

Over-the-Top (OTT) Carrier Solution

Introduction

As the telecommunications landscape continues to evolve with smarter devices and faster networks, the acceptance of OTT services by operators is clearly highlighted by the number of operator-owned OTT services launched since 2011. Competitive threats from fast moving OTT players who are more agile and use clever customer acquisition techniques is one reason driving operators to do something.

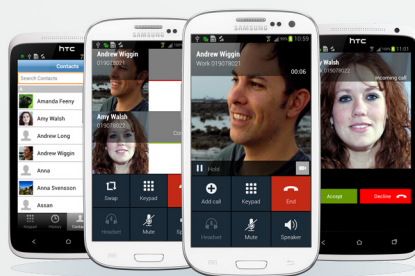
However, on further investigation the real driver is the subscriber and their insatiable appetite for smart devices and the associated apps which are innovative, easy to use and cost effective. They are compelling operators to act or potentially lose their business.

OTT Solution Overview

Cicero has developed a solution which addresses the main challenges that operators face in deploying an OTT VoIP service. The solution blue-print includes both software and services to enable operators to quickly and cost-effectively reach service launch. The solution, which includes Cicero's OTT VoIP client and provisioning server, also includes professional services required to interface with the operators existing systems and deliver a seamless service experience.

CiceroSupra

CiceroSupra is a highly mature, stable mobile VoIP client which runs on Android and iOS across a range of mobile devices including smartphones, tablets and other emerging form factors. It has its own user interface (UI) which can be branded and customised according to an operator's specific requirements.



CiceroSupra supports all of the standard telephony features of the circuit-switched phone and provides a familiar user experience for subscribers. Extended features of CiceroSupra include:

- ▶ Dynamic call routing
- ▶ VoIP only or dual-mode calling from the client
- ▶ Support for multiple IP bearers such as Wi-Fi, 3G, LTE
- ▶ QoS optimisation
- ▶ Enhanced security using VPN, TLS, DTLS
- ▶ Multiple codec support

The client supports industry-standard protocols including SIP, IMS, RTP, RTCP and has proven interoperability with all of the leading IMS and softswitch platforms globally.

Operator Challenges

Operators evaluating the move into OTT are challenged with many technical and business issues.



- ▶ What changes do I need to make to my network?
- ▶ How will I provision clients?
- ▶ How can I update client settings?
- ▶ What devices should it run on?
- ▶ Should I charge for the service or provide it as part of a bundle?

Cicero's addresses these challenges with its Over-the-Top Carrier Solution.

One of the compelling features of the solution is that it has been designed so that the operator does not have to make any changes to their existing environment.

Solution Components

The software and services in the solution blueprint are:

- ▶ CiceroSupra
- ▶ CiceroProvisioning Server
- ▶ Cicero Professional Services

Cicero Provisioning Server

The Cicero Provisioning Server (CPS) is a carrier-grade platform which enables service providers to provision, manage and update softphone client configuration settings. The provisioning server is easy to deploy, simple to use, and forms a highly secure and scalable platform which can be easily integrated within any existing network environment for fast service enablement. Its standards-based interfaces facilitate easy interoperability with existing OSS/BSS/self-care systems as required.

Key features include:

- ▶ Provisioning profile management
- ▶ User account management
- ▶ Initial client provisioning
- ▶ Configuration update management
- ▶ Client distribution monitoring and control
- ▶ Reporting & analytics
- ▶ Web service and systems management interfaces (SOAP/ReST/Authentication/SNMP)

Implemented as a Linux application server, the CPS delivers secure internal user access and data communication security. Its web-based UI facilitates user account creation, profile set-up and reporting simply and quickly, to enable management by the operator's own systems management platform. The CPS supports individual operator requirements and, most importantly, to accommodate service evolution and growth.

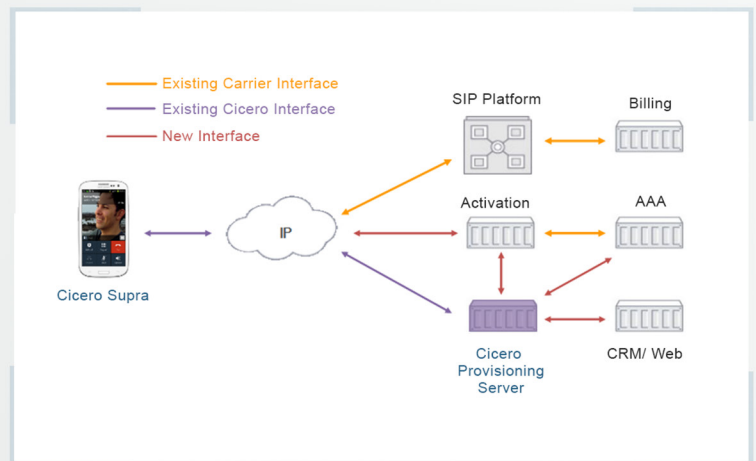
Professional Services

The solution blueprint also includes a bundle of services which cover the standard customisations required both client and server side to enable a commercial service including:

- ▶ Implementation of custom interfaces for authentication
- ▶ Interface between systems the cicero provisioning server
- ▶ Client re-brand, configuration to operator softswitch/IMS platform and lock-down of settings
- ▶ Interoperability testing within operator network
- ▶ Preparation for launch on the app markets

Why Cicero OTT Solution

- ▶ Mature, reliable softphone client
- ▶ Proven in production telco environments
- ▶ Interfaces with existing systems
- ▶ Robust, scalable solution architecture
- ▶ Implements open standards (IETF, 3GPP, etc.)
- ▶ Customisable to operator requirements
- ▶ Highly experienced integration team
- ▶ Fast time-to-market
- ▶ Strong cross-platform mobile OS support



Cicero OTT Solution deployed in Carrier Network

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