

## Contact

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(LinkedIn)

## Top Skills

Audio Programming  
Virtual Reality (VR)  
Game Development

# Tom Shirley

Programmer at Digital Domain 3.0  
Dallas, Texas

## Summary

Unity, iOS, Android, GearVR, C#, C++, HTML5  
Specialties: Spatialized 3D Ambisonic PCM audio programming,  
360-degree video streaming, FFmpeg, Entertainment, Educational,  
Video Game Programming, VR, BlackMagic DeckLink SDK

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## Experience

### Digital Domain 3.0

Programmer

July 2015 - September 2018 (3 years 3 months)

Dallas, TX

Ambisonic 3D audio programmer, Unity, iOS, Android, and GearVR developer. Programmed 3D audio ambisonic audio solution utilizing C++ for access to raw PCM audio data within AAC elementary streams contained within MP4 and HLS video streams. This solution functions on iOS, Android, x64 and Unity via a C++ native Unity plugin.

Created end-to-end ambisonic audio HLS live streaming solution, with live mixing of spatialized 3D audio sources, and a custom live desktop VR 360 video C++/Unity monitoring program, which ingests a BlackMagic DeckLink SDI audio/video feed, converts the ambisonic channels into a binaural mix, then renders via PortAudio.

2018 Winter Olympics - Created custom AAC two-channel 3D spatial audio live-streaming positioning, consumed by official Olympic iOS, Android, and GearVR apps.

### Immersive Media

Programmer

April 2013 - June 2015 (2 years 3 months)

Dallas, TX

VR 360 video, iOS Objective-C, Android, C#, and HTML5 development  
Created several mobile applications and 360 VR video interactive websites  
Clients include Audi, EA Games, and Universal Pictures

Programmed 'Fifty Shades of Grey' VR website

Programmed Unity VR Samsung GearVR Android app, for the SyFy network's TV show, 'The Expanse'

#### TM Advertising

Flash Developer (Contract)

January 2013 - March 2013 (3 months)

Dallas, TX

#### Bean Creative

Interactive Developer (ActionScript, C#, HTML5/JavaScript)

May 2011 - December 2012 (1 year 8 months)

Dallas, TX

Programmed multi-touch WePlaySmart interactive educational SMART table using C#/C++, used widely in classrooms

Programmed interactive kiosk touch exhibit "Nam June Paik" for Smithsonian American Art Museum

Programmed interactive kiosk touch game exhibit "Buffalo Hunt" for Native American Museum

Programmed PBS Kids Curious George Animal Bedtime HTML5 game

#### Future Ads, LLC

ActionScript 3 Programmer

July 2009 - August 2011 (2 years 2 months)

Programmed multiple Flash games

#### Digital Dog, Inc

Actionscript Programmer

January 2008 - July 2009 (1 year 7 months)

Programmed multiplayer virtual world using Electrotank Universe Platform

#### Demand Media

ActionScript Programmer

January 2007 - January 2008 (1 year 1 month)

Programmed Gold Miner Vegas® Holiday Edition (Flash Game)

Programmed Flash ad-serving video player (YuMe/VideoEgg/Yahoo)

Programmed Me.TV photo editing program (Flash)

#### iWin

ActionScript Programmer

January 2006 - January 2007 (1 year 1 month)

Ported C++ Trivial Pursuit® (Bring on the 90s) to ActionScript 2  
Programmed multiplayer lobby framework in ActionScript 2

#### Fox Interactive Media

ActionScript Programmer

January 2002 - January 2006 (4 years 1 month)

Programmed secure Flash Protection Shell in C++/MFC Currently distributed on AOL, Real.com, and Hewlett Packard computers. Programmed five original Flash MX games. Created unique swf security system used on all Intermix game sites enabling secure partner distribution. Edited NullSoft installer scripts for Intermix games on AOL. Programmed chat client, base64/XOR encoder. Programmed multiplayer game lobby. Implemented ElectroServer multiplayer functionality to Flash games.

#### Intermix, Inc

ActionScript Programmer

July 1999 - July 2002 (3 years 1 month)

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## Education

The University of Texas at Austin

Bachelor of Science (B.S.) · (1993 - 1996)