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Internet Innovators

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In 1996, a group of amateur musicians from Mid Wales made internet history. Caduseus became the first band in Britain to broadcast live audio and video on the net. NASA Houston were among those who tuned in.

Songwriter and keyboard player **Dave Lawrence** , who still lives in Powys, recounts the trials, tribulations and triumphs of that time.

"The time was November the 1st 1996 - the ancient Celtic Feast of Samhuinn; a time of madness, a time of solitude in the Vortex at Celtica, Machynlleth, Mid Wales.

The first chords were played, the first voices were heard, by a selected audience in the vortex (suitably dressed in black sitting motionless and silent on the vortex steps, amongst the musicians, amongst the mayhem), and also by unknown listeners and viewers all across the world. It might have been breakfast time, or lunchtime, but wherever they were, we were all united by experiencing this networked musical Celtic Feast. The concert lasted exactly one hour, climaxing at midnight chosen to coincide with Samhuinn but also to make the times on the various continents reasonably comfortable!

I was a songwriter in Caduseus, and played keyboards, and the feeling of playing our original music live in that venue, and to that mysterious global audience was fantastic. Even in the last seconds before 11 pm, the band members were helping with technical and organisational nightmares, and so to climb into the stage area and perform was actually as much of a relief as a challenge!

The Vortex event was definitely at the leading edge, and pushed all the boundaries of the technology and stage engineering. To quote the TV news at the time "it was the first time that video and sound was to be broadcast live on the net Oasis and David Bowie had transmitted audio but not visuals as well". In fact, we did more than that - we used a multiple combination of different web audio and visual technology formats, and a network of strategically placed Internet relay centres across the globe.

Broadband was very rare in those days, but we used something called Mbone to get a broadband video/audio signal out to those that could connect to that systems (mainly academic and large corporate organisations). The concert was also beamed out on RealAudio (it was too early for RealVideo yet!), and CuSeeMe (mainly used in North

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America and mainland Europe for web video/audio conferencing).

Money Too Tight To Mention
At the start, it was a daunting task for the initial project organisers (myself and Glyn Foulkes the Caduseus drummer) we didn't know the technology, we had a short amount of time, and we had no money or funding! As each week and day unfolded, however, during the summer of 1996, the project family grew and grew.

In one way, the lack of money was an advantage. It caused lots of stress, but it resulted in forming partnerships with engineers, technicians, musicians and internet broadcasting specialists in various countries (including University of Aberystwyth). It was unique in that one knew that anyone saying yes to giving up masses of time, skills and energy for free, had the necessary spirit of community, creativity and endeavour that was needed for it all to be a success and also unique in that this could never be repeated.

Most of the people involved are based in Mid Wales, which was an important aspect of the project family atmosphere, and I think apart from the personal bonds made between us all, we all gained a great deal technically and professionally from the experience of the project.

"This is Houston..."
The enormity fell into place when immediately after the concert, band members and crews answered questions from people in different countries who were still connected on the Internet, one question came in that stopped everything (even our vocal lyricist, Jim Griffin!) - it was a voice from NASA, direct from Houston!"

Written by Dave Lawrence from Powys.

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