

Application Certification Program



Process, Criteria and Roadmap



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Agenda

- Program Overview
 - Two Levels of Certification
- How It Works
 - Application Certification Management System
- Process Breakdown
 - Developers and Test Labs
- Future Plans
 - Program Rollout
- Conclusion





Program Overview

Two Levels of Certification

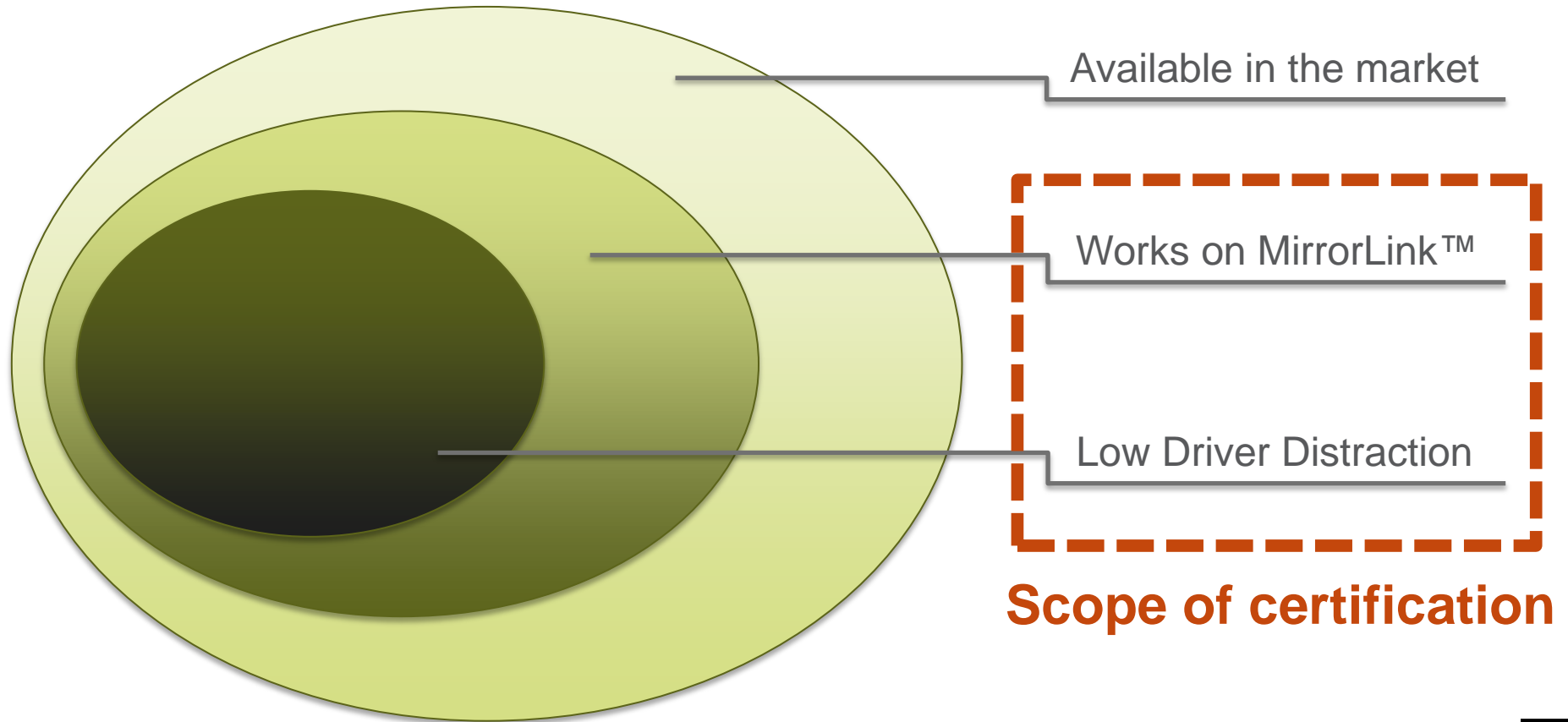


Mission Statement

Establish an ecosystem of smartphone applications for use in cars, where application developers have a central & transparent set of requirements and processes to follow.



Smartphone App Universe



Two Levels of Certification



CCC will provide two levels of certification: **Base** and **Drive**.

Base-Level will assess general compatibility with the MirrorLink™ technology.

Drive-Level will assess driver distraction characteristics, on top of foundation laid by Base-Level requirements.



Base-Level Certification: Automotive Compatibility

- Account for the differences in Human-Machine Interface between mobile and automotive
- Examples:
 - **Primary Display Orientation**
 - Smartphone: portrait
 - IVI: landscape
 - **Primary Input Device**
 - Smartphone: multi-touch capable screen
 - IVI: single-touch screen and/or rotary controller

IVI = In Vehicle Infotainment



Drive-Level Certification: Safety and Regional Regulations

- **Based on regional guidelines**
 - Alliance of Automotive Manufacturers (AAM)
 - European Statement of Principles (ESoP)
 - Japan Automotive Manufacturers Association (JAMA)
- **Global Guideline will also be made available**
 - Most strict subset of all regional guidelines
 - Makes for a single point of reference for developers
- **CCC is looking to lower overall operational cost associated with testing**
 - Research project currently underway to reduce complexity of certain test methodologies





How It Works

Application Certification Management System



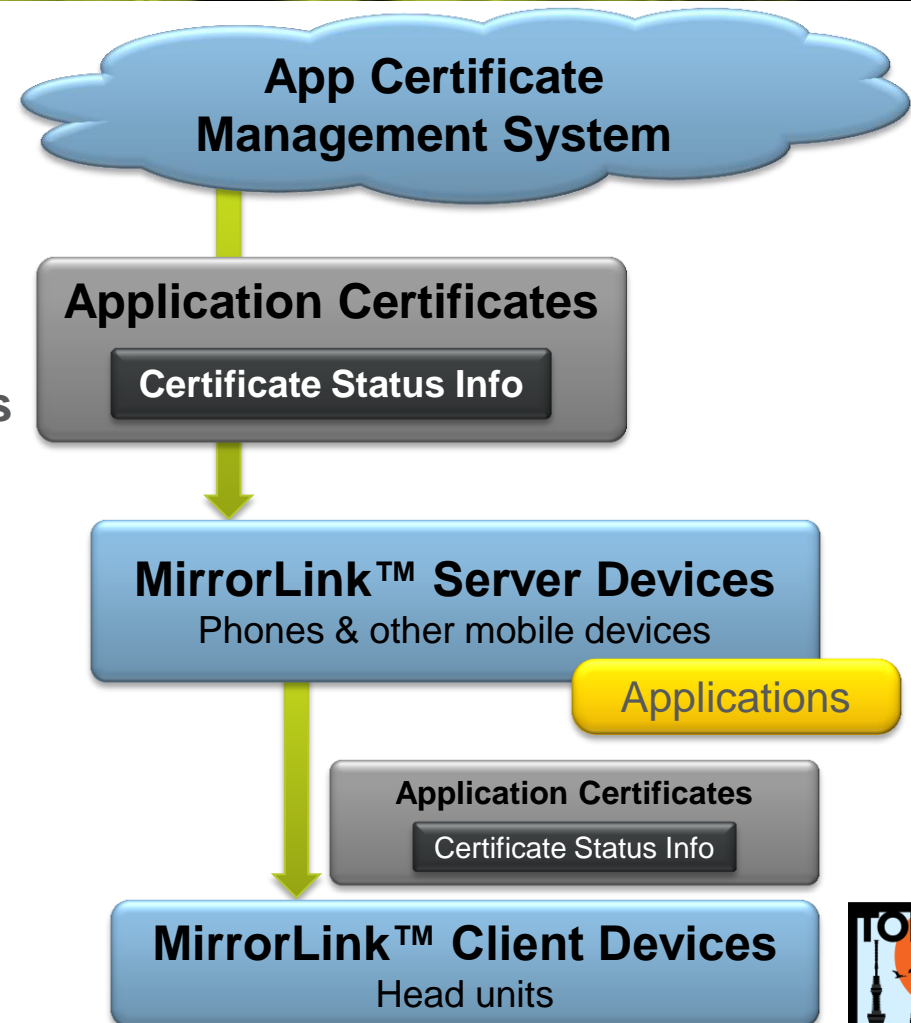
Problem Statement

1. MirrorLink™ Server needs to know that the application is genuine.
 - In other words, there must be some way of knowing that an app has not been tampered after the certification test.
2. MirrorLink™ Server needs to obtain additional information to communicate to the MirrorLink™ Client.
 - E.g. Application category, certification level
3. Multiple mobile platforms must be supported.
4. It must be possible to update the certification status of an app.
 - Downgrade/Upgrade



The Solution: Application Certification Management System

- How and when an application can be used is contained within application certificate
 - Certification Status Information
 - X509.v3 certificate
 - Custom extension information
- **MirrorLink™ Server Device (Phone) Gets Application Certificate From Internet Server**
 - Application Certification Management System (ACMS)
 - Provides certificate and Certificate Status Information to Client Device (Head Unit)
- **MirrorLink™ Server Device Periodically Checks to See if the Certification Status Information for it's Apps Has Changed**



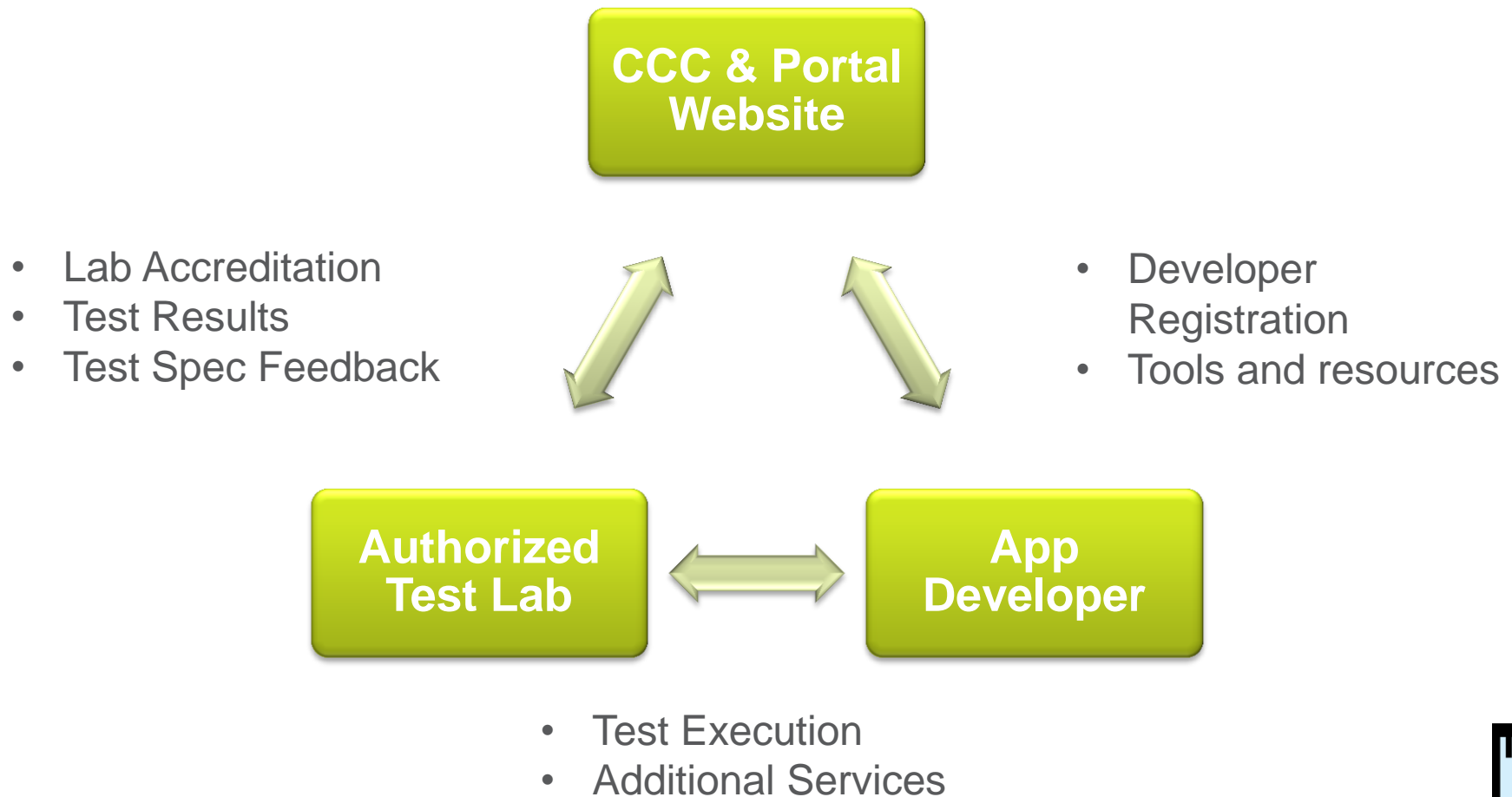


Process Breakdown

Developers and Test Labs



The Three-Way Process



How to get certified: in a nutshell.

1. Register as a developer at the Developer Portal and earn access to various resources including the Guidelines.
2. Develop/modify your application based on the guideline.
3. Select an Authorized Test Lab.
4. Submit your application to the Developer Portal for testing.
5. Wait for the result!
6. If successful, your app will be available to MirrorLink™ systems at specified date.



Developer Resources

- **Development Guidelines**
 - Basic Operability Guidelines
 - Regional & Global Guidelines for avoiding driver distraction
- **Developer Certificate**
 - Used to test apps in real-life environment
 - Valid only on a limited number of registered devices
- **Developer API Documentation**
 - Exposes certain set of MirrorLink™ features
 - To be made available on MirrorLink™ compatible smartphones



Authorized Test Laboratories (ATLs)

- CCC will authorize labs to conduct certification testing
 - Test result is submitted to CCC for the final verdict
- ATLs will be able to price their service
 - Creates a healthy competition between labs
 - Fosters value-added services beyond test-and-certify
- CCC will be building a directory of ATLs
 - Several in each major geo-location
 - Accreditation criteria under finalizing process
 - If your company is interested – contact us





Future Plans

Program Rollout



Program Rollout Plan

Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
				★ Certification Rollout	★ Portal Rollout		
ATL Accreditation & Training							
Guideline Finalization							
Portal & System Development							



Conclusion

- CCC Application Certification Program will comprise of two levels of certification: **Base** and **Drive**.
- **Registered Developers** will have full access to the guidelines and resources.
- Accreditation for **Test Labs** will begin soon.
- CCC plans to launch the program in the **2nd** quarter of **2013 (CY)**.





THANK YOU

