LG Smart TV SDK 활용법



Contents

- 1. Using LG Smart TV SDK
- 2. Testing & Publishing
- 3. UX Guideline





Using LG Smart TV SDK



LG Smart TV SDK 구성



SDK* 다운로드: LG Developer (http://developer.lge.com)



* SDK : Software Development Kit

* IDE : Integrated Development Environment

HW Category	상세 사항					
Processor	Pentium 4 2.0 GHz or higher					
RAM	1 GB or higher					
Operating system	 Windows XP Service Pack 2 or higher Windows 7 (32-bit/64-bit) Mac OS X : snow leopard or higher (32-bit / 64-bit) Ubuntu 10.04, 12.04 (32-bit / 64-bit) 					
Screen resolution	1280 x 1024 or higher					
Video memory	256 MB or higher					
SW Category	상세 사항					
	Oracle VirtualBox (for 2012, 2013 Emulator)					
LG SDK	Safari (for IDE)					
	Microsoft DirectX (for 2011 Emulator)					



VirtualBox for LG Emulator

VirtualBox 다운로드

(http://www.oracle.com/technetwork/server-storage/virtualbox/downloads/index.html)



LG Smart TV SDK(2.4 이하) 를 설치하기 전, 먼저 반드시 VirtualBox가 설치되 어 있어야 함



LG Developer Site

http://developer.lge.com

LG Smart TV SDK 다운로드

Android

Java ME

SDK

LG Smart TV SDK V3.0.1

LG Smart TV SDK 3.0.1 provides tools that help developers to develop the applications for 2013 LG Smart TV platforms including existing platforms.

Platform Windows, Linux, Mac Version V3.0.1 Download Linux32 LG Smart TV SDK Installer.part1.rar (503,316 KB) Linux32 LG Smart TV SDK Installer.part2.rar (476,902 KB) Linux64 LG Smart TV SDK Installer.part2.rar (470,884 KB) Hac32 LG Smart TV SDK Installer.part2.rar (470,884 KB) Hac32 LG Smart TV SDK Installer.app.part2.rar (323,564 KB) Hac64 LG Smart TV SDK Installer.app.part2.rar (503,316 KB) Hac64 LG Smart TV SDK Installer.app.part2.rar (299,489 KB) Win32 LG Smart TV SDK Installer.app.part1.rar (503,316 KB) Hac64 LG Smart TV SDK Installer.app.part2.rar (299,489 KB) Hint Win32 LG Smart TV SDK Installer.app.part2.rar (280,000 KB)
Download Linux32 LG Smart TV SDK Installer.part1.rar (503,316 KB) Linux32 LG Smart TV SDK Installer.part2.rar (476,902 KB) Linux64 LG Smart TV SDK Installer.part1.rar (503,316 KB) Linux64 LG Smart TV SDK Installer.part2.rar (470,884 KB) Mac32 LG Smart TV SDK Installer.app.part1.rar (480,000 KB) Mac64 LG Smart TV SDK Installer.app.part2.rar (323,564 KB) Mac64 LG Smart TV SDK Installer.app.part1.rar (503,316 KB) Mac64 LG Smart TV SDK Installer.app.part2.rar (299,489 KB) Mac64 LG Smart TV SDK Installer.app.part1.rar (480,000 KB) Mac64 LG Smart TV SDK Installer.app.part2.rar (299,489 KB)
Win32 LG Smart TV SDK Installer.part2.rar (480,000 KB) Win32 LG Smart TV SDK Installer.part3.rar (205,709 KB) Win64 LG Smart TV SDK Installer.part1.rar (503,316 KB) Win64 LG Smart TV SDK Installer.part2.rar (503,316 KB)

① LG Developer (<u>http://developer.lge.com</u>) 회원 가입 후 로그인

> Resource Center > Smart TV > SDK & Tools > SDK 메뉴 클릭

② 파일 다운로드 클릭 > 약관 동의 체크 후 Download 버튼

③ PC에 파일 다운로드 진행

④ 압축 파일 해제 후 SDK 설치 시작

※ Linux와 Mac 의 경우 Installation Guide 참고

- - Installation Guide ✓ Resource Center > Library > Developing > Using SDK > "Installation Guide" 참조

SDK					
LG Smart TV SDK	V3.0.0				
LG Smart TV SDK 3.0 existing platforms.	provides tools that help de	SDK Download Contract Terms of the SDK License Agreement	Close X		
Last Updated	08-FEB-2013	Before downloading SDK, agree to the terms and conditions below. Read through carefully and thoroughly in order to properly use the SDK download service.	it		
Platform	Windows, Linux, Mac				
Download	Linux32LG Smart	LG Smart TV System Application Software Development Kit License Agreement	(E)		
	Linux32LG Smart	IMPORTANT: PLEASE READ THE TERMS AND CONDITIONS OF THIS END			
	Linux64LG Smart	USER LICENSE AGREEMENT ("LICENSE AGREEMENT") CAREFULLY BEFORE			
	Linux64LG Smart	DUMNLOADING, INSTALLING AND/OR USING THE LG SMART TV SYSTEM APPLICATION			
	Mac32 LG Smart	DEVELOPMENT KIT, INCLUDING ANY UPDATES THERETO AND ANY RELATED	-		
	Mac32 LG Smart	I agree to the terms of the SDK License Agreement.			
	Mac64 LG Smart	Down	load		
	Win32LG Smart T	V SDK Installer.part1.rar (419,430 KB)			
	Win32LG Smart T	TV SDK Installer.part2.rar (419,430 KB)			
	Win32LG Smart T	V SDK Installer.part3.rar (326,991 KB)			
	Win64 LG Smart	TV SDK Installer.part1.rar (419,430 KB)			
	Win64 LG Smart	TV SDK Installer.part2.rar (419,430 KB)			
	Win64 LG Smart	TV SDK Installer.part3.rar (363,682 KB)			



IDE & Emulator



🐫 WYSIWYG - LG Start Page - LG IDE packa	ge product for NetCast		
File Edit Navigate Search LG Tools I	Run Emulator Window Help		
📑 T 🗋 🔚 🕼 🔅 T 🕨 T 🐻	2 🛷 • 👳 🗢 •		WYSIWYG 🏇 Local »
Project Explorer 🛛 📃 🗖	🐕 LG Start Page 🛛	- 8	🔲 Prop 🕴 🚼 Outli 🍃 Call 📄 🗖
🖻 😫 🎽			🗉 🌞 🗔 🖻 🎽
			Property Value
	LG Smart TV	' SDK	
R LG Image Viewer 않	LG PROJECTS	RECENT FILE	Problems 23 AMarkers Contens Description
	📑 New LG Web Project	📄 main.js [MRCU_pointer_c	
	📑 New LG Web Page Designer	📄 index.html [MRCU_point(
	Import Projects	my_style.css [jquery]	
LG PREVIEW		📄 index.html [jquery]	
		📄 main.js [VideoControl]	
	<	• • • • • • • • • • • • • • • • • • •	< >
□ °			



						x
	▶ LG_Smart_TV_SDK ▶	▼ 47	LG_Smart_TV_SDI	K 검색		م
구성 ▼ 라이브러리	에 포함 ▼ 공유 대상 ▼	굽기	새 폴더	1		?
☆ 즐겨찾기 🔺	이름		수정한 날짜		유형	
📃 바탕 화면 🗉	퉬 .nvm_data		2012-09-26	오후	파일 폴[э
🚺 다운로드	퉬 FlashWorkspace		2012-09-26	요전	파일 폴[н
📃 최근 위치	퉬 Log		2012-10-17	오후	파일 폴[н
	퉬 ScreenShot		2012-09-26	오후	파일 폴[э
詞 라이브러리	퉬 WebWorkspace		2012-10-17	오후	파일 폴[3
Subversion	瓋 recent.dat		2012-09-26	오후	DAT - N	1PEG 동
■ 문서 ▼ <						۰.
6개 항목						









Emulator User Guide

 ✓ Resource Center > Library > Testing > Testing App on Emulator 참조



IDE 실행 및 구조



프로젝트 생성 및 동작

Eclipse 메뉴 - [File > LG Web Project]



Step 4. Emulator에서 동작 테스트



LC Life's Good

Web Project eate a Web project for simple content (HTML files) only. oject name: HelloSmartTV troject location) 🗙
oject name: HelloSmartTV troject location 2 Use default location arget runtime None> New Runtime ionfiguration Default configuration Pedault configuration Pedault configuration Add project to working sets Add project to working sets Select	Web Project sate a Web project for simple content (HTML files) only.	3
troject location 2 Use default location arget runtime Anone> Anone> New Runtime ionfiguration Default configuration to add new functionality to the project. Vorking sets Working sets: Verking sets: Verking sets: Verking sets: Verking sets: Verking sets: Verking se	oject name: HelloSmartTV	
¿! Use default location ocction: C:WUsersWhicky.ohWLG_Smart_TV_SDKWWebWorkspaceWH Browse arget runtime	roject location	
ocation: [C:WUsersWhicky.ohWLG_Smart_TV_SDKWWebWorkspaceWH] Browse_ arget runtime «None» New Runtime configuration Default configuration Modify he default configuration provides a good starting point. Additional facets can later be nstalled to add new functionality to the project. Working sets Add project to working sets Working sets:	Use default location	
arget runtime <none> New Runtime Configuration Default configuration Imodify The default configuration provides a good starting point. Additional facets can later be stalled to add new functionality to the project. Vorking sets Add project to working sets Working sets: Vorking sets: Vorking sets:</none>	ocation: C:\Users\nicky.oh\LG_Smart_TV_SDK\WebWorkspace\F Brows	e
Nore> New Runtime Sonfiguration Selault Configuration Modify Select Select Select	arget runtime	
Configuration Default Configuration Modify The default configuration provides a good starting point. Additional facets can later be nstalled to add new functionality to the project. Vorking sets Add project to working sets Working sets Vorking sets Vorking sets Vorking sets Vorking sets Vorking sets	None>	time
Default Configuration provides a good starting point. Additional facets can later be nstalled to add new functionality to the project. Vorking sets Add project to working sets Select	onfiguration	
he default configuration provides a good starting point. Additional facets can later be stalled to add new functionality to the project. Working sets Add project to working sets Working sets:	Default Configuration	y
Vorking sets Add project to working sets Working sets Select	he default configuration provides a good starting point. Additional facets can la stalled to add new functionality to the project.	ater be
Add project to working sets Working sets.	/orking sets	
Working sets: Select	Add project to working sets	
	Vorking sets: Select	
DK Version for Web Application :	K Version for Web Application :	
3.00.00	3.00.00	-

Step 3. Run LG 프로젝트







Testing & Publishing



샘플 App

| Web App 샘플

Web App Samples (10)	API Samples (17)
Music	Voice Recognition A
Photo	Window Media Play
Video	Key Repeat App
Virtual Keyboard Library	Key Up/Down App
Advertisement Sample	Window Media Play
Broadcast Sample	Window Media Play
Tic Tac Toe Sample	Subtitle API App
HTML5VideoPlayer Sample	NetCastReturn/Back
ImageViewer Sample	NetCastPageLoading
MediaPluginVideoPlayer Sample	NetCastOutOfMemo
	ASX Play App
	CE-HTML App

API Samples (17)
Voice Recognition API App
Window Media Player API App #1
Key Repeat App
Key Up/Down App
Window Media Player API App #2
Window Media Player API App #3
Subtitle API App
NetCastReturn/Back/Exit API App
NetCastPageLoadingIcon API App
NetCastOutOfMemory Event App
ASX Play App
CE-HTML App
Multi Audio App
Full Screen App
3D Video App

[관심플 및 튜토리얼 문서 Resource Center > Smart TV > SDK & Tools > To	ols & Samples
Login Register St	earch D
LG Developer Getting Started Resource Center Distribution Community	Support
Tools & Samples	
Utilize the tools and sample codes for your development.	
Q Search	
Sort By Latest	View Description
Web_Virtual Keyboard Library	25-FEB-2013
Web_Quick Start Sample App & Framework (ImageViewer)	11-JAN-2013
Web_Quick Start Sample App & Framework (HTML5VideoPlayer)	11-JAN-2013
Web_Quick Start Sample App & Framework (MediaPluginVideoPlayer)	11-JAN-2013
Web_Quick Start Sample App (Broadcast)	02-JAN-2013
Web_Quick Start Sample App (Tic Tac Toe)	02-JAN-2013
Web_LG API Sample Applications	18-0CT-2012
Web_Integrating Advertisement into Web Application	31-JAN-2012
Web_Video Sample Code	27-JUL-2011
Web_Photo Sample Code	26-JUL-2011

12 H



디버깅 - Emulator

디버그 실행

🤑 Remote Debug - test/WebContent/index.html - LG IDE package product for NetCast		
File Edit Navigate Search LG Tools Run Emulator Window Help		
📂 • 🕼 📄 🐘 • 🕨 • 🦉 🖉 📃 💿 🔛 🚱 💷 🖗 💷 🕅 🖬 🛛 B I 🔺 A 🚱 🛷 • 🤝 🔶 •		📼 WYSIWYG 🛛 🔯 Remo
🕞 index.html 🔀	- 8	🕼 Help 🛛 🗖 🗖
	😳 Palette 🛛 🖒	≣ 🗐 🔶 → 🍸
A head	Cursor 🔺	Contents 🌮 Search
Drag and drop Web page content here	🔍 Select	🗞 Related Topics 💷 Bookmarks
	LG Custom	開 Index
	Component	Search expression:
	🕞 LG UI Compo 👳 🔻	auto test 👻 🖌 Go
<pre><!--DOCIYPE ntmi PUBLIC "-//W3C//DID HIML 4.01 Transitional//EN" "http://www.w3.org/IR/html4/loose.dtd"--> @ (html></pre>	<u>^</u>	Scope Default
⊜ <head></head>		
<pre><meta content="text/html; charset=utf-8" http-equiv="Content-Type"/> <titile here<="" tile=""></titile></pre>	E	
 <bdy></bdy>	-	
	4	
Design Preview		
Console 🛛		
LG Console		
[[2013.06.07 14:51:02] [] Webbocket Ver. 1.007 (nightly build 20425) (32Dit) [[2013.06.07 14:51:02] (c) 2010-2012 Innotrade GmbH (iwlebbocket.org), Germany (NRW), Herzogenrath	A	
[2013.06.07 14:51:02] Distributed under GNU LGPL License Version 3.0 (http://www.gnu.org/licenses/lgpl.html)		
[[2013.06.07 14:51:02] Loading bootstrap 'C:\Program Files\LG Smart TV_SDK\Resources\jWebSocket-1.0\conf\Resources\bootstrap.xml'	d	
[2013.06.07 14:51:02] Initializing: Using config file 'C:\Program Files\LG_smart_TV_SDK\Resources\WebSocket.nl		
[2013.06.07 14:51:02] Loading configuration from file 'C:\Program Files\LG_Smart_TV_SDK\Resources\jWebSocket-1.0\conf\jWebSocket.xml		
[[2013.06.07 14:51:02] Configuration successfully loaded from [::/rrogram files/Lu_smart_Iv_Suk/kesources/jwebsocket.i.w/conf/jwebsocket.xm. [[2013.06.07 14:51:02] Starting 'Websocket Server Sub System		
[2013.06.07 14:51:02] Initializing servers		
[2013.06.07 14:51:02] Initializing plugins		
[2013.06.07 14:51:02] 0 plugin(s) initialized for server (s0'.		
[2013.06.07 14:51:02] Initializing filters		
[2013.06.07 14:51:02] 2 filter(s) initialized for server 'ts0'.		
[2013.06.07 14:51:02] Starting engine 'tcp0'		
[2013.06.07 14:51:02] Starting TCP engine 'tcp0' at port 8787 with default timeout infinite		
[2013.06.07 14:51:02] Trying to initiate SL on port 9797		
[2013.06.07 14:51:02] Using keystore \${JWEBSOCKET_HOME}conf/jWebSocket.ks		
[2013.06.07 14:51:02] Starting SSL engine tcp0 at port 979, with default timeout infinite [2013.06.07 14:51:03] SSL engine 'tcp0' started' at port 9797 with default timeout infinite.		
[2013.06.07 14:51:03] Starting servers		
[2013.06.07 14:51:03] JWebSocket server startup complete		
	Ψ.	
	•	
	Lau	nching test: (27%)



디버그 실행

🦉 Remote Debug - file:/C:/Program%20Files/LG_Smart_TV_SDK/Resources/LGInspectorForIDE/NetCast3/inspector.html - LG IDE package product i	for NetCast	
File Edit Navigate Search LG Tools Run Emulator Window Help		
💕 - 🗋 🗒 🏇 - 🕨 - 🦁 💋 🛷 - 🏷 - 🗇 -		WYSIWYG Remo »
index.html 🚯 index.html 🔞 Remote Web Inspector 🛛		🗖 🕼 Help 🛛 📃 🗖
	Q	
Elements Resources Network Scripts Timeline Profiles Audits Console	Search Elements	Contents 👋 Search
<pre><!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN" "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd"> </pre>	Computed Style	ted 📽 Related Topics 💷 Bookmarks
<pre>v <html lang="en" xml:lang="en" xmlns="http://www.w3.org/1999/xhtml"></html></pre>	▼ Styles	🕞 🔚 Index
▼ <hebu:stringer ▼<hebu:stringer *Cheb</hebu:stringer </hebu:stringer 	▶ Metrics	Search expression:
► (div ide"mainContain")_ < cli>	▶ Properties	auto text
v form id="ayerForm" name="layerForm" method="post">	► Event Listeners	e auto test 👻 🐨
<pre><div_id="registerguideview"> </div_id="registerguideview"></pre>		Scope Default
<pre><ruint src="/devel/common/is/s code.is" type="text/javascript"></ruint></pre>		
<pre>><script language="lawaScript" type="text/javascript">.</script> >. >. >. >. >. >. >. >.<td></td><td></td></pre>		
▼ <scripts< td=""><td></td><td></td></scripts<>		
" <pre>"" </pre>		
<pre><l code="" end="" h.22.1="" stecatalyst="" version:=""></l></pre>		
<pre></pre>		
Console 🛛		
LG Console		
[2013.06.07 14:58:40] jWebSocket server startup complete		*
[2013.06.0/ 14:58:46] Client trying to connect on port #00327		
[2013.06.07 14:58:46] Started TCP connector on port 60327 with timeout infinite		
[2013.06.07 14:58:46] Parsing handshake request: GET /jWebSocket/jWebSocket HTTP/1.1\nUpgrade: WebSocket\nConnect	tion: Upgrade\nHost: localhost:8787\nOrigin: f	
[2013.06.07 14:58:46] Client uses websocket protocol version #76/draft #76 for communication.		
[2013.06.0/ 14:58:46] Flushing handshake response: HTP/1.1 101 WebSocket Protocol Handshake\nupgrade: WebSocket	\nConnection: Upgrade\nSec-WebSocket-Protocol:	
[2013.06.07 14:58:46] Handshake flushed.		
[2013.06.07 14:58:46] TCP client accepted on port 60327 with timeout infinite (TCPNoDelay was: false)		
[2013.06.07 14:58:46] TCP client accepted on port 60327 with timeout infinite (TCPNoDelay was: false)		
[2013.06.07 14:58:46] Starting ICP connector		
[2013.06.07 15:00:59] Client trying to connect on port #60544		
[2013.06.07 15:00:59] Starting TCP connector on port 60544 with timeout infinite		
[2013.06.07 15:00:59] Started TCP connector on port 60544 with timeout infinite		
[2013.06.07 15:00:59] Parsing nandshake request: GET /jwebsocket/jwebsocket nit/illubgrade: websocket/nconnect	tion: Upgrade(nHost: localnost:8787(nUrigin: 1	
[2013.06.07 15:00:59] Flushing handshake response: HTTP/1.1 101 WebSocket Protocol Handshake\nUpgrade: WebSocket'	\nConnection: Upgrade\nSec-WebSocket-Protocol:	
[2013.06.07 15:00:59] Handshake flushed.		=
[2013.06.07 15:00:59] Handshake flushed.		
[2013.00.07 IS:00:59] ICP client accepted on port b0544 with timeout infinite (ICPNODEIay Was: Taise)		
[2013.06.07 15:00:59] Starting TCP connector		
[[2013.06.07 15:00:59] Detected new connector at port 60544.		
K	•	
R 🕹	4	aunching test?: (27%)
		aunoning test2. (2776)



Digital Signing Tool

1. Issuing Certificate

- LG Developer의 ID와 Password 사용하여 Certificate 발행
- Certificate Password는 7-12자의 알파벳 또는 숫자

2. Selecting Certificate and application

- Certificate 선택
- Application Root 디렉터리 선택
- Uncheck "Developer Test with USB"

3. Signing Application

- LDS 포맷의 Signing 된 파일의 저장위치 지정



Digital Signing Tool 가이드 Resource Center > Library > Publishing > Packaging App > using LG Digital Signing Tool 참 조





Hello Smart TV 프로젝트

새로운 LG Web Project 생성

🖷 W	/YSIWYG -	HelloSr	martTV/W	ebContent,	/index.html - L	G IDE packag	ge pro	oduct for NetCast	-
File) Edit Na	vigate	Search	LG Tools	Run Emulator	Window	Help)	
	New				A	t+Shift+N ▶	B	LG Web Project	
	Open File						₽	LG Web Page Template	
	Close					Ctrl+W	S	CSS File	
	Close All				Ctr	l+Shift+W	₫	HTML File	
	Save					Ctrl+S	3	JavaScript Source File	
	Save As			JSP File					
R	Save All				Ct	rl+Shift+S		Folder	
	Move					Ľ	Other	Ctrl+N	
	Rename						Г		
\$	Refresh					F5			
	Switch W	orkspac	e			+			
2	Import								
Ð	Export Ap	p Test				Ctrl+2	ι.		
	Properties Alt+Enter 1 index.html [HelloSmartTV/WebContent] 2 2 main.js [MRCU_pointer_control//js] 3 3 index.html [MRCU_pointer_control/]				Alt+Enter				
				/]		>			
	4 my_styl	e.css (j	query/We	bContent/o	:ss]				
	5 index.ht	tml (jq	uery/Web	Content]					
	Evit						UT	F-8>	
	LAIL						_e h	ere	



or



Hello Smart TV 프로젝트

Web 프로젝트 설정

C

Life's Good



17

Hello World 프로젝트

App 제작 및 구동

html	
<pre><head> <meta charset="utf-8"/> <title>Insert title here</title> <style type="text/css"> here(background colonywhite)</pre></td><td>Make your Code</td></tr><tr><td><pre>body {Background=Color.wnree,} body p {font-family:LG Display; font-size : 30px; text-align:center;} </style> </head></pre>	
 <body> kello Smart TV !!!</body>	





Hello World 프로젝트

실행

평 Run Configurations		X
Create, manage, and run configura	ntions 🕑	
Image: Image	Name: HelloSmartTV LG Configuration	
 LG JavaScript Configuration HelloSmartTV 	Browser Setting for LG Smart TV SDK: Target © Emulator LG Smart TV Emulator 2013	Â
Select running target	Real TV 10.177.222.59 Start Page	E
	C:#Users#nicky.oh#LG_Smart_TV_SDK#WebWorkspace#HelloSmartTV#WebContent#index.html Browse HTTP Web Server Port Number 8080	-
Filter matched 2 of 13 items	Apply Revert	
?	Run Close	



Hello World 프로젝트

Emulator 결과 확인

Lo smart i v Enitiator 2015 (NetCast 4.0) (실명 중,			
	Hello Smart TV !!!		
			1 2 3
			4 5 6
			789
			+ FAV
		se	
			< ОК ∶
			· ·
			TEXT T.OPT Q.N
			 ≪ ≫ R
			INFO®



App 테스트 환경 – Emulator

Emulator (NetCast 2.0, NetCast 3.0, NetCast 4.0)





Open URI	L	×
Address	http://www.google.com http://www.naver.com	GO Cancel
		Delete From History



Emulator 사용에 관한 설명은 Resource Center > Library > Testing > Testing App on Emulator 참조

USB App 테스트 과정









App Test에 관한 자세한 설명은 Resource Center > Library > Testing > Deploying and Testing App on Real TV 참조

LG Smart TV 의 SDK 버전 확인

- LG Smart TV의 SDK 버전이 1.5 버전 이상이어야 함
- SDK 버전이 1.5 미만일 경우 소프트웨어 업데이트 필요

?	SUPPORT	Product/Service Info.	?		• DK Exit
()] 0	• Software Update • Picture Test • Sound Test	- Manufacturer : LG Electronics Inc. - Model/Type : GLOBAL-PLAT3 - Software Version : - SDK Version : 01.05 - Serial Number : SKJY1107		Software Update Picture Test Sound Test	Software Update On Current version XX.XX.XX.XX
\bigcirc	• Signal Test	- ESN :	\mathbf{e}	• Signal Test	Check Update Version
	Product/Service Initialization of P	– Customer Service Center : 0844 847 5454 – Homepage : http://www.lg.com	6	 Product/Service Info. Initialization of Premium 	Close
?		Close	?		-



LG Developer의 App Test 페이지에서 App 업로드

- LG Developer (<u>http://developer.lge.com</u>)에 로그인 후 [Resource Center] > [Smart TV] > [Test] > [App Test] 메뉴 클릭

Resource Center	Smart	τν	Н	lome > Res	ource Center >	> Smart TV 🛛 🖴 🐱
Smart TV	Overview	SDK & Tools Documenta	ation Test Forums	FAQ		
Mobile • Android			App Test Virtual T	est (Korea	only)	
· Java ME	App Test					
	Please note that Currently, App Te LG Media product For more informat > Smart TV > Do	the App Test can be carried out i est is supported on LG Smart TV a ts does not support App Test usin tion on testing application on Real ocumentation).	n SDK V1.5.0 version or above. Ind Smart Upgrader (SP820). g USB. TV using App Test Menu, please	e refer to Sr	mart TV Docur	nentation(Resource Center New App Test
	NO	App Title	Арр Туре	Item	Country	Update Date GMT+0
	18	130116	Web > Packaged	0		2013-01-16 08:14
	17	Test130108	Web > Packaged	0		2013-01-08 08:50
	16	daum	Web > Hosted	0		2012-11-23 07:36



상세 정보 입력

LG Life's Good

u can register yo ler to test it froi	our own application for testing purposes only from here. Once up m device with DRM protected.	① 제목 입력
sic Information	n App information in English	 2 App 타입 선택 3 - Hosted app: Web 어플리케이션 서
App Title*	1 Please enter basic App information in alphanumeric (Max o ex) 0-9, A-Z, blank and underscore_	버 주소 입력 예: http://www.abc.com/ http://www.abc.com/index.html
Арр Туре*	2 Web Select Please select your App type to upload	-Packaged app: 최초실행 HTML 파일의 상대 경로 입력
File Upload*	 3 URL * http:// 4 File Upload - Web App - Available App Types: lds , zip - Recommended File Size : up to 20MB (Max 100MB) 	예: index.html ./abc/index.html abc/index.html ④ 업로드 파일 선택
App Icon*	호마보기 Recommended Picture Size : Greater than 200 X 200 pixe Available File Type : JPG, GIF, PNG Available File Size : 100KB	- Hosted app: 공란 - Packaged app: 어플리케이션 압축 파 일 ⑤ App 아이코 이미지 서택
Item 6	Service (7)	6,⑦ CP일 경우에만 선택 (Option 입력) ⑧ 저장하기

pTest		2012-10-16	5 06:20 GMT+0
File Basic Information			① 아이콘 이미지 조회
File type Upload File	Web> Downloadable index.html		② 약관 조회 ③ DRM이 적용된 어플리케이
· Icon (AppTest 1 Image: Constraint of the second		파일 다운로드 ④ 업로드 정보 수정 ⑤ 업로드 App 삭제
CP Option Information			⑥ 목록으로
· Loading Message :			
· Accept Language :			
• Progress : 95 %			
· DRM Cookie :			
• Default Language : en			
• Background Color : 1			
• Mouse-off Event : 0			
• Magic RCU : 1			
Redirection Number : 0			
Download DRM applied fil	e		
Please read terms and condit	ions carefully before you start to download	application [Terms and Conditions]	
Veu and developed DDM a	pplied file		Download



Step 1. USB에 DRM 패키징된 어플리케이션 파일을 다운로드

Download DRM applied file	
Please read terms and conditions carefully before you start to dowr	load application [Terms and Conditions]
You can download DRM applied file.	🔄 🖢 Download

USB에 다운로드된 파일을 압축 해제하면, 이름이 숫자로된 폴더가 있고 이 폴더를 아래 그림과 같이 USB의 lgapps₩installed 폴더 아래에 복사





Step 2. Smart TV에 USB 삽입 LG Apps TV의 ID와 Password로 LG Smart TV 로그인 ▶ USB 포트에 USB 삽입

*'12년 이전에 출시된 모델 중에서 USB 포트가 하나인 모델은 사용 불가



Step 3. My Apps 페이지에서 App 확인

1. 마이앱 페이지로 이동 ▶ 2. USB 아이콘 클릭
 ▶ 3. 자신의 App 확인





App 테스트 환경 - USB 이용 (13년 TV)









UX Guideline



UX Guideline

TV UX에 관하여









- **어디서?** - 거실
- 누구와? - 가족과 함께

- **무엇을?** - TV 프로그램, 영화, 게임 등
- **어떻게?** - 편한 자세로





UX 체크 리스트 - 필수사항

LG Smart TV 앱 개발을 위한 체크 리스트

Screen Layout

- 1280 x 720 해상도 (화면에 스크롤 바가 생기지 않도록)
- 클릭 가능한 오브젝트, 텍스트, 로고의 배치

Navigation

- 매직리모컨 (4방향, OK, Back 버튼) 과 리모컨 센서

On Screen Button

- 텍스트 입력 시 Screen Keyboard 이용

• Font

- Recommend: LG Display Font, Tiresias Font (이미지 제외)
- TV 시청 거리에서도 읽을 수 있는 Font 크기 (최소: 18 pt)

Visual Treatment

- 화면을 Black으로 만들지 말 것
- 클릭 가능한 아이템은 최소 54 x 54 pixel로





• UI Checklist 문서 참조 ✓ "LG Smart TV and Media Product UI Guideline" 참조





Over Scan 영역 및 포커스를 고려하지 않은 예





글자 크기를 최적화하지 못한 예





이중 포커스의 예





초기 포커스 부재의 예



