

Barnabas Takacs, Ph.D.



Dr. Takács is an internationally recognized scientist who has spent much of his career developing cutting-edge technologies and has a long history of bringing novel solutions to the market place. A graduate of the Technical University of Budapest in Electrical Engineering and Informatics, he later received his M.S. from the Univ. of Houston, USA and a Ph.D. from computational Sciences from GMU, VA, USA.

Currently, Dr. Takács is with Digital Elite Inc. (Los Angeles, CA) and Digital Custom Group Inc. (San Francisco, CA), two companies he founded in 2000, focusing on *Virtual Human Interface* technology, digital production, and R&D on human interaction and modeling, respectively.

- (1) *Digital Elite Inc.* (www.digitalElite.net) is a Los Angeles-based consulting & software company that develops a high performance virtual human modeling and animation platform for the new communication age. Dr. Takács serves as the company's President & CEO. Digital Elite's facial modeling and real-time animation/visualization technology has been used for many cutting edge projects. Examples include recent and ongoing SBIR projects with DARPA, U.S. Army, NASA, and Boeing as well as research projects with Harvard University and commercial partners such as Gulfstream Jets.
- (2) *Digital Custom Group Inc.* (www.digitalcustom.com), based in San Francisco with a world-wide customer service in Cincinnati and affiliates on five continents. Dr. Takács serves as the company's CTO and Director of International Operations. The company offers comprehensive digital image editing/manipulation of still images to approved clients in the advertising, marketing and media industries, including photo agencies, publication firms, professional photographers, and catalog companies. *DigitalCustom Group* is the leading developer of outsourced custom digital image editing service systems at all market levels.

Before starting the above ventures Dr. Takács was involved with many high tech ventures. In 1998 Dr. Takács became the Director of R&D for Virtual Celebrity Productions (Los Angeles, CA) where he was responsible for the design and implementation of the company's Digital Cloning System (DCS). The DCS was created with the aim of producing photo-realistic human actors for television commercials and movies. This system used state-of-the art facial tracking off a live plate of an actor to drive the facial motion of a digital 3D head was used in producing VCP's critically acclaimed digital *Marlene Dietrich* that brought the "Blue Angel" back to life for a brief 30 seconds in August, 1999.

Apart from working in Hollywood and digital entertainment Dr. Takács also spent many years in consulting and high-tech development helping companies to enter the marketplace. In 1999 he helped developing a "smart" running shoe for the consumer market that measures all physical characteristics of a runner (speed, calories burnt, heart beat, etc.) and transmits this information via a wireless communication link to a personal computer for real-time analysis. Previously, in 1996, while working with WaveBand Corporation (Torrance, CA), he developed a number of proprietary technologies used by the U.S. Airforce and Navy. Examples include 3D object recognition and advanced tracking solutions for automatic target recognition (ATR), millimeter-wave radar landing systems and collision avoidance radars. He also worked on developing novel concealed weapon detection systems for increased airport security. In 1995 he designed an innovative image compression algorithm that is capable of encoding a complete face photograph in a single barcode. The system was demonstrated to INS and the U.S. Armed forces. In 1994 he was part of the team who contracted the U.S government to create a large and standardized facial data set (FERET project) for testing face recognition systems, the resulting database was the first of its kind and helped develop the testing standards in use today. In 1990 he was co-founder of Telemedia LLC. (Hungary) and designed the first speaker-independent voice recognition solution for interactive voice response (IVR) applications.

Dr. Takács is also internationally recognized computer scientist in the fields of human animation, virtual reality, computer vision, tracking, real-time image processing, face recognition and security systems. He published over 60 technical papers and currently works on a book on Virtual Humans (Elsevier / Morgan Kaufmann Publishers). He has been invited to speak on prestigious scientific conferences, and regularly delivers lectures on various scientific, institutional and professional forums. A partial list of his publications as well as related press in English and German are further available on the website http://www.digitalelite.net/Pages/DigitalElite/DEE_PressPapers.html