

One to watch: INSIGMA Technologies

Visiting INSIGMA's new headquarters in a converted barn in Gloucestershire you immediately know something major is happening. Eight months ago, the four founding partners of the company were deep in debt and living at home, surviving only on the knowledge they were onto something. Now the company is expanding rapidly, operates from state-of-the-art offices and the four partners are controlling shareholders of a **substantial company**.

Within the industry, there's a growing buzz around INSIGMA too, as they gear up to hit the market with a series of media authoring tools for the web. Brand leaders in different sectors - among them Eidos Interactive, Nationwide, Waterstones, Addison Wesley Longman, HMV and Aegean (Internet home of George Michael) - have been quick to **quick to invest their reputation and resources in the product** and are currently redesigning their Internet projects to incorporate INSIGMA's tools. The websites of the pop group Cleopatra (www.cleopatramusic.com) and actress Anna Friel (www.netshopuk.co.uk/annafriel) already showcase these revolutionary technologies.

The company's first - and very ambitious - goal is to bring sound to the Web. The belief at INSIGMA is not only that sound should be an integral part of the Internet experience, but also that it should be delivered in a way designed specifically to work in harmony with the Internet. If the company can be said to have a motto it is: "The technology should fit the medium". INSIGMA see a vast market - as existing Internet sound technologies have failed to meet the needs of the majority of users. In all aspects of late 20th Century life, most people expect a visual display to be accompanied with sound. However, the Web for the most part still operates in almost complete silence.

It was a shared passion for sound and music that sparked the enterprise into life. Stewart Everett, James Booth and James Barrs were old friends, all passing through the same school. Everett had a background in the music business, and had gained considerable experience of the legal aspects of management and publishing. Booth's background included classical training and several years producing and recording computer music. Barrs' grounding was in multimedia and design, and it was natural that when Barrs was asked to investigate audio for interactive set top boxes that he would call on the special knowledge of Everett and Booth to help him.

Everett realised that their approach to set top boxes could also apply to the Internet. The three decided to set up a company together with the aim of creating sound, music and jingles for the Internet. They soon realised there was little money in selling sounds - and much more potential for the software that could deliver them.

Together they raised an enterprise loan from the Department of Trade and Industry and matching credit from the bank. The money was quickly spent - on programmers, equipment and subsistence wages. The three asked management consultant Ian Montgomery to write the business plan necessary to raise further finance. He got so excited about their ideas he decided to join them. They borrowed more funds from friends and family. When that went too there came a long period in the wilderness - the four of them working crammed into a tiny room lent to them by a family friend. They worked like that for fourteen months without drawing any wages.

Their big break came through the Gloucestershire Enterprise Agency. A series of introductions lead them to their eventual chief backer, Michael Cuzner-Charles, who had already received a report from a business acquaintance, which read: "I don't really understand what these guys are talking about, but I can smell money."

An investment adviser representing a 300-strong pool of private investors, Cuzner-Charles was impressed by their vision and commitment. He went to visit them and listened to their ideas. "I spent some time assessing the people and I liked what I found out about them. My gut feeling was that it was possible - probable even - they were developing a unique product."

While he set about raising finance, Cuzner-Charles put their idea and business plan to the test, requiring independent assessment of every aspect of the technology by experts in the US and Europe. In the end it was nearly eight months - a seeming eternity on zero pay - before the money came through. By the end of the process, Cuzner-Charles was convinced. Such was his confidence in the product and people that he gave them free rein to finalise development of the product before being invited onto the board as Chairman. He now works there 2-3 days a week. "I normally don't get so involved," he says. It was their "passion and ownership and commitment" that persuaded him to give them hands on help as they moved out of R&D and into running a business.

INSIGMA's launch product is **hyperceive** - a revolutionary audio authoring tool for the web. "The principle was so simple, we were astonished that no-one else had thought of it," says Everett. He had joined the original set-top box project to advise on the psychological effects of using music and audio cues to orient the interactive television viewer. He was stunned to discover that the developers had put sound functionality way down on the to-do list. He wrote a passionate report arguing the importance of sound in the interactive domain - which was quickly taken on as company policy.

Later, when the three original founders turned to the Internet, he was similarly amazed to discover that very few sites featured sound. Streaming audio was being touted as the tool that would bring sound to the Web. "When I first found out about streaming technology I was appalled to discover that even silence had a download implication. Things like drumbeats - the same pattern of sounds repeated thousands of times - had to be downloaded over and over again. We wondered why no-one had broken music into its constituent pieces, and used the same approach for other types of sound." The search for answers lead them to **hyperceive**.

With classical training and an interest in computer music, James Booth relished the challenge of developing an audio solution for the Internet, which would respond to the way the Web worked. He is credited with the crucial "Eureka" moment on the path to developing **hyperceive**. One weekend, he was experimenting using samples from a track by Underworld - breaking it down into its sound constituents and then building it up again with additional sounds and voice files, into a sequence.

He discovered that by sending the individual audio samples over the Internet, the track could be reconstructed in the surfer's computer, with the first audio file playing as the next is downloading. "With a bar's worth of reusable piano or drums you can get a lot of linear time for a very small download."

The principles of breaking music down and making the most efficient use of available bandwidth apply to all kinds of sound information. "**hyperceive** is not just a background music toy", says Booth, "It's also great for sound effects, and particularly spoken voice with its natural pauses and phrasing".

For his part, Barrs realised that the patented dynamic download engine behind *hyperceive* was a sophisticated “information sequencer” with numerous applications. It was this insight that lead to the INSIGMA product range being born.

Next year INSIGMA will launch several products which build on the basic principles behind ***hyperceive***. The company's long term goal is to turn INSIGMA into a leading international software development company.

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