

tvOS

An Introduction by Blake Merryman

New Hardware

64-bit A8 processor

32GB or 64GB of storage

2GB of RAM

10/100Mbps Ethernet

WiFi 802.11a/b/g/n/ac

1080p resolution

HDMI

Fancy New Remote



New Platform



Revamped User Experience
Full App Store
Universal Purchases
Access to Familiar Tools
New Way to Build Apps
New Ways to Interact with Users

Key Development Challenges

New User Interaction Model (Remote vs. Touch)

No Persistent Local Storage (Cloud Required)

Maximum App Size is 200MB (ODRs)

Native Apps vs. Client-Server Apps

Native Apps

Similar to building apps for iOS

Objective-C & Swift

Storyboards

Inherits a ton of iOS Frameworks

tvOS Frameworks

Accelerate	CoreImage	GLKit	ModelIO
AudioToolbox	CoreLocation	ImageIO	OpenGL ES
AudioUnit	CoreMedia	MachO	SceneKit
AVFoundation	CoreSpotlight	MediaAccessibility	Security
AVKit	CoreText	MediaPlayer	simd
CFNetwork	CoreVideo	MediaToolbox	SpriteKit
CloudKit	Darwin	Metal	StoreKit
CoreBluetooth	Foundation	MetalKit	Swift Standard Library
CoreData	GameController	MetalPerformance Shaders	System Configuration
CoreFoundation	GameKit	MobileCore Services	UIKit
CoreGraphics	GameplayKit		

Demo

Client-Server Apps

Powered by AppDelegate, TVJS, & TVML

Most useful for serving media in a well structured manner

Heavily Template-based UIs

T_VML

Custom XML used for laying out UI

Template based UI (18 pre-built templates)

Customizable

Potential for dynamically loading content (???)

TVJS

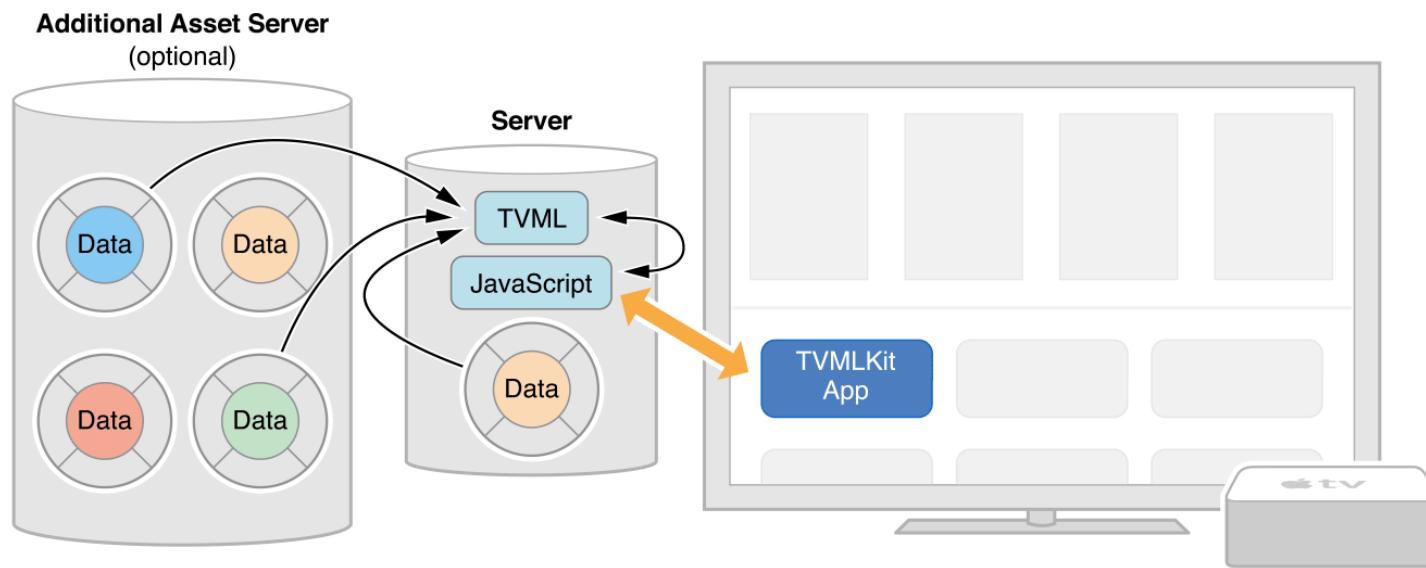
JavaScript API for interacting with TVML files.

Incorporates many standard DOM classes along with custom classes for tvOS-specific tasks.

TVMLKit

App-side interface point for interacting with
TVMIL + TVJS files.

Client-Server Apps



1. App Delegate loads up remote TVJS file.
2. TVJS file loads & controls flow TVML files on the navigation stack.
3. TVML files present content to user.

Demo

Other Goodies

TVServices Framework

API for “Top Shelf” to populate top row of home screen.

Parallax Artwork

Fancy layered images that give 3D effect.
Creation tools provided by Apple.

Demo

Ideas for Future tvOS Topics

Designing for tvOS

Porting iOS Apps to tvOS

TVJS & TVML In-Depth

Mastering the Focus Engine

Handling Dynamically Loaded Content

Integrating Game Controllers

Is Your Content Top Shelf?

Thank you!