

## Joseph Hinrichs

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### Senior Interactive Developer

Expertise in a wide variety of skills is required to effectively manage today's complex interactive projects. Comfortable working solo or in team environments, this seasoned professional has over 25 years of experience developing award-winning software for education, marketing, and enterprise.

### Career Overview / Highlights

- A history of developing over 200 solo and team projects for a variety of industries, including Fortune 500 companies like Ford Motor Company and General Mills, on-time and under budget
- Lead developer of award-winning interactive products for the nation's largest provider of K-12 content to schools and school libraries
- Lead developer of the world's first WebGL vehicle configurator for a major vehicle manufacturer
- Lead developer of a SCORM based web training platform, variations of which are used by QLogic and Imation
- Lead developer of a .NET n-tier enterprise-level platform comprising multiple applications for clients and administrators of True Value's Loyalty program
- A pioneer in the field of interactive development. Created a series of award-winning interactive CD-ROMs supporting Thomson's College Publishing in the mid-1990s.

### Technical Expertise

- Front End (15 years) HTML5, CSS3, Bootstrap, Responsive Design
- Javascript (15 years) React JS, Angular JS, jQuery, Node.js, Three.js, Knockout.js, PlayCanvas, AJAX, WebGL
- .NET (10 years) ASP.NET (1.1 - 4.5), C#, VB, Azure, WPF (XAML), MVC 4, WCF, Web API
- Actionsript (10 years) Flash, Flex, Away3D
- Gamification (5 years) Unity (C#, Javascript), Unreal (Blueprints)
- WebGL (5 years) Three.js, PlayCanvas, Unity WebGL exporter, Unreal WebGL exporter
- LAMP (1 year) Linux, Apache, MySQL, PHP, Zend Framework
- Data Access (15 years) SQL Server, XML, JSON, SCORM, nHibernate, Entity Framework, Sitecore, Web Services
- Visual / UI Design (20 years) Photoshop, Modo, Expression Blend, Illustrator, Omnigraffle, Visio
- Digital Media (20 years) Premiere, After Effects, Audition, Reaper, Adobe Media Encoder
- Team Tools Leankit, Slack, Jira, Workspace, Git, TFS, Subversion

### History

Jun 2019 – Mar 2020	Sr. Interactive Developer (Consultant)	Jostens
Feb 2017 – Jun 2019	Sr. Interactive Developer (Consultant)	DiscernCX
Feb 2016 – Dec 2017	Sr. Interactive Developer (Consultant)	Polaris
Jul 2015 – Jan 2016	Sr. Interactive Developer (Consultant)	Imation
Apr 2013 – May 2015	Sr. Interactive Developer (Consultant)	QLogic
Apr 2012 – Nov 2013	Sr. Interactive Developer (Consultant)	General Mills
Sep 2010 – Apr 2012	Sr. Interactive Developer	Carlson Marketing / AIMIA
Aug 2007 – Sep 2010	Sr. Application Developer	Coughlan Companies
Jan 2007 – Aug 2007	Application Developer	Winstar Partners Inc.
Jan 1999 – Jan 2007	Principal	Joseph Hinrichs & Associates, LLC / Artis Logicae
Sep 1990 – Jan 1999	Interactive Developer	West Publishing / Thomson Consulting

### Education

B.S., Computer Science, Minor in Art – Mankato State University, 1990

### Highlights / Examples

#### *Jostens WebGL Configurator (POC) (2020)*

Technologies: Three.js, Javascript, WebGL, Node.js (WebPack), C#, Subversion

Tools: Atom, Unity, Modo, Houdini, Photoshop

Description: Jostens is considering moving their configurator from displaying static, rendered images to a real-time, WebGL-based approach. Proof-of-concepts were created using Three.js and Unity's WebGL exporter. Assets (geometry and PBR maps) were created to be compatible with both approaches.

#### *Jostens Unity Rendering Configurator (2020)*

Technologies: C#, Subversion

Tools: Unity, Modo, Houdini, Photoshop

Description: Jostens currently uses Unity to render out still frames of products during the configuration process. Enhanced the existing platform with additional functionality including real-time geometry deformation, dynamic normal maps, and ray-traced gem rendering. Also developed a pipeline in Houdini to mass process geometry (material group assignments, automatic uv generation, ambient occlusion rendering, and geometry creation from opacity maps).

#### *Evodesk 3D Configurator (2019)*

Technologies: Javascript, WebGL

Tools: Atom, PlayCanvas, Modo, Photoshop, Substance, Git

Description: All of the Evodesk assets, which were previously displayed as static rendered imagery in their web configurator, was converted into a WebGL-friendly format. Using these assets and Playcanvas, the static configurator was reimaged as a true 3D experience.

#### *3D Studio for MTS (2019)*

Technologies: React JS, Javascript, HTML5, CSS3, Node.js Web Services, WebGL

Tools: Atom, DriveWorks, Node.js, Git

Description: This is a CPQ (Configure, Price, Quote) application developed for a major manufacturer of industrial testing equipment. It's comprised of a React JS front-end driving a 3D view powered by DriveWorks. Users can configure a product and view it in 3D in the browser. Once the product is configured, they have the option of saving the model as a CAD file, printing out a customized detail sheet, or receiving a price quote.

#### *SuperCar Systems AR Viewer (2018)*

Technologies: C#, Vuforia

Tools: Unity, Modo, Substance Painter, Photoshop

Description: This tool is an AR viewer for tablets showcasing SuperCar's 2018 line of engines. AR (Augmented Reality) allows the user to view 3D models mapped to a real-world view supplied by the tablet's camera. This project is being used as a marketing aid for events and showrooms.

#### *Entrematic Garage Configurator (2018)*

Technologies: React JS, Javascript, HTML5, CSS3, WebGL

Tools: Atom, PlayCanvas, Modo, Photoshop, Substance, Git

Description: This application was developed for Entrematic, a division of ASSA/ABLOY. It allows users to configure a garage door in 3D with the ability to add features and accessories. The door is also animated, allowing the user to see the configured door open and close.

#### *Polaris WebGL Build and Quote (2016 - 2017)*

Technologies: Angular JS, Javascript, ASP.NET, Episerver, AWS, WebGL

Tools: PlayCanvas, Modo, Photoshop, Substance, Quixel

Description: The world's first WebGL based vehicle configurator developed for a major vehicle manufacturer. Polaris' entire product line, hundreds of vehicles and accessories, was converted into 3D assets and ported to the web. Users of this interaction can "build" a vehicle online in full 3D and see the corresponding pricing and fitment information.

#### *Imation 360 Training Portal (2015)*

Technologies: Angular JS (Javascript/AJAX), HTML, XML, SCORM 1.2, Vimeo API, Facebook API, Twitter API

Tools: Dreamweaver, SCORM Cloud, SCORM Driver, Photoshop, Litmos

Description: The training group at QLogic moved over to Imentation after QLogic's reorganization. We continued work at Imentation on the training portal concept with the addition of enhanced tracking abilities. The code was re-written from scratch using AngularJS.

#### *Eseries Quick Start Simulation (2015)*

Technologies: jQuery (Javascript/AJAX), XML, SCORM 1.2

Tools: Dreamweaver, SCORM Cloud, SCORM Driver, Photoshop

Description: This simulation was created to support training for Imentation's Eseries line. It was tailored to guide the user through the "Quick Start" process of setting up an Eseries. It's a perfect recreation of software that is embedded in the Eseries Operating System.

#### *Learning Lab Training Portal (2015)*

Technologies: jQuery (Javascript/AJAX), HTML, XML, SCORM 1.2, Vimeo API, Facebook API, Twitter API

Tools: Dreamweaver, SCORM Cloud, SCORM Driver, Photoshop, Rainmaker

Description: In 2015 QLogic decided to redesign their training platform. The new framework needed to incorporate video along with simulations of QLogic software for users to experiment with. SCORM 1.2 was used for user tracking, bookmarking, and scoring.

#### *QLogic Adapter Inspector (2014)*

Technologies: Actionscript 3.0, Javascript, WebGL

Tools: Flash, Away3D, Photoshop, Modo, ZBrush

Description: This tool was created to allow users to examine QLogic's new NetExtreme II adapter. The adapter was built as 3D model and code was created allowing the user to resize, rotate, and adjust the lighting to fully explore every angle of the adapter.

#### *FlexQuiz SCORM Assessments (2014)*

Technologies: Actionscript 3.0, jQuery (Javascript/AJAX), HTML, CSS, LESS, XML, SCORM 1.2

Tools: Flash, Dreamweaver, Photoshop, SCORM Cloud, SCORM Driver, Modo, Lightwave, Audition

Description: This application was built to support the "Why QLogic?" campaign and future SCORM-based assessments in QLogic training modules. The approach is the result of research and proof-of-concept work on gamification.

#### *FlexLab Simulations (2013)*

Technologies: Actionscript 3.0, jQuery (Javascript/AJAX), HTML, CSS, LESS, XML, SCORM 1.2

Tools: Flash, Dreamweaver, Photoshop, SCORM Cloud, SCORM Driver

Description: In order to add value to the existing QLogic training program, a series of simulations were created that replicate the experience of using QLogic software in a browser. Depending on the needs of the interaction, the simulations were either developed using HTML, CSS and Javascript or using Actionscript. The interactions were data-driven using XML and SCORM 1.2.

#### *Guitar-O-Rama for Android (2013)*

Technologies: Actionscript 3.0, Adobe AIR, Android SDK, XML

Tools: Flash, Photoshop, Illustrator, Sound Forge

Description: Interactive guitar chord and scale teaching tool. Every note on a Fender Stratocaster was sampled to provide the most accurate audio representation of a guitar. Provided all development for this interactive product including interface design, project management, coding, graphic design, and audio sampling

*Liberté USA (2012) for General Mills*

Technologies: ASP.NET, VB, JQuery (Javascript/AJAX), HTML, CSS, Sitecore

Tools: Visual Studio, Dreamweaver, Photoshop

Description: Product site for the Liberté Yogurt. Responsible for all front-end development in Sitecore and contributed to the .NET business logic.

*Find My Snack (2012) for General Mills*

Technologies: ASP.NET, VB, JQuery (Javascript/AJAX), HTML, CSS, SQL Server, nHibernate, W2GI Framework

Tools: Visual Studio, Dreamweaver, Photoshop

Description: Find My Snack was created to enable users to easily find General Mills snacks near their location. The site includes maps using Where 2 Get It (W2GI) services. For this project I was responsible for all front-end (jQuery, HTML, CSS) animations and interactions, back-end (nHibernate, SQL Server scheduled jobs) development, and contributed to the middle tier (.NET) business logic.

*Plug Into Ford (2012) for AIMIA (Client – Ford Motor Company)*

Technologies: Javascript (jQuery / AJAX), HTML, CSS, JSON

Tools: Dreamweaver, Photoshop

Description: This is the first module in a planned series of four modules showcasing Ford's line of electric cars. This highly interactive site was designed to work with a variety of browsers on both PCs and mobile devices. Functionality includes various informative interactions, embedded YouTube video, a drop and drag quiz, and a survey. Responsible for all coding and architecture of the AJAX/JSON driven shell and the Getting Ready Module.

*True Value Rewards (2011) for Carlson Marketing (Client – True Value Company)*

Technologies: ASP.NET, C#, Javascript (jQuery / AJAX), HTML, CSS, SQL Server, WCF and RESTful web services

Tools: Visual Studio, Dreamweaver, Photoshop

Description: This project consists of two web portals for True Value; one for customers and one for store owners. Users can view store statistics and financials, edit customer and store information, view and order campaign and store materials, and peruse a library of faqs, pdfs, and other content related to the program. Responsible for overall architecture, direction, and coding of the application tier and the presentation tier.

*MYON Reader (2010) for Coughlan Companies*

Technologies: Actionscript 3.0, PHP, Javascript (jQuery / AJAX), HTML, CSS, MySQL, MVC

Tools: Flash, Dreamweaver, XAMPP, Zend Framework

Description: MYON Reader is a classroom tracking and management system built around an interactive book library. For this project responsibilities included developing the Flash-based dictionary system and the production of the PHP-based reporting system.

*Pebble Go (2009, 2010) for Coughlan Companies*

Technologies: Actionscript 3.0, ASP.NET, VB.NET, C#, Javascript, HTML, CSS, SQL Server

Tools: Flash, Visual Studio, Dreamweaver, Photoshop, After Effects, Sound Forge

Description: Pebble Go is an award-winning online database for K-2 researchers that consists of two distinct titles; *Animals and Earth and Science*. Sole architect, primary developer. Responsibilities for the development of this product included architecture, development, prototype development, art direction and project management.

*Capstone Interactive Library (2008) for Coughlan Companies*

Technologies: Actionscript 2.0, ASP.NET, C#, Javascript, HTML, CSS, SQL Server

Tools: Flash, Visual Studio, Dreamweaver, Sound Forge

Description: Capstone Interactive Library is a subscription-based interactive book delivery system. Sole architect / developer for the Flash-based interactive book delivery system. Also coded the Flash / C# / SQL Server book menu.

*Marketing Wizard (2007) for Winstar Partners*

Technologies: Actionscript 2.0, ASP.NET, VB.NET, HTML, CSS, Javascript

Tools: Flash, Visual Studio, Dreamweaver, Photoshop

Description: This is a tool which allows users to create personalized marketing materials in .pdf format by choosing from a variety of templates and inputting personal information. Responsible for interface design and coding.

*Winstar Intranet (2007) for Winstar Partners*

Technologies: ASP.NET, VB.NET, Javascript, HTML, DHTML, CSS, XML, LDAP

Tools: Visual Studio, Dreamweaver, Photoshop, SQL Server

Description: The intranet site for Winstar Partners. This site contains dynamic company and department information that is updatable by authenticated users. Updates are tracked using XML. The site also features ADO-based productivity reports and LDAP security. Provided all interface design and coding.

*BREW-based Mobile Phone Interactions (2007) for Wadsworth Publishing*

Technologies: Flash-Lite

Tools: Flash, BREW IDE

Description: This mobile phone based prototype allowed students to view and listen to interactive 'flash cards' on mobile Verizon BREW devices. Provided interface design, prototyping, and development

*Management Interactive Self-Assessments (2006) for South-Western Publishing*

Technologies: Actionscript 2.0, HTML, CSS, Javascript

Tools: Flash, Dreamweaver, Photoshop, Illustrator

Description: This collection of interactive tests and scenarios was designed to assess the user's familiarity with management concepts. Responsible for interface design, instructional design, prototyping, and development.

*Video Assessment Platform (2004 – 2006) for Wadsworth*

Technologies: Actionscript 2.0, HTML, Javascript, XML, Media Production

Tools: Flash, Dreamweaver, Photoshop, Premiere, Cleaner

Description: This platform consisting of 38 separate products enables users to take quizzes based on included video content and receive networked grading and feedback. Provided interface design, instructional design, development, media production, and content preparation for all 38 products.

*News Scene 2.0 (2005) for Wadsworth Publishing*

Technologies: Actionscript 2.0, Video Streaming, HTML, CSS, Javascript, Media Production

Tools: Flash, Dreamweaver, Photoshop, Premiere, Sound Forge

Description: This comprehensive 'News Story Simulator' uses digital video and audio to help students develop news writing and reporting skills. Solely responsible for all aspects of this project including architecture, interface design, coding, and digital media development.

*Personal Trainer 4.0 (2005) for South-Western Publishing*

Technologies: HTML, CSS, Javascript

Tools: Dreamweaver, Photoshop, Illustrator

Description: Responsible for the interface design, instructional design, and prototyping of an extremely successful homework management and grading tool. The redesign of this tool was instrumental in increasing usability and salability while maintaining leadership in a competitive educational market.

*Invitation Speaking DVD (2005) for Wadsworth Publishing*

Technologies: DVD-5 Programming, Media Production

Tools: Encore, Premiere, After Effects, Cleaner, Sound Forge

Description: This DVD is designed for consumer DVD players as well software DVD players. The DVD contains the complete video of a conference presentation including chapter navigation and an innovative self-assessment. Responsible for interface design, development, and media digitization and production.

*MarketSim (2004) for South-Western Publishing*

Technologies: HTML, CSS, Javascript

Tools: Dreamweaver, Photoshop, Illustrator

Description: Developed interface design, instructional design, and prototyping for a popular marketing simulation tailored for college level economics students.

*Discover Chemistry 1.0 – 2.0 (1996 – 1998) for Wadsworth Publishing*

Technologies: Authorware, Quicktime

Tools: Authorware 4, Photoshop, Illustrator, Strata3D, Premiere, After Effects

Description: This *New Media Invision* award finalist is a virtual lab where students can interactively experiment with chemistry concepts. Managed a staff of artists, provided art direction, graphic design, and interaction development.