

Stay ahead of the curve

Software Licensing in Telecom Industry

- An Analysis of Demand & Supply

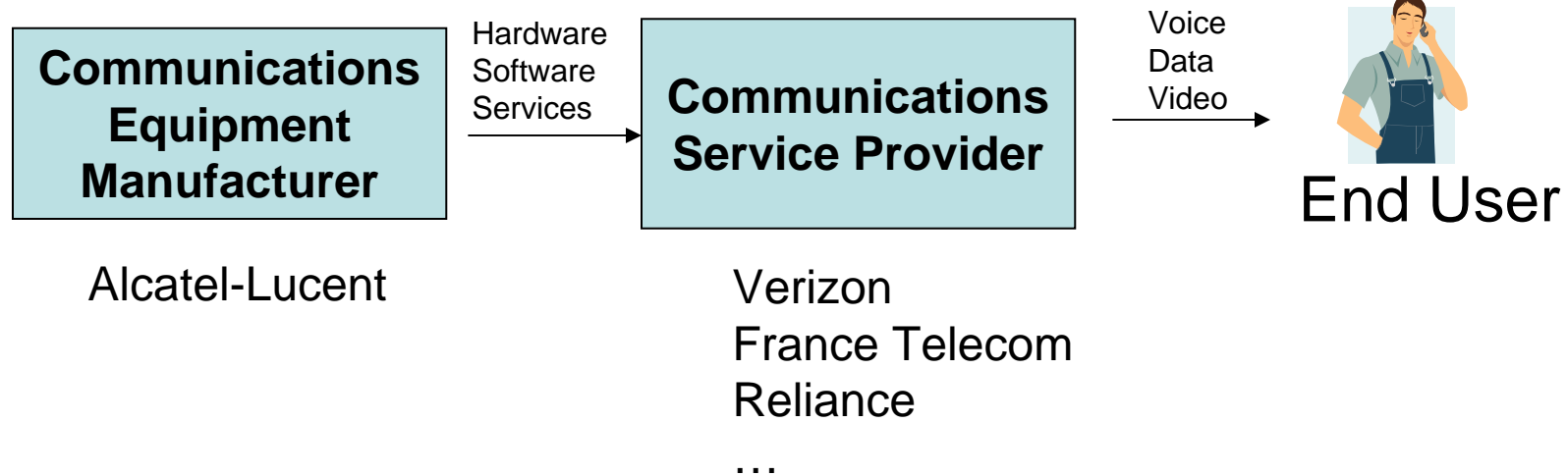
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Lets Begin

- A business manager's perspective rather than a researcher's
- Qualitative not a quantitative analysis
- Expect to find similar issues in other industries

What is Telecommunications

- Exchange of information over a distance by electronic means



Snapshot of Telecom Industry

- Global Communication Service Provider Revenue in 2006\$1.569 Trillion *
- Avg. Yearly Growth in Service & Equipment excluding some items (2007 to 2011) 3.5% #
- Avg. Yearly Growth in Software (2007 to 2010)15.5%~

* Source: OSS Observer, September 2007

Source: IDC's Worldwide Telecom Black Book, Version 2, 200

~ Source: Alcatel-Lucent estimate

Trends in Telecom Industry

- Demand for interactive video & Web enabled services are leading to a proliferation of content and applications
- Consumers are expecting everything, everywhere, seamlessly
 - > Connectivity, Availability, Mobility
- Time to Market – Old World vs. New World
 - > Quick development and deployment to new services
- Software Controlled Capacity and Features
- Evolving and Disruptive Business Models
 - > Emerging Markets, Google Phone

Software is in the “Front & Center” of these Trends

Relative differences in Hardware & Software Products – Logistics View

	<u>Hardware</u>	<u>Software</u>
Delivery	<ul style="list-style-type: none"> • Difficult 	<ul style="list-style-type: none"> • Easy
Asset Management	<ul style="list-style-type: none"> • Easy 	<ul style="list-style-type: none"> • Difficult

Requires Control

Customer won't complain about lack of Control, THEY WOULD, if Delivery is delayed!

Software Licensing Enforcement Relevant Factors in Telecom Industry

- Size & Volume performance, operations
- Real-Time access performance, reliability
- Complex solutions containing multiple products
. . . . operations, install base (field) support
- Wide variance in product margins
. . . . business model
- ROI – High vs. Low business model, operations, field support

Barriers to Software Activation

- Psychology
- Customer (Service Provider) View
 - > My cost of operations will go up!
 - > My operations complexity will go up!
 - > My customers might experience service disruption!
- Supplier (Equipment Manufacturer) View
 - > Do I have expertise in software licensing concepts?
 - > Do I choose a new product feature or software licensing enforcement?
 - > What is Business Manager's experience and perspective?
 - > Do prevalent business models in Software Licensing Industry support my needs?

Tail Wind – Software Activation

- Service Provider (Customer)
 - > Protection against hardware theft
 - > Pay-as-you-grow
 - > Improvement in operations cost and speed of service deployment
 - > Payment flexibility (Perpetual, Subscription, Utility)
 - > Control of assets
 - > Contract compliance
 - Inadvertent misuse – how to track usage in field

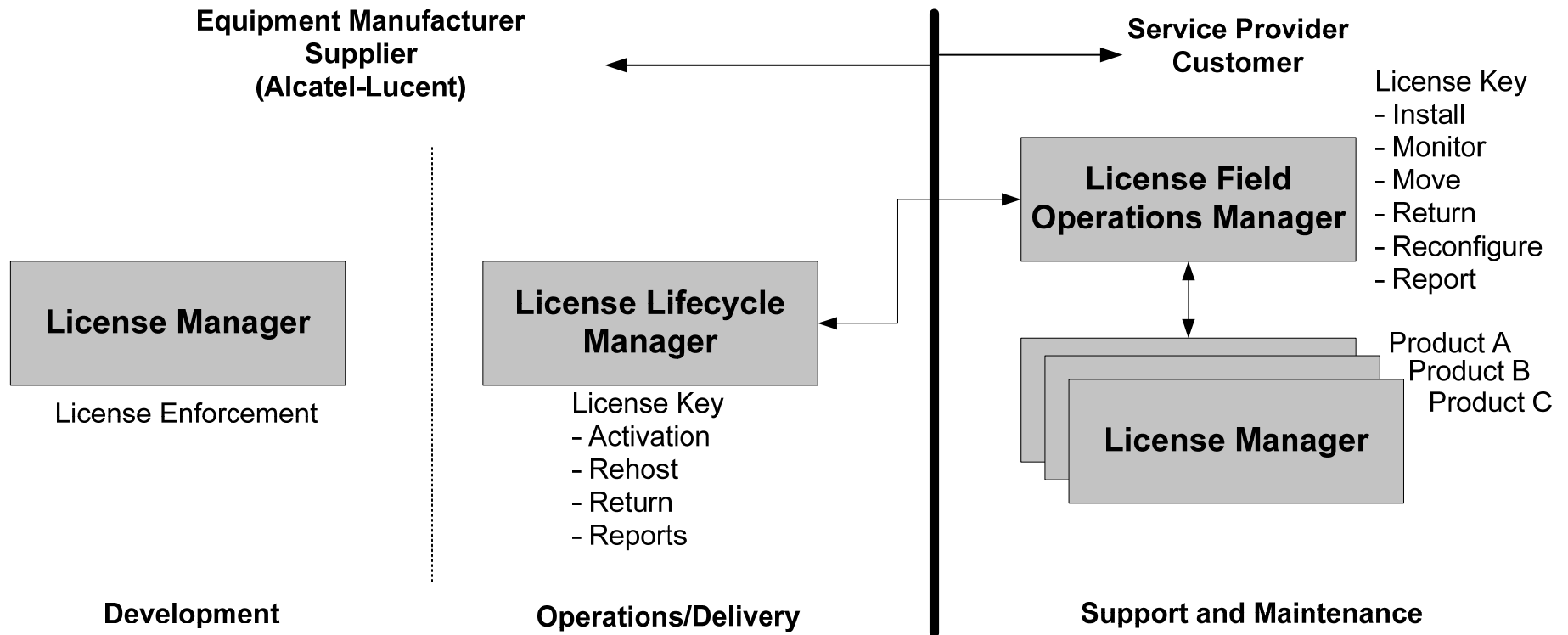
Tail Wind – Software Activation

- Supplier (Equipment Manufacturer)
 - > Revenue protection
 - Stop Intentional theft and Inadvertent misuse
 - Limit Exposure to Grey Market
 - > Revenue growth
 - Market segmentation – product packaging & pricing
 - Pricing flexibility - sales models (Perpetual, Subscription, Utility)
 - Usage flexibility – license models (Node Locked, Floating etc)

Expectations from Software Licensing Industry: Summary

- Improved performance & reliability
- New business models
- Improved technology for Utility Model
- Capability enhancements (in software licensing products)
- Integrated approach to software licensing – end to end solution

Integrated Software Licensing Model



Gaps – Additions & Improvements

- Business/Licensing Model
- License Manager
- License Lifecycle Manager
- License Field Operations Manager

Gaps – Business Models

- Principle business/pricing model in Software Licensing Industry is not suitable for Telecom Industry
 - > Product revenue based pricing is default
 - > Model needs to address
 - Difference in target products' margin
 - ROI – lagging benefits
 - Spending - Budget allocation (R&D vs COGS)
 - > Low cost entry point needed

Gaps – License Manager

- Technology improvements required
 - > Performance & reliability
 - > Utility Model
 - > Security
 - > Support for increased number of embedded platforms

Gaps – License Lifecycle Manager

- Extend the capabilities to support
 - > Service provider billing & operational structure
 - Customer hierarchy and permissions
 - > Bulk license key generation
 - > Equipment manufacturer operational structure
 - Product hierarchy and permissions
 - > Reporting
 - > User Interface

Gaps – License Field Operations Manager

Support for voluminous, complex and manual customer operations

- > Install
- > Monitor
- > Move
- > Return
- > Reconfigure
- > Report

Review

- Telecom industry provides significant growth opportunity to software licensing industry
- Software Licensing Industry is not poised to take maximum advantage of major transformation in telecom industry
- Software licensing industry needs to invest in understanding constraints and needs of its telecom customers and reposition its business models & product offerings accordingly.