

Agenda

RDK Training Summit 2015

July 21-23, 2015

Tuesday, July 21, 2015 – Morning Session (*Boulder 1 & 2 Conference Rooms*)

- 7:00 – 8:00** **Registration/Breakfast**
- 8:00 - 8:10** **Welcome**
John Cernazanu, R&D Program Manager, CableLabs
- Opening Remarks**
Peter Sheedy, Director, Licensing & Strategic
Development RDK Management, LLC
- 8:10 - 8:40** **Course 101: Introduction to RDK**
Glee Abraham, Senior Consultant, RDK Technology, RDK Management, LLC
- This session provides an introduction to the Reference Design Kit and discusses its architecture and features.*
- 8:40 – 9:15** **Course 102: Introduction to RDK Community Resources**
Glee Abraham, Senior Consultant, RDK Technology, RDK Management, LLC
- This session introduces the community resources available and how the code contribution process works.*
- 9:15 – 9:45** **Course 103: Introduction to RDK Components - Part 1**
Glee Abraham, Senior Consultant, RDK Technology, RDK Management, LLC
- This session provides more details on the main RDK components and their functionality.*
- 9:45 – 10:00** **Break**
- 10:00 – 10:45** **Course 103: Introduction to RDK Components - Part 2**
Glee Abraham, Senior Consultant, RDK Technology, RDK Management, LLC
- This session provides more details on the main RDK components and their functionality.*
- 10:45 – 10:55** **Break**
- 10:55 – 12:00** **Course 104: Introduction to Yocto - Lecture 1**
Carey Sonsino, Lead Engineer, CableLabs
- This session will cover an introduction to the Yocto project build system and how it works both conceptually and practically.*

12:00 – 1:00 Lunch

Tuesday, July 21, 2015 – Afternoon Session (Boulder 1 & 2 Conference Rooms)

1:00 – 1:50 Course 104: Introduction to Yocto - Lecture 2
Carey Sonsino, Lead Engineer, CableLabs

This session continues to talk about Yocto and will discuss the machine specifications and tips to accelerate the Yocto learning curve.

1:50 – 2:00 Break

2:00 – 3:45 Course 104: Introduction to Yocto - Lecture 3 & 4
Carey Sonsino, Lead Engineer, CableLabs

This session will cover how to extend a recipe, configuring and patching components and adding a component to the build. The session further presents an overview of some additional tools provided to the Yocto project.

3:45 – 4:00 Break

4:00 – 4:50 Course 105: Working with the RDK Emulator
Glee Abraham, Senior Consultant, RDK Technology, RDK Management, LLC

This session provides a hands on walk through on how to use the RDK emulator and the RMF app to playback and stream media from gateway devices.

4:50 – 5:00 Wrap Up, Survey & Q&A

5:30 – 7:30 Evening Reception and Demonstration

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Wednesday, July 22, 2015 – Morning Session

Track 1 – Application Development Agenda (Boulder 2 Conference Room)

7:00 – 8:00 Breakfast

8:00 – 8:05 Session Overview - RDK Application Development
Glee Abraham, Senior Consultant, RDK Technology, RDK Management, LLC

The sessions over the day will introduce RDK usage and application development for application developers and MSO developers.

8:05 – 9:45 **Course 201: IARM**
Glee Abraham, Senior Consultant, RDK Technology, RDK Management, LLC

This session explains the usage of the IARM component provides and overview of the usage by developing sample applications.

9:45 – 10:00 **Break**

10:00 – 10:20 **Course 202: Device Settings**
Glee Abraham, Senior Consultant, RDK Technology, RDK Management, LLC

This session provides an overview of the device settings.

10:20 – 12:00 **Course 203: Service Manager**
Glee Abraham, Senior Consultant, RDK Technology, RDK Management, LLC

This session explains the concepts of the service manager and showcases the modifications required to add new services and to use existing services from a web application.

12:00 – 1:00 **Lunch**

Wednesday, July 22, 2015 – Afternoon Session

Track 1 – Application Development Agenda (Boulder 2 Conference Room)

1:00 – 2:45 **Course 204: RDK Media Framework**
Glee Abraham, Senior Consultant, RDK Technology, RDK Management, LLC

This session provides a hands-on understanding of the usage of the RDK Media Framework.

2:45 – 3:00 **Break**

3:00 – 3:45 **Course 205: ALTICAST - Integrating RDK with back-end subsystems & Application Framework**
Mark Johnson, Product Manager Alticast

Alticast will discuss lessons learned and best practices for integrating the Application Frameworks layer with the User Interfaces, RDK components and back-end systems. The discussion will review real world experiences working with multiple hardware (OEM and SoC) vendors and MVSP User Interfaces. In addition we will review strategies and techniques used to migrating to the latest RDK versions.

3:45 – 4:00 **Break**

4:00 – 4:45 **Course 206: Additional Streaming Mechanisms**
Glee Abraham, Senior Consultant, RDK Technology, RDK Management, LLC

This session will explore additional streaming mechanisms in RDK.

4:45 – 5:00 **Wrap Up, Survey & Q&A**

Wednesday, July 22, 2015 – Morning Session

Track 2 – System Development Agenda (Boulder 1 Conference Room)

7:00 – 8:00 **Breakfast**

8:00 – 8:05 **Session Overview**
Arun Bhargavan, Tata Elxsi

The sessions over the day will introduce RDK implementation details for the benefit of system programmers from SOC/OEMs and System Integrators.

8:05 – 8:30 **Course 301: Gstreamer Primer**
Ajith James, Tata Elxsi

This session provides a primer to the Gstreamer architecture as it is the basis for the RDK Media Framework.

8:30 – 8:50 **Course 302: Gstreamer in RDK**
Arun Bhargavan, Tata Elxsi

RDK mandates certain Gstreamer requirements for SOCs to comply with. This session will discuss some of these requirements and plugins that are provided.

8:50 – 9:45 **Course 303: RDK Media Framework (RMF)**
Arun Bhargavan, Tata Elxsi

This session introduces the RDK Media Framework architecture and provides an overview of the use cases of RMF.

9:45 – 10:00 **Break**

10:00 – 10:45 **Course 304: RMF - Network and Conditional Access Integration**
Arun Bhargavan, Tata Elxsi

The session talks about the implementation of network sources such as QAM Source and integration of Conditional Access.

- 10:45 – 11:40** **Course 305: RMF - Media Streamer**
Arun Bhargavan, Tata Elxsi
- This session outlines the architecture and design of the Media Streamer with a hands on exercise.*
- 11:40 – 12:00** **Course 306: RMF Case Study - Integrating OpenMax in RDK**
Ajith James, Tata Elxsi
- OpenMax is an alternate multimedia pipeline framework. In this session we demonstrate the flexibility by which OpenMax can be integrated into RDK.*
- 12:00 – 1:00** **Lunch**

Wednesday, July 22, 2015 – Afternoon Session

Track 2 – System Development Agenda (Boulder 1 Conference Room)

- 1:00 – 1:30** **Course 307: Closed Caption**
Arun Bhargavan, Tata Elxsi
- This session discusses the Closed Caption module of RDK with a hands on exercise.
- 1:30 – 1:50** **Course 308: RDK Graphics – Part 1**
Ajith James, Tata Elxsi
- This session talks about RDK graphics elements, handling of multiple graphics planes, multi app support etc.
- 1:50 – 3:00** **Course 309: RDK Graphics – Part 2**
Ajith James, Tata Elxsi
- This session continues the discussion on RDK graphics delving into QT webkit / CEF and Blink.
- 3:00 – 3:15** **Break**
- 3:15 – 4:30** **Course 310: SOC / OEM RDK Integration**
Ajith James, Tata Elxsi and Arun Bhargavan, Tata Elxsi
- This session talks about the integration effort for some of the RDK components and features such as IARM Managers, Device Settings, MFR libraries, Service Manager, RF and System Requirements.

4:30 – 4:50 **Course 311: Boot up procedure**
Arun Bhargavan, Tata Elxsi

This session talks about RDK system initialization scripts and boot process.

4:50 – 5:00 **Wrap Up, Survey & Q&A**

Thursday, July 23, 2015 – Morning Session (Boulder 1 & 2 Conference Rooms)

RDK Debugging, Logging, & Testing

7:00 – 8:00 **Breakfast**

8:00 – 8:25 **Course 401: DRM & Security**
Arun Bhargavan, Tata Elxsi

A short talk about integration of DRMs in RDK and about Security.

8:25 - 10:00 **Course 402: Debugging & Triage**
Arun Bhargavan, Tata Elxsi

This session delves into the RDK debugging methodologies and triage process / best practices. It also talks about RDK logging schemes and how to leverage logs.

10:00 – 10:15 **Break**

10:15 –10:45 **Course 403: tr69**
Glee Abraham, Senior Consultant, RDK Technology, RDK Management, LLC

This session talks about the RDK tr69 implementation.

10:45 – 11:15 **Course 404: Testing RDK**
Glee Abraham, Senior Consultant, RDK Technology, RDK Management, LLC

This session talks about RDK testing best practices and case studies.

11:15 - 12:00 **Open Workshop 1**

This session provides a slot for students to try out the previous exercises and catch up if needed. The trainers will around to answer questions and help out as required.

12:00 – 1:00 **Lunch**

Thursday, July 23, 2015 – Afternoon Session (*Boulder 1 & 2 Conference Rooms*)

1:00 - 2:45

Course 405: Test Development Kit

Ajith James, Tata Elxsi and Sreelal Nampoothiri, Tata Elxsi

This session outlines the architecture, deployment and usage of the Test Design Kit (TDK) for component testing of RDK.

2:45 – 3:00

Wrap Up, Survey & Q&A

3:00 – 3:15

Break

3:15 – 4:00

Open Workshop 2

This session provides a slot for students to try out the previous exercises and catch up if needed. The trainers will around to answer questions and help out as required.