

William S. Moulton

Technologist, Engineer, Designer, Executive, Multidisciplinary-Generalist

Mr. William Moulton is a whole systems engineer, serial entrepreneur, new business strategist, futurist, and advanced technology developer/engineer. Mr. Moulton has extensive experience in leading agile multidisciplinary development teams, and has successfully pioneered many dozens of breakthrough software and hardware technologies in both industrial and consumer markets.

Mr. Moulton specializes in total life cycle systems design, disruptive technologies, social media, emerging markets, pattern recognition, and improving human-computer interaction. Moulton has deep and broad experience as an applied technology development super-generalist in the search, audio, multimedia, augmented user interface, data visualization, collaborative innovation, and mobile domains. Mr. Moulton has innovated many new technologies including swarm search agents, semantic link analysis, data visualization, global simulation, knowledge systems, speech recognition, voice-to-text synchronization, video codecs, VLSI and FPGA chips and systems, resilient adaptive controls, autonomous robotics, virtual reality systems, and DSP audio technology.

Mr. Moulton's teams have delivered speech recognition solutions for mission critical floor trading of securities (NYSE, ASE), designed and delivered management information dashboards, engineered artificial intelligence based industrial process controls, streamlined multimedia production workflow systems for speech recognition and video synchronization for search, and created numerous apps and tools for consumer and professional arts, and consumer electronics, and search engines for career and college planning.

His teams have engineered multimedia conference boards for Video Network Communications; speech recognition systems for Goldman Sachs and Company, Merrill Lynch, and RW Presspritch; assembly robot failure recovery expert systems for General Motors; industrial control knowledge engines for Alcoa, Reliance Electric, JPL, LANL, Army, TRW, NASA, IITRI, EG&G and others; production aquaculture ecosystem controls for Oceanic Institute; satellite failure mode prediction and self-repair for Aerojet; 3DTV displays and motion graphics software for Atari; game console and glove technology for Hasbro and Mattel; creative music products for Apple, Amiga and Commodore; and low power radar assisted facial reanimation with voice dubbing for Tricoast Films and BabelOn.

Companies Moulton cofounded include Clouddtalk (2011), Energy Voyager (2006), Ursa Minor Arts & Media (2004), Navagent (2001), Pacific Digital FX (1995), UmeClarity (1992), Umecorp (1985), Waveform (1983), and Stereographics (1982).

William Moulton - Firsts in Technology Innovation

William Moulton has developed and delivered to markets and clients an extremely broad spectrum of technology innovations - as an executive, inventor, engineer and product manager. He has accomplished many 'firsts' as a team leader and principal engineer of musical instruments, audio effects systems, integrated multimedia tools, virtual reality systems, artificial intelligence systems, speech recognition applications, consumer electronics, sound and visual special effects, DSP software, VLSI chip design, music synthesizers and sequencers, search engines, database systems, 3D web visualization, science and technology forecasting tools, and business intelligence systems. Mr. Moulton's accomplishments include the following 'world firsts' in product technology development and early commercialization:

- First audio digital delay effects system for personal computers - **Echosoftware**. (Ultimate Media 1981)
- First commercial 3D stereoscopic television system and circular polarization system - **DDD**. (Stereographics, Atari 1982)
- First consumer personal computer based computer music systems - **MusiCalc**, **ScoreWriter**, **Colortone** Keyboard. (Waveform 1983)
- First personal computer expert system out-performing mainframes for defense satellite failure mode prediction - **Expert Advisor**. (Aerojet 1985)
- First Amiga music software synthesizer - **Sonix**. (Aegis 1985)
- First expert system industrial process controls - **Knowledge Engine**, **Expert Controller**. (Umecorp 1986)
- First virtual reality gaming systems - **PowerGlove**, **3E System**. (Umecorp, Hasbro, Mattel 1987)
- First expert system applied to manufacturing robot assembly line fault automated recovery - **Rocky Robot**. (Umrcorp, General Motors 1987)
- First intensive closed system recirculating aquaculture expert system - **RIAX**. (Umecorp, Oceanic Institute 1988)
- First high speed 'one hot state' non-Boolean inference system for space applications - **HIE System**. (Umecorp for NASA Ames 1990)
- First low cost audio digital effects tools for the Amiga personal computer - **MultimediaFX**, **SpectrumFX**, **VocoderFX**. (Pacific Digital FX 1993)
- First interactive 3D videodisc graphical interface controller - **DeeJay V-J**. (Enter Corp 1992)
- First satellite teleconference system with human height multi-location stereoscopic 3D virtual reality - **TeleWall**. (Cybermind 1993)
- First viable speech recognition for Wall Street brokers and traders, with world's best noise cancelling microphones for NYSE, ASE - **UmeVoice**. (UmeVoice)

1994)

- First real-time NTSC and D1 quality video conferencing boards working over standard phone twisted pair wires - **OCB Conference Board**. (Golden Media 1997)
- First just-in-time automated voice recognition video transcript synchronization display and keyword video search system - **MediaPod**. (Vodium 2000)
- First radar based continuous speech re-animation and synchronization system for foreign language film dubbing - **FilmLanguage**. (Tricoast Films 2001)
- First real-time 3D web search visualization system using autonomous swarm search agents - **Surf3D**. (Navagent 2002)
- First fully integrated audio, video, special effects multimedia production pipeline workflow management system - **ISIS**. (Ursa Minor Arts & Media 2003)
- First geospatial real time news visualization app for PCs - **NewsMatrix**, **Earthquake3D**. (Navagent, Wolton Designs 2004)
- First full spectrum DSP brainwave binaural induction system - **Hypnos Vocoder**. (Wolton Designs 2005)
- First user configurable open source collaborative business intelligence system and emergent trend visualization and prediction - **CBIN**. (Energy Voyager 2007)
- First open source desktop attention share trend tracking system - **Trend Trakker**, **Trenddex**. (Navagent, Institute for Global Futures 2008-9)
- First integrated college and career planning and crosswalk search app and web application - **Colleges & Careers**, **Career Paths**, **Scholarship Explorer**. (Student Loan Finance Corp 2011)