MICHAEL A. HULME

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5 min. Multimedia Resume Addendum, available at www.michaelhulme.com

COMPUTER ANIMATION & 3D SIMULATION EXECUTIVE

A visionary leader in the field of 3D graphics, animations, and real-time simulations currently credited with the leadership of one of the top three engineering based animation studios in the United States.

An innovator in increasing processing power without burdensome expense, a collaborator with major universities in the development of graphic applications and a pioneer at profitably transitioning military and entertainment software and hardware to engineering environments.

PROFESSIONAL HIGHLIGHTS

HALFF ASSOCIATES INC .- DALLAS, TEXAS

1998 – 2003

Director of Visual Technologies

Provided concepts and leadership necessary to develop the technological capabilities that permitted photorealistic visual renderings via terabytes of accurate data. Ultimately created Urban Simulation models covering 50 sq. miles, with 6", to-scale, topographical accuracy. Concurrently accountable for all technology development, departmental operations and business relationship management.

Technology Innovations and Advancements

Provided ongoing solutions to increasing requirements for processing power to meet the demands of exceptionally large graphic and animation databases. In order of development:

- Introduced 3D computer modeling via 3D Studio Max, Non-linear DVE with Discreet Logic's "EDIT" including Z-depth compositing and production capabilities "PAINT" and "EFFECT" (now "Combustion") for advanced post-production efforts.
- Introduced Network Rendering capabilities to counter the need for expensive UNIX-based technology, harnessing the firm's existing PC resources with a 60+ station Rendering Farm. Wrote batch applications to automate the management of all network utilized project data.
- Introduced DVD Authoring, and produced over 15 original titles in less than two years.
- Deployed several File Servers and their associated procedures, including; interconnected gigabit topology, as well as innovative file and folder naming conventions, which optimized identifications, accessibility, and backup procedure; while helping prevent file redundancy.
- Created an Online "project portal" or file repository, (based on Microsoft IIS and third party software from Xerox;) providing web-based file-serving, video streaming, and DVD storyboard proofing for off-site clients.
- Configured post-production workflow with private theater projection capabilities, providing in-person review of production prior to final printing.
- Implemented findings of Stanford University's White Paper "Wire-GL", *presented during ACM SIGGRAPH 2001* ; in turn, creating a scaleable PC array utilizing the API software to intercepted OpenGL Windows OS instructions and distributed them to all available nodes. Included the design of a fiber optic backplane for node integration and achieved scalable processing power in excess of ten times that of originally utilized UNIX SGI ONYX2-IR for just $45,000.
- Championed several new technologies surrounding GIS and Metadata servers to automate data acquisition, which would include 3D visualization via web-based servers. These efforts involved numerous consultations with Keyhole Corp. software developers in San Jose, CA.

Departmental Management

Accountable for Profit and Loss, production, and Quality Control with responsibility for over 50 full-production computer animation projects produced for major governmental and private entities including the Army Corps of Engineers, Local Cities, Texas Department of Transportation, DFW International Airport and a dozen major real estate developers and sub-consultants.

- Provided technical leadership, training and mentoring for a multi-cultural six-person (recent trade school graduate) graphic and animation production staff. Guided production teams of up to 13 members during peak projects.

- Oversaw Computer Animation and Real-time Simulation project completions in 19 engineering disciplines with commissions in: Transportation, Aviation, Private Development, Natural and Artificial Light studies, Flood Impact Studies and Environmental Restorations.
- Personally authored or approved all project proposals, including formal RFP bidding strategies, scheduling and budgets of both Public and Private contracts.
- Consistently supported the sales effort with seminar and podium based presentations of products and capabilities.
- Oversaw departmental operations including annual budget development, staff performance and appraisals, and capital equipment specification and acquisition.

VIRTUAL VISION PRODUCTIONS COMPANY – DALLAS, TEXAS

1995 – 1998

Co-Founder & Managing Director

Capitalized a high tech 3D visualization studio, providing 3D stills and animations to the architectural and Land Development industries - primarily servicing retail and entertainment projects as well as some mixed-use and industrial projects. Pioneered the use of Hollywood and Military animation software for Architectural & Land Development Applications.

Technology Innovations and Advancements

Directed the $180,000+ equipment and software upgrade from DOS to SGI UNIX operating platform, subsequently gaining expertise in producing large-scale virtual models, and subdividing processing to achieve high frame-rates during real-time / simulation utilizations, or scripted animation production.

- Championed the use of 3D Studio Max (PC), Alias & Maya (UNIX), Composer (UNIX) based Z-depth post-production compositing, and Smart-Scene 3D Run-time Editing; while converting all data from AutoCad or Microstation originated 3D models.
- Consulted with leading universities, software and hardware specialists and national vendors to enhance programs, company overhead, and final workflow expectations.
- Introduced multi-media productions, gaining expertise in the synchronization of Visual Content with narratives and background music.
- Co-developed a reversal procedure for Beta-SP uncompressed video archives to counter the affects of “3-2 pull-downs” through an advanced scripting procedure written for Composer-based editing suites. This allowed us to render at 24 fps while archiving at 30 fps, without fear of losing quality during transfers. Additionally, developed techniques to get rid of undesired artifacts, which occurred during the Z-depth compositing of large area databases.
- Added Accom WSD/HD stripped arrays to house all uncompressed original digital footage.

Business Development

- Drove revenues to over $400,000 annually during the mid 1990’s when animation work was an unknown service in this industry; maintained profitability from the first quarter of operations.
- Sourced and trained an eight person mixed use production and product development staff in a variety of emerging technologies. Provided hands-on technical leadership in both production and post-production techniques.
- Created value propositions, made presentations to architectural, property management and real estate development staff concerning capabilities and strategies. Key resource in the acquisition of major land developers including Cencor, Weitzman, Hunt, Stonebriar, & Sam Ware, as well as major retailers including: Blockbuster, Hallmark, Ann Taylor Loft.

KIMLEY-HORN AND ASSOCIATES - DALLAS, TEXAS

1992 – 1995

1200 person civil engineering firm

Product Designer

An original cast member in the Intelligent Transportation Systems (ITS) division, responsible for managing a $130-million federally mandated fiber optic traffic management technology contract. Personally responsible for all three-dimensional (3D) renderings.

- Key Designer for the initial Greater Houston Regional Computerized Traffic Signal System improvements which included conceptual overview of System Project Topology for over 4500 signals; including options and template creation for system architecture, required hardware, alternatives, and system implementation.

- Satisfied a number of unique hardware product needs with ongoing product designs for ITS Components including those needed for fiber routing, signaling, security systems, mobile barricades, coin management systems, Control Centers and Toll Plaza layouts.
- Generated schematics, process flowcharts, software diagrams for developers and control logic for signaling systems.
- Consistently evaluated fabrication materials and supplies with potential vendors, making recommendations to senior departmental management.

Emerging Technology Experiences

- Created software logic schematics, network topology schematics and analyzed existing software architecture for transportation related systems integration, Including; Hilton Head's Cross Island Tollway real-time license plate recognition system & timing schematic for toll collections points. Similar efforts executed for the Phoenix, AZ FMS project comprising a 200-mile Fiber network.
- Completed 3D pre-visuals of Chicago, IL Midway Airport's secured entrance and exit systems to validate visibility from various angles of the developing Variable Messaging Signage Systems. Similar efforts were conducted for the Colorado DOT, I-25 HOV ITS Surveillance System.
- Authored and provided 3D animated and printed training content for the Houston RCTSS project, providing step-by-step illustrations for the retraining of installation staff to prepare for the unique requirement of fiber optic topologies.

TECHNICAL CAPABILITIES

Computer Application Skills:
Proficient with a number of industry standard NL-DV Editing systems, previously performed extensive 3D Modeling utilizing a vast number of industry standard production tools, current on all MS-Office products, advanced Photo Editing skills, state-of-the-art advanced DVD-Authoring techniques, etc…

Computer Language Skills:
AutoLISP, Intergraph MDL, COBOL, FORTRAN, BASIC, Pascal, Assembly

Academic training in:
C++, ASP Editing for Project Portal File-Server Customization, Understanding of OpenGL API Programming and Implementation.

PROFESSIONAL CONTRIBUTIONS / DEVELOPMENT

A sought-after technical speaker before professional and academic groups with highlights including:

- White Paper Presentation: "Using Virtual Reality in the Entitlement Process" – 1999 before the Urban Land Institutes (ULI) annual convention in Miami, FL.
- An annual full-conference attendee (1995 - 2002) of the ACM SigGraph Annual convention.
- Numerous speeches and presentations given to local chapters of both Civil and Environmental Engineers, as well as UTA Student Association of Civil Engineers.

EDUCATION

A total of 157 credit hours with a bulk occurring at the following two universities:

Bachelor of Science program – Physics / Optics emphasis
TEXAS A & M - Kingsville, Texas
Physics with an optics emphasis geared towards Computer Engineering.

Dual Major Bachelor of Computer Science and Religion / Psychology Program
TEXAS Wesleyan University – Fort Worth, Texas
Preparing for anticipated attendance to local seminary to pursue a career in ministry; while maintaining earlier established knowledge in Computer Sciences.

…a technical interest consistently maintained since the first College level computer courses I audited in the third grade. Interest additionally supported through the experimental programs I was invited to join; featuring computer coursework tested on select groups of qualifying secondary education students during the late 70's and early 80's within Texas public schools.

<References available immediately upon request>