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Technologies

Flash ActionScript development has been my niche since 2001, beginning with version 5 when the scripting capabilities really became useful and progressing through MX, MX2004, 8, CS3+ and Flex/Flash Builder 3+. I've come to prefer open source solutions (FlashDevelop, Eclipse/FDT) to the Adobe IDE's due to improved efficiency and a more traditional coding paradigm.

Since before it was fashionable I've placed a strong emphasis on robust object-oriented methodologies, from prototype-based OO in AS1 to the safer and saner approaches available in AS2 & 3. I use design patterns where appropriate; there's rarely any reason to reinvent the wheel. I'm also something of an evangelist for the use of source control software on all but the tiniest projects. In general I try to introduce good development practices to whatever environments I find myself in.

I'm capable and confident in a Lead Developer role, I enjoy doing software architecture when I get the chance, and I've been drifting naturally in the direction of project management for some time now. Having said that, sometimes it's nice (and a great novelty) to find myself in a position where all I have to do is write code – so I'm open to those as well.

I have the usual toolbox of what are now companion skills to Flash, too: **HTML**, **CSS** and **JavaScript** are how I started out and I use them just enough to still remember how. On the server I've got **PHP**, some classic **ASP**, and recently a bit of **Ruby on Rails** as well as the popular varieties of **SQL**. I've got a basic to intermediate knowledge of **VB6** which is unlikely to ever improve, recent commercial experience with **Java**, and a good grasp of **C#** which I used many years ago for desktop apps and services and more recently with **Silverlight 4** and **XAML** to create a complex RIA. I necessarily use **XML**, and I'm familiar with writing and using schemas, and accessing with XPath and E4X. I'm also very good with **Photoshop** but not very good with Illustrator.

Clients / Employers

■ **Rehabstudio**

Contract | Autumn 2011
ActionScript 3, RobotLegs

Short project leading a team of 5 developers to create a microsite for a large automotive company. We used the RobotLegs framework and closely followed company coding guidelines allowing a smooth handover to staff on completion.

■ **Skilio**

Contract | Spring-Summer 2011
ActionScript 3, Java

Skilio.com is a fledgling social network based around skill sharing. I architected and built their core multi-user video conferencing and real time information sharing application consisting of a Flash front-end and multiple Wowza media servers. The client is AS3 using the PureMVC framework and the Wowza modules are written in Java. Sessions can be recorded in full and played back later.

■ Imagitech

Contract | Swansea | Summer-Winter 2010
Silverlight 4, XAML, C#

Imagitech develops Driving Test Success, the UK's leading series of products for learner drivers. Having decided they wanted to use Silverlight to create the new online version of DTS, they got in touch and asked if I'd be prepared to build the client application based on my previous good work for them in Flash. I'm always happy to learn something new, so I immersed myself in documentation and discussions for a couple of months until I was ready to do the job justice. The basic architecture is MVVM (using MVVM Light), connecting to a WCF web service and using Smooth Streaming for instructional video and hazard perception tests.

■ Toptable

Contract | London | Winter 2009/10
ActionScript 3, XML, JavaScript

Toptable were keen to offer a white label reservation panel for client restaurants to put on their own sites, allowing bookings to be made through Toptable's existing systems. I created a user-friendly and lightweight panel in Flash which site owners can embed and customise with JavaScript, allowing visitors to check availability and make bookings via XML REST services. Very straightforward theming capabilities make it simple to integrate into existing designs.

■ BSKyB

Contract | London | Autumn 2007, Autumn 2009
ActionScript 2, ActionScript 3, PHP, SQL, XML

In August 07, many people thought we'd have a General Election before the end of the year. By mid-October we all found out that this was not to be. However, in the intervening time I developed an interactive election map application to be used on the Sky News website. Key features included a detailed and fully zoomable vector-based map, a quick constituency searching & sorting tool, intelligent data loading to increase responsiveness and a full-screen mode. Subsequently I helped out with a few other things including making a quick SQL and PHP based voting system for their "Charity Search" site.

In September-October 09, I returned to put together a Flash microsite for a movie channel.

■ EHS Brann

Contract | London | Spring-Summer 2009
ActionScript 3, XML, XForms

Development of an extensible forms renderer based on a subset of the XForms standard, for use on web sites for Jaguar/Land Rover and in possible future projects. This was quite tricky and involved a partial implementation of XML Schema in order to derive type information from the prescribed XML document format.

■ BBC World Service

Contract | London | Autumn 2008
ActionScript 3, HTML, CSS, JavaScript, jQuery, PHP

Implementation of a system to deliver election results in real-time in multiple languages and exotic character sets over several different World Service sites using XML feeds from BBC News. Plain HTML versions of pages were generated at intervals by a PHP script which also uploaded them to the relevant live web servers, and jQuery was used on page load to dynamically reorganise the structure into a modern DHTML format and incorporate an interactive Flash map for users with the correct plugin installed. The map swf would periodically poll the server for new results XML data and, if changes were found, would update the HTML page (including sorting tables and altering bar graphs) with jQuery via ExternalInterface.

■ LBi

Contract | London | Spring – Autumn 2008
ActionScript 3, PureMVC, Papervision 3D

ActionScript 3 projects using the PureMVC framework and Sprouts: An unusually subtle and elegant dynamic 3D environment using complex Collada models for Unilever, a 3D carousel for Sony, various flash components for the Red Bull Racing and Toro Rosso team sites, and I helped to develop the “Eco-Rangers” game for British Gas at www.generationgreen.co.uk/Games.

■ Cimex

Contract | London | Spring 2008
Flex 3, ActionScript 3

Created a few Flex 3 components using AS3 and MXML for a larger Cairngorm application.

■ Iris

Contract | London | Early 2008
ActionScript 3, XML

I spent a few weeks as part of a team developing a site to showcase ING's sponsorship of Formula 1.

■ Nexus Productions

Contract | London | Winter 2007
ActionScript 2 & 3, Papervision 3D, XML

Implementation in Flash of a kaleidoscopic video effect for a POS display in Nike's shop in Oxford Street. Nexus, working in conjunction with AKQA, had already designed and created a number of video sequences with a particular look and feel. My role was to reproduce some of these dynamically using ActionScript 2 so graphic elements within them could be altered at runtime based on data from the container application.

Also R&D on a viral 3D pitch with AS3 and Papervision 3D – with a view to combining pre-rendered video from 3DS Max with dynamic content. The work went elsewhere, but the experience was valuable.

■ Imagitech

Contract | Swansea | Spring-Summer 2007
ActionScript 2, JavaScript, XML

Development of a modular web-based driving related test system (“Roadmarque”), aimed at businesses who want to assess their mobile workforce in line with some recent legislation. A core Flash application and a number of widely varying (e.g. hazard perception, coordination/reaction and psychometric) test modules were created and hooked into a server side app using XML.

■ Victoria Real / Endemol

Contract | London | Summer 2006 – Spring 2007
ActionScript 2, Photoshop, XML

Flash development on several projects using open source tools (Eclipse, MTASC, SwfMill); various online games (prototypes and final builds) and components for clients ranging from the BBC (including the 1vs100 game: <http://extdev.bbc.co.uk/1vs100/>) to Williams and Ladbrokes.

■ Cambridge Training & Development (CTAD)

Contract | Cambridge | Summer 2005 – Spring 2006
ActionScript 1 & 2, XML

Various work using Flash in the e-learning field, including:

Creation of a system for Pocket PC devices to contain current and future mobile learning materials, working in conjunction with a desktop PC based authoring tool and connecting to a web server in order to synchronise tracking/scoring information. I used open-source tools (MTASC and SwfMill) to build this AS2 application, and communicated with a custom-written C++ wrapper via XML sockets in order to achieve full local filesystem access.

A port of "Framegrabber" from Delphi to Flash. This is a tool that enables a learner to extract individual frames from a video asset and place them in a storyboard where they can be annotated, saved, printed or (future functionality) shared with others via a central repository. This was also created in a fully object-oriented manner with MTASC and SwfMill, and utilised the new bitmap data features in Flash 8. It will be used in several CDs and websites in future.

■ 3T

Contract | Manchester | Summer 2004
Actionscript 2, XML

Work on two CD-ROM based educational products – one aimed at improving adult financial literacy and the other part of a suite of learning aids for teachers.

■ Max & Co

Contract | Aberdeen | Summer 2003, ongoing
ActionScript 1, C#, SQL, VB6, XML

Creation and maintenance of the Flash-based desktop client for the R2S crime-scene analysis / annotation system using Flash and Screenweaver. Current end users include several police forces in the UK and Europe, and the FBI. A fuller description of the software can be found at www.r2scime.com.

As well as using ActionScript, I developed a licensing system for the ASP-based server application in C#, which involved generation of a unique ID for each server and use of public-key cryptography to create and authenticate license files. I also learned and used just enough VB6 to write a wrapper allowing the use of a visual ActiveX control from within the Flash app.

■ The British Museum

Contract | London | Summer 2003, Spring 2004
ActionScript 1, HTML, Photoshop

Work for the Educational Multimedia Unit, using Flash MX to create various games and activities for the 'Ancient Civilizations' project at www.ancientcivilizations.co.uk and www.mughalindia.co.uk.

■ Friends of Ed

Contract | London | Autumn 2002
ActionScript 1

I collaborated with Erwan Bezie (www.lebonze.com) to produce a chapter on scripted video masking for the FoE book "Flash Video Creativity".

■ NYK

Permanent | London | Autumn 2001 – Spring 2003
ActionScript 1, ASP, SQL, XML

At NYK I was part of a small team doing development on logistics (track & trace, cargo transloading, etc) applications for corporate clients such as Clarks and Tesco. The initial system was built on Flash 5, ASP, SQL Server 7 and XML. Version 2 utilised Flash MX, C# and .NET Remoting with SQL Server 2000, but the project was shelved during a company reorganisation.

■ View

Contract | London | Spring-Autumn 2001
ActionScript 1, HTML

Creation of a dynamic XML driven map system for the Rio Tinto site, as well as several Flash sites for the 'Value Retail' chain of shopping outlets using ASP Turbine to create Flash content from templates.

■ Dyson

Permanent | Malmesbury | Spring 2000 – Winter 2000/1
ASP, Director, Flash 4, HTML, JavaScript, Photoshop

Work on web projects, CD-ROMs, POS Kiosk systems and interactive multimedia presentations.

■ Swansea University, Education Dept.

Freelance | Swansea | Summer 1999 – Spring 2000
HTML, JavaScript, Perl

Web design and development for the Department. Sites created included an experimental distance-learning PGCE course involving streaming video.