



Mobile Entertainment Services For Sports Verticals

Media snacking for the sports fan



Introduction

Data revenue from mobile content and services is poised to outpace the voice revenue. ARPU (average revenue per user) for voice is on the decline and MNOs (Mobile Network Operators) are looking at data services to drive revenue and differentiation. SMS will continue to generate the highest share of global mobile data revenue through 2012¹; however other data services such as mobile entertainment, mobile commerce, location based services and mobile advertising are gaining further traction. More importantly consumers are looking for personal media experiences, access to content – anytime, anywhere – on their mobile devices. In addition, the advent of wireless broadband technologies such as Wi-Fi, 3G, WiMAX and LTE are also creating new opportunities for MNOs to address the demand for content rich applications with higher bandwidths and further drive the mobile data growth.

The ability to create and deliver compelling rich media experiences to the consumers is the challenge facing today's MNOs and content providers. Through its vision of media mobility, Motorola is enabling exciting mobile experiences across mobile entertainment, mobile commerce, personal and social networking, and mobile enterprise communications through a combination of access-agnostic Service Delivery Framework components, professional services, innovative technology and application services.

Mobile entertainment is one of the key categories for growth that enables personalized media on the go experiences with a variety of mobile video and mobile TV solutions. Motorola TuVista solution is specifically developed for verticals, such as sports, events and music concerts, to deliver media bundles to end-users who desire rich interactive experiences and social networking with the intent to ultimately drive the "fan experience".

This solutions paper addresses the applications of TuVista solution for the sports vertical. The TuVista solution provides compelling value proposition across the value chain for the content providers – e.g. Union of European Football Associations – who are affiliated with the event, for the event hosts – e.g. Manchester United – who schedule and run the event, for the MNOs – e.g. Vodafone – who operate and maintain the system equipment and services, for the advertisers – e.g. Nike – who want to target sports fans, and for the end-users – e.g. event attendees, sports team fans – who attend or participate remotely in the event.

The Motorola TuVista Software Solution is a live content creation, management and distribution software solution that creates an exciting and unique experience with time-shift and place-shift functionalities around an event. The solution focuses on delivering rich media content before, during, and after the event to fans' mobile devices. Designed as a complete, scalable, network and device-agnostic software solution, Motorola TuVista enables content providers, event hosts, MNOs, and advertisers to offer a value-added service to their end users. This end-to-end solution enhances the experience of attending an event, enabling end-users to have additional, customized content and interactive applications delivered to their personal mobile devices.

¹ Source: Pyramid Research, 2008

Motorola TuVista Experience

Motorola TuVista can support a diverse set of events occurring at multiple venues or a single stadium, spread over multiple days or merely a few minutes.

Experience At Single Stadium or Venue Events

Motorola TuVista supports stadium events such as professional and collegiate sports. Events of this type are held in venues to accommodate a large number of sports fans and broadcast to an even larger group. These stadium-based events host games with different action speeds and interruptions. Professional basketball, baseball, football, soccer, hockey, rugby, cricket are similar stadium-based events where a key benefit of Motorola TuVista is enhancing the live-event experience with statistics, injury reports, weather, traffic, promotions for memorabilia and other event related content.

High school basketball games, youth soccer games are some examples in this category which typically have no external broadcasting, and may rely entirely on UGC (user generated content). In these cases, Motorola TuVista offers an opportunity to provide sports fans some of the benefits they expect at larger venues. Motorola TuVista enables social networking experiences to share proud moments captured with personal cameras with their friends and family.

Experience at Multiple Stadium or Venue Events

Events like the Olympic Games and Grand Slam tennis tournament like Wimbledon spread across a number of days and multiple venues. Sports fans at these events can only see part of the action at any one time. Motorola TuVista will allow them to experience the full event by bringing together bundled media coverage across the event with compelling place-shift and time-shift functionalities.

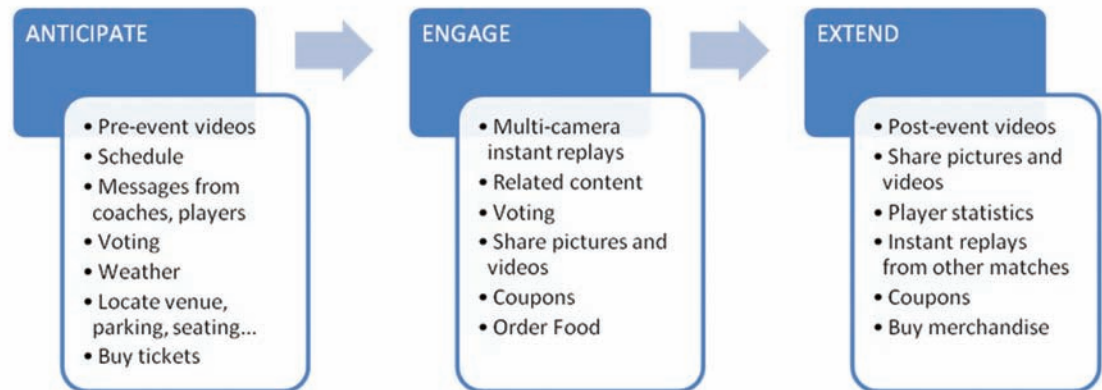
Experience Outdoor Wide Area Events

Motorola TuVista also supports outdoor events that span a wide area, often limiting a fan's ability to see the entire event. Horse racing is held at a racecourse to accommodate a large number of sports fans and is broadcast to an even larger group following the event off-track. For the fans, it is difficult to pick one location where they can see everything that transpires as closely as if they were in a stadium. Delivering video from key locations on the racecourse or where a highlight happens will enhance the race goers' overall experience of the full event.

Golf tournaments, such as The U.S. Masters, is a similar large venue event where a key benefit Motorola TuVista brings is enhancing the live event experience with instant video replays of action occurring anywhere on the course, and most of the time not visible to the spectators. It offers fans the option to view video replays of specific actions with time-shift functionality, such as a sensational hole-in-one on a different golf course.

Auto racing, marathons, fishing tournaments, bike racing, yacht racing are other examples of outdoor events that Motorola TuVista solution brings compelling personalized experiences to end-users.

Experiences Enabled By Tuvista



Anticipate - Leading Up To An Event

Motorola TuVista helps content owners and event hosts build anticipation for events by enabling end-users to watch pre-event videos, view season schedules and club information, receive recorded messages from coaches or key players, or vote on which team will win. It can also include game-day weather forecasts; assistance in locating venue parking, seating, food and beverage service upon arrival; and purchase of tickets for future games.

Engage - During The Event

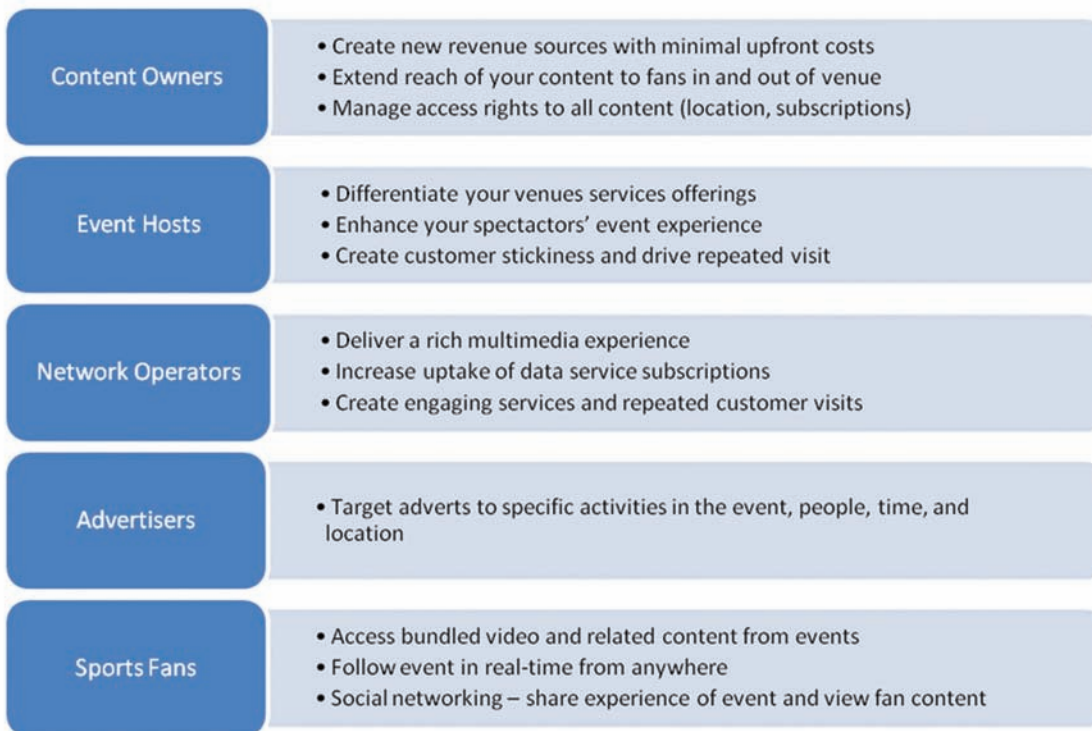
Motorola TuVista allows content owners and event hosts to engage end-users in new ways, such as viewing instant replays from multiple camera angles; receiving announcements such as injury reports; voting on the most valuable player; sharing pictures and video with their friends; getting coupons for local shops and restaurants in the stadium; and ordering food and beverages all on the end-user's personal device.

Extend - Following The Event

Motorola TuVista enables content owners and event hosts to reach beyond the venue, allowing end-users to watch post-event videos and highlights, send and share photos and videos or provide information on players, teams and leagues.

Compelling Value To The Ecosystem

Motorola TuVista provides compelling value across the ecosystem – content providers who are affiliated with the event, event hosts who schedule and run the event, MNOs who operate and maintain the system equipment and services, advertisers who want to target sports fans, and the end-users who attend or participate remotely in the event. Occasionally an entity or company may be one or more of these groups of people. The Motorola TuVista solution can create increased value for each of these target groups.



Content Owners

Content owners are looking for ways to monetize and provide new services to be distributed to sports fans. By including pre-owned content and information that can be bundled with a live event such as text, video instant replays, or advertising to be distributed to fans, they can increase the usage of their content assets. Because Motorola TuVista presents new bundled delivery opportunities to consumers in almost real-time during an event, this creates an avenue for targeted content customization and increased revenue opportunities.

Event Hosts

Event hosts who organize and host events on behalf of teams and other third parties are looking to differentiate their venues and the services they can offer to their customers and spectators. With the ability to easily synchronize media, video and pre-event content into the Motorola TuVista solution from the publishing tool and the distribution service, the solution improves the event experience for consumers and helps drive demand to attend future events.

Mobile Network Operators

MNOs will value the ability of Motorola TuVista media bundles to drive increased demand for rich mobile media devices and broadband data delivery services. With the availability of many different wireless broadband technologies like Wi-Fi, 3G, WiMAX or LTE, Motorola TuVista is designed to run on different wireless networks supporting flexible business models like BOOT (Build, Own, Operate, Transfer) and wide range of end-user devices. Its scalable, distributed software solution design supports:

- near real-time content publishing from multiple concurrent venues
- intelligent distribution optimizing network-bandwidth consumption
- live monitoring, with offline capacity planning and analytics functionalities

It may be easily integrated with their own back-office services, such as billing, provisioning and customer information system services.

Advertisers

With Motorola TuVista's solution Advertisers can effectively target different segments, such as sports fans at an event, with a rich media interface. The publishing tool and distribution service will support promotions to be delivered based on activities in the event (promoting the jersey of a player who just scored), profile of the sports fan (a football fan attending a football game), the time of day or time in event (halftime) or location (offer a promotion to visit a restaurant near the venue before or after the event).

Sports Fans

Sports fans are the primary segment of end-users for the solution. Motorola TuVista solution allows end-users to experience personalized media across various stages – before, during and after – of the event. With consumers increasingly using their mobile device as the major screen for video content, demand for richer media offerings and content is poised to grow.

Motorola TuVista Solution

Motorola TuVista is an end-to-end software solution for publishing and consuming event content architected in three parts: the bundle publishing tool, the bundle distribution service, and the mobile application.

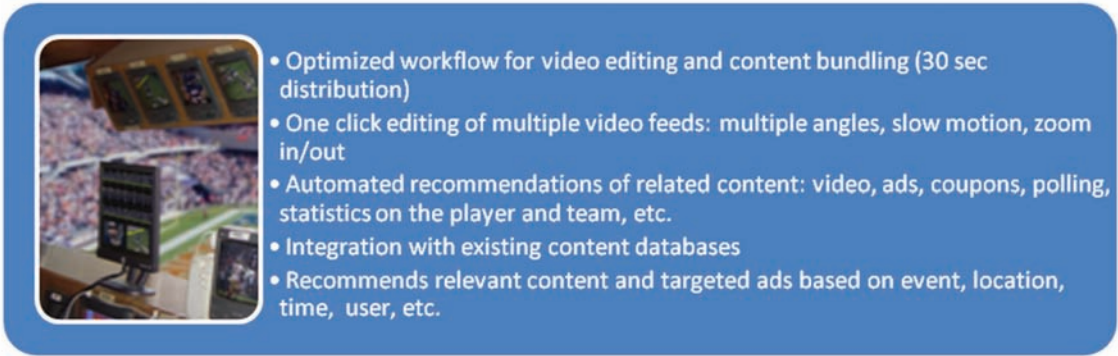


Motorola TuVista Bundle Publishing Tool

The bundle publishing tool manages events, teams, players, and actions occurring during the event to create and distribute event-based media bundles from the live event. These bundles include plain text with photo and headlines, video clips including multi-camera angles, instant replays, coupons, and polls. Completeness (not missing important moments), timeliness (publishing content shortly after occurrence) and quality (rich and compelling media clips) are primary concerns of the person operating the bundle publishing tool.

An event-based media bundle contains links (URLs) to related multimedia content of a sports event, and links between some of the selected content items. Content includes, but is not limited to, live TV streams about the event and the venue, video/audio content for event highlights, textual news from local newspaper and internet, coupons from local merchants during the event, user polls of the event during or after the event.

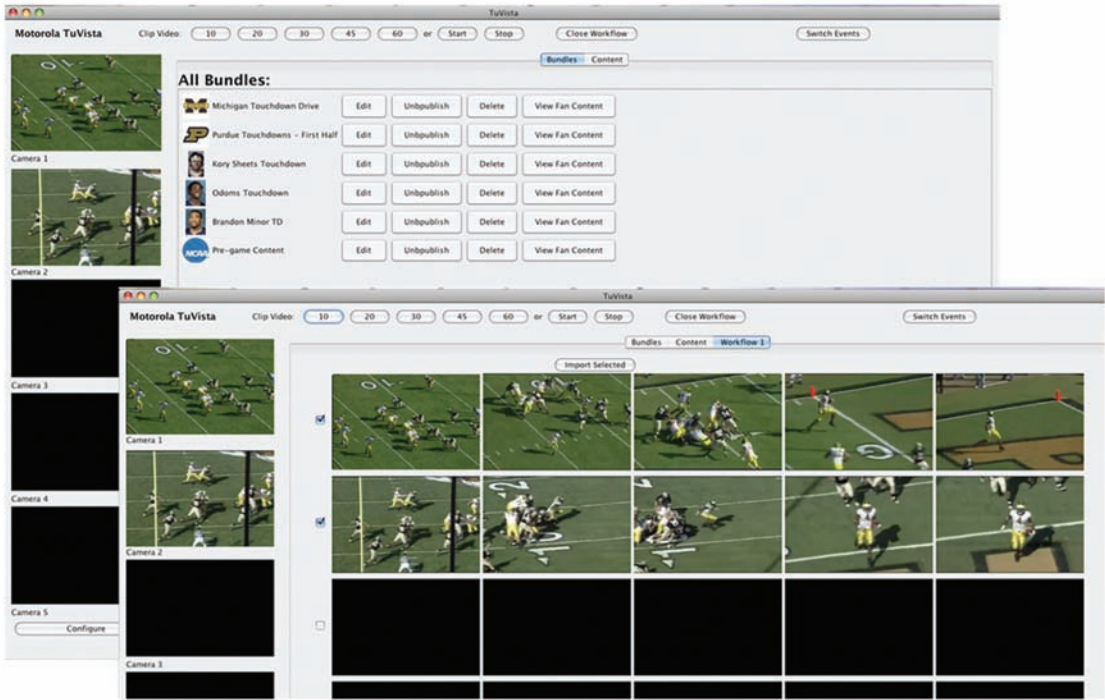
The tool allows for easy clipping and editing, including slow motion and zoom in and out as well as annotation of multiple live video streams. For example, if a goal occurs in a soccer game, the operator can click the 30-second button and get the past 30 seconds video clips from all cameras. The tool then provides a screen of thumbnails featuring the captured content and allows for one-click editing of start and stop points of each clip. The operator may then pick an annotation from events in the game or enter a new one, and apply it to any or all of the video clips.



- Optimized workflow for video editing and content bundling (30 sec distribution)
- One click editing of multiple video feeds: multiple angles, slow motion, zoom in/out
- Automated recommendations of related content: video, ads, coupons, polling, statistics on the player and team, etc.
- Integration with existing content databases
- Recommends relevant content and targeted ads based on event, location, time, user, etc.

Once the multi-angle instant video replay is created, the tool automates and simplifies the operator’s authorship by recommending related content to the instant replay, such as additional videos, statistics on the player and team polling, and advertisements based on player and action. Ads can be included as a banner at the bottom of the mobile application user interface, an advertising clip prior to an instant replay, or a media item within the bundle, such as a coupon.

The optimized workflow for multiple live video feeds editing and content bundling enables the operator to generate – in less than 30 seconds – the best possible content to engage sports fans and can be integrated with existing content databases. These event-based media bundles are then published to the Motorola TuVista Bundle Distribution Service.



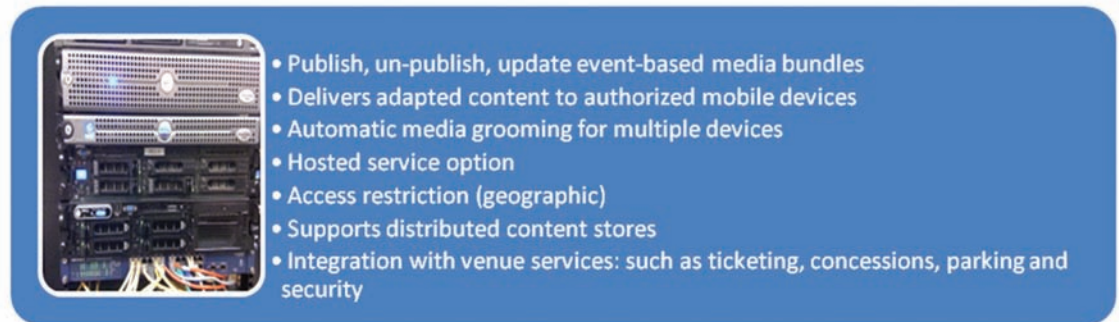
Motorola TuVista Bundle Distribution Service

The bundle distribution service automatically adapts and delivers event-based media bundles and fan content to authorized mobile devices. The bundle publishing tool operator controls the publishing, un-publishing, and updating of media bundles, as well as the ability to quarantine inappropriate, user-generated content that may be created, or flagged, by the sports fans.

The distribution service automatically grooms the content linked to a media bundle. Photos are dynamically resized, and video instant replays are encoded to different formats – including WMV, H.264, MPEG-4, and H.263 –, resolutions, and frame rates depending on the set of devices selected by the operator for the event.

The bundle distribution service can be hosted on a cloud infrastructure, such as Amazon's Elastic Compute Cloud™, to scale and adjust to demand, as well as reduce capital cost. The service also supports distributed content stores to adhere to content owners' desire to control where the video store is physically located. Mobile devices can be authorized access selectively based on restrictions, such as IP filtering and code entry, offering additional control for the distribution of copyrighted content geographically or to specific user groups. Finally, the solution does not allow users to directly share the actual content, such as instant video replays, but rather allows them to share a URL which points to the content, offering the operator further access control and the potential to acquire new fans to the service through personal friend recommendations.

For some venues, Motorola TuVista will be just one of a number of services provided to sports fans and in those cases integrating these services with the solution may be important. Ticketing, concessions, parking and security are examples of services that can be integrated with Motorola TuVista.

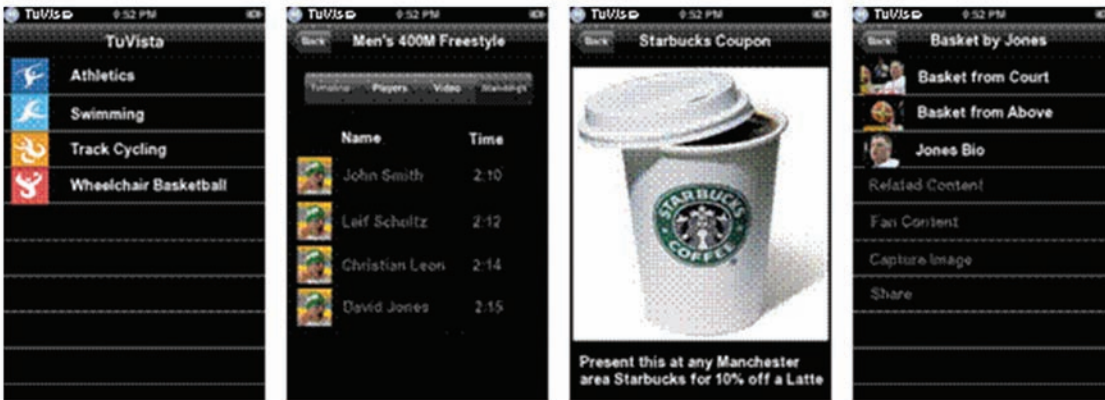


- Publish, un-publish, update event-based media bundles
- Delivers adapted content to authorized mobile devices
- Automatic media grooming for multiple devices
- Hosted service option
- Access restriction (geographic)
- Supports distributed content stores
- Integration with venue services: such as ticketing, concessions, parking and security

Motorola TuVista Mobile Application

Using the Motorola TuVista Mobile Application, sports fans automatically receive event-based media bundles within seconds of publication on their mobile device wherever they might be, inside or outside the sports facility. An intuitive interface allows fans to view the instant video replays from multiple camera angles and sort the received media bundles in multiple ways, including chronologically, by player, or media type.


As capturing photos and videos is a core part of the fans' experience at an event, the application supports the uploading of personal content, photos and video captured by the fan at the event to the distribution service. The personal content is automatically associated with the content bundle closest to the time of capture. Upon uploading content, users can decide to keep it private and just forward it to select friends, or allow anyone to view it. For each bundle, a "fan content" link is available to access the related fan content for that action in the game.



Motorola TuVista is supported on multiple mobile platforms – including J2ME, iPhone, Windows Mobile, and Windows XP – and access technologies – including 3G, Wi-Fi, WiMAX and LTE. Wi-Fi, WiMAX and LTE mobile broadband networks offer the richest quality mobile video experiences to the end-users.

The Motorola Difference – Adding Value To Your Content

Motorola TuVista is a software solution to distribute rich, timely, and interactive content to sports fans to enhance their experience before, during, and after a sporting event at the event venue, or anywhere. The solution can be integrated with other services, such as mobile commerce for merchandising, location based services and mobile advertisements for targeted location based promotions, etc. to create stickiness and drive additional revenue.



- Access bundled video and related event content in real time, from anywhere
- Dynamic push delivery: UI updates, bundles appear in seconds of publication
- Sort bundles intuitively: chronologically, by players, media type,...
- Customizable experience: branding, multiple advertisements opportunities in the and within media bundles
- Fans can share photos, videos of the event
- Browse user content related to an event bundle
- Supported on multiple mobile platforms and access technologies including: J2ME, iPhone, Windows Mobile, Windows XP; 3G, Wi-Fi, WiMAX, and LTE

Motorola TuVista solution is part of the Global Applications Services portfolio enabling mobile entertainment experiences to end-users and providing compelling value proposition to MNOs, Content Owners and Broadcasters. Motorola Global Services collaborates with customers to deliver optimal wireless solutions in network infrastructure and applications. Our leading expertise in wireless system integration, network optimization, and security is supported by our legacy as an RF pioneer and 75+ years of experience with multi-vendor, multi-technology wireless networks. Motorola can help you achieve greater profit through maximum network performance, lower cost of ownership, and differentiating applications. We have helped secure the networks of some of the largest network operators in the world, integrated and optimized hundreds of complex multi-vendor systems for over twenty years, and have managed over 100 networks worldwide. To learn more about how Motorola Applications Services can help you take your network and serve your target markets to the next level of performance and experiences call your Motorola representative or go to: www.motorola.com/services



MOTOROLA

motorola.com

Part number SP-TUVISTA. Printed in USA 05/09. MOTOROLA and the Stylized M Logo are registered in the US Patent & Trademark Office. All other product or service names are the property of their respective owners. ©Motorola, Inc. 2009. All rights reserved. For system, product or services availability and specific information within your country, please contact your local Motorola office or Business Partner. Specifications are subject to change without notice.