBS) will be the first, and leading MPEG-4 authoring tool: multi-user, with industry leading video and audio quality, EBS simplifies MPEG-4 authoring where graphic designers can easily produce complete MPEG-4 files without engineering assistance. (Windows 2000 & Mac OSX). Envivio Media Servers (EMS) deliver state of the art streaming performance including full interactivity management. (Solaris, Linux & Windows 2000.) Finally EnvivioTV is a full MPEG-4 client capable of decoding and managing viewer interaction on Window 2000, Macintosh and a growing number of set top boxes.

## Management Team

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| <b>Julien Signés</b> | Acting CEO | Julien Signés has been awarded 7 MPEG-4 patents. In 1998 he was granted the "young investigator award" from the SPIE society of engineering for his contribution to MPEG-4. During the last 4 years he managed the 30-engineer France Telecom standardization project in the US and France. He chaired the scene representation (BIFS) group within MPEG-4 and is recognized as almost single handedly designed this portion of MPEG-4. Julien brings to Envivio.com his unparalleled expertise, strong industry connections, and ability to manage large development teams in product realization. Julien graduated from Ecole Polytechnique and Telecom Paris. |
|                      | CTO        |  |

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| <b>Alexander Hoag</b> | COO              | Alexander Hoag brings over 17 years of experience in the design, creation, branding and distribution of industry-leading consumer, enterprise and design software, web applications and communities. His track record includes major marketing and senior management accomplishments in startup and restructuring companies that have defined and built preeminent competitive positions in their markets: Blyth Software, Brøderbund, Quark, The Learning Company, Mixman Technologies, and Managemark. In each case, Hoag was instrumental in restructuring, creating, building and restoring lagging brands and financial performance through common sense marketing of advanced product designs. During his career, Hoag has developed such major product brands as The Print Shop®, QuarkXPress®, MicroPhone®, Omnis®, WordStar®, PC PaintBrush®, and Calendar Creator® Quicken® ExpensAble, to mention a few.<br><br>Most recently, Hoag was the V.P. Marketing for Managemark, a leading ASP in the enterprise financial services market, after guiding Mixman Technologies, the leader in interactive web music communities to a merger with Beatnik, Inc. Previously, Hoag held the pivotal role of EVP, Products and C.T.O. in the restructuring of WordStar International into The Learning Company, which became the leading consumer and educational software publisher before its acquisition by Mattel. Mr. Hoag also co-founded Helix Capital, a merchant bank focused on strategic and financial services to technology companies in the US, Israel and Europe. |
|                       | GM North America |  |

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| <b>Shawn Ambwani</b> | VP Business Development | At France Telecom, Shawn successfully conceived and led international teams in the development of Internet services for France and the US. Ambwani holds a JD/MBA from Boston University, and a BS in Applied Mathematics from UCLA. |
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| <i>Eric Deniau</i>   | VP<br>Engineering   | Eric has a 12 years background as an R&D manager in companies such as DASSAULT and THOMSON Multimedia. He is an expert in MPEG2/DVB, OpenTV and GUIs. He has been involved in MPEG2/DVB standardization process.   |
| <i>Yvan Galisson</i> | VP Services   | Yvan has an 11 years technical, sales, marketing and management background in leading software houses and consulting firms. Recently, he built a startup software & consulting firm SofTeam Think Object, to 52 employees as the Regional Managing Director. Since 1995, he has worked on a number of MPEG-4 engineering projects.   |
| <i>Mike Coleman</i>  | Director, US<br>Software<br>Development                     | Since 1996, Mike is a recognized leader in MPEG-4 products, for which he has designed and created the first authoring tools. Previously the Owner of Five Bats, the leading MPEG authoring company. Mike developed the first MPEG-4 authoring tools. He previously worked in various TV networks where he acquired a hands-on experience of TV broadcast and in Tektronix where he was leading the broadcast products development. |
| <i>Gilles Dupuis</i> | Director,<br>European<br>Sales &<br>Business<br>Development | Gilles has over 13 years experience in European sales, marketing and channel management with multinational broadcast and enterprise software companies like Avid Technology Inc. Microsoft and Softimage Inc.  |

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#### TECHNOLOGY BACKGROUND

Operating under the International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC), the Moving Picture Experts Group (MPEG) has been developing standards for audio and video data compression since the term "multimedia" was coined in the 1980s. MPEG standards for compressed video permit worldwide distribution of prerecorded media and fast efficient compression and decompression in a variety of video applications. MPEG-1 established compression standards for moving pictures for CD-ROM media. MPEG-2 provided additional capabilities for compressing interlaced-scan television signals.

MPEG-4 was developed to permit real-time display and presentation of mixed media (audio, video, 3D, 2D, data) delivered over any TCP/IP network and medium: Internet, intranet, wireless, mobile, optical, MPEG-2, cable networks. MPEG-4 will serve as the foundation for new media products and services such as delivery of high quality video and audio content via satellite to individual motor vehicles, PDAs, set top boxes, virtually any display device without re-encoding. In addition to superior compression to MPEG-2, MPEG-4 also provides for object-oriented processing of the video clips, still images, text and computer graphics and user interaction that constitute the typical web experience but now contained in a multimedia stream.

Envivio's MPEG-4 technology competency and early market entry will be early competitive differentiators. When competitive product suites arrive, we believe our focus on interactivity, personalization and commerce will continue to differentiate us from simple streaming vendors.

Adoption of MPEG-4 is rapidly accelerating around the world and we believe there is no credible alternative yet proposed for broadcast operations. By having the most complete end-to-end MPEG-4 solution, Envivio is able to add an overall personalization layer throughout its solution that permits Broadcasters to tag objects and track user activity and interaction with the content and advertising in the media stream.° By providing a higher level of scripting and logging of user interaction, Envivio can provide information for personalization and targeting of media from which broadcasters can receive additional revenue.°° Companies such as **Motorola, DoCoMo, AT&T, Thomson, Toshiba, Philips, Cisco, Bertelsmann,** and **Sony** all have announced plans to adopt MPEG-4 or have already implementing it.



## ***Advisory Board***

- **Stuart Brotman:** Entertainment Law Professor at Harvard and consultant to the leading Broadcasters ([www.brotman.com](http://www.brotman.com)), Stuart will serve as a coordinator for Envivio's board of advisor.
- **Bernard Tani:** President of France Telecom Multimedia Envivio, Bernard is in charge of all the production of multimedia content for France Telecom and of broadband applications. He is very well connected to the content communities in Europe.
- **Jacques Guichard:** President of the Multimedia Research Division at France Telecom, Jacques Guichard is one of the pioneers of digital video. He is very well connected in the Internet and multimedia business.
- **Hans Peter Baumeister:** VP of Strategic Alliances at Philips, Mr. Baumeister brings 20 years of digital industry experience to Envivio.