Stephen Heitmann

Senior Software Architect and Engineer, Innovator, Entrepreneur

"Good Design is Good Business" – Thomas J. Watson, former Chairman, IBM Corporation.

Brief Bio

Steve Heitmann has over 20 years' experience as CEO of two successful software businesses he founded, as Chief Architect at a third business he co-founded, and over 40 years' inclusive experience in project management and innovative software engineering, architecture, algorithms, and design. A generalizing specialist, his engineering expertise is *Telematics* (integration of multimedia information systems, computer telephony, user interface technologies, Web and wireless networks). With a background in Electrical Engineering and Mathematics, his experience includes trend analysis and identifying emerging technology markets. Amateur work includes avid interest in alternative 24x7 energy sources and storage, especially molten salt reactors (solar and nuclear), plasma gasification, and fuel cell energy servers.

Mr. Heitmann routinely pushes some technology envelope. He conceptualized and implemented a store-and-forward email capability in 1970 at U.C. Davis. At Tektronix in 1973, he developed an interactive email system for the Tektronix sales engineers, later adopted by GE Timesharing as GEmail. He began formal email and computer conferencing R&D at Tektronix Laboratories in 1977, leading to Tekcom, used for manufacturing QA, remote educational classes, and improved collaboration among researchers. Founder of Data Dynamics, Inc. in 1980, Mr. Heitmann continued to develop and market email and conferencing products worldwide. Expanding to unified multimedia messaging, in 1990, he founded CogniSoft, Inc. to develop and market Unilink, a then leading-edge product, which integrated voice-, fax-, and e-mail, IVR, Faxback, ASR, RDBMS, and automation functions. Renamed Cognilink in 1998, Mr. Heitmann redirected the company from its PSTN focus to target the "dot com" market, with product plans to address what is now known as *Cloud Computing.*

Mr. Heitmann worked at IBM T.J. Watson Research from 1999-2001 and was included in a group patent for his innovative contributions to the development of the Mobile Assistant, which supports unified messaging, personal schedules, to-do lists, database content mining, and Web site access by mobile phone. Interaction is exclusively via natural language understanding (NLU) and text to speech (TTS) response. The project concluded with a successful demonstration to DARPA. The Mobile Assistant in 2001 was then similar to the Google Assistant introduced circa early 2018.

Recently, he worked at Mercedes-Benz Research Development, North America, specifying and developing the Automated Vehicle Advisory (AVA) prototype for Chrysler and Mercedes-Benz Research & Development, North America. Prototype uses a browser to provide vehicle owner with information about DTCs, CO_2 emissions, fuel efficiency, city/highway driving, and more from vehicle data log. AVA then advises the driver about improving driving habits to reduce CO_2 emission, reduce wear on brake, and increase fuel efficiency.

Mr. Heitmann has been engaged in the global paradigm shift in pervasive computing represented by tablets, smartphones, multimedia cloud computing, and encryption methods to secure personal information at rest and in motion. A historical footnote: at Tektronix, Mr. Heitmann is believed to have developed the first-ever microprocessor application software—using an Intel 8008 and completed in December 1973—a graphic information entry, editing, storage and retrieval system for NAFEC's aviation pilot weather self-briefing system.

Currently, Mr. Heitmann is the founder of Zharma Solar, LLC which is focused on developing water-conserving agricultural methods (90% reduction of water use) via solar hydroponic greenhouses that are semi-automated (using Raspberry Pi, Javascript, and WiFi). The goal is to market a DIY solar hydroponic greenhouse that can be assembled and operated by virtually anyone.

Mr. Heitmann has a BS in Mathematics, and has met nearly all requirements for a BSEE and MSEE in Electrical Engineering/Computer Science at the University of California, Davis. He also has an AA in Applied Electronics.

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