



HIGHLIGHTS OF THE

3GSM WORLD CONGRESS

12-15 February, 2007

AT BARCELONA

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I. Overview

The world's premier mobile event, **the 3GSM World Congress 2007, held from 12-15 February 2006** enjoyed a second successful year in Barcelona with an increase in both the quantity and quality of visitors. An estimated over 55,000 visitors from across the globe gathered at the Congress to do business and discuss the hottest trends in the mobile phone industry.

In a small survey conducted on the attendees of the Congress, it was found that one in four attendees had initiated contract negotiations at the Congress and one in ten had concluded contract negotiations. Eighty-two per cent of the respondents said that the Congress was the most important event in the entire global telecommunications industry and 75% said the Congress was the most important event for mobile entertainment. This year the Congress, organised by the GSM Association, hosted 1,300 exhibitors.

A strong contingent from India led by the Hon'ble Minister of Communications and Information Technology Thiru Dayanidhi Maran was prominent at this year's 3GSM World Congress. The delegation included Regulators, Senior Government Officials, Senior Indian Embassy Officials, a large number of CEOs from the public and the private sector as well as CEOs from suppliers companies. Chairman, TDSAT and Member, TDSAT also actively participated in the event. The size and the senior level participation of the Indian telecom industry made a great impact at Barcelona.

India was seen at the forefront throughout the 3GSM World Congress 2007. It is well appreciated that India holds promise for immense growth in terms of subscribers and revenues in the future. The greatest achievement for India was winning the **Government Leadership Award 2007 for "Best International Practices" in the field of mobile communications policy.** The award was accepted by the **Hon'ble Minister of Communications & IT, Thiru Dayanidhi Maran.** While accepting the award, the Hon'ble MoC & IT stated, "It is an honour to accept this award from the GSM Association. India has put great effort into reforming its policies related to mobile communications and the private sector has responded positively to the policy and regulatory environment created by the Government. The results of the combined efforts



of all stakeholders are now apparent and I am sure India will continue to benefit from the strong and vibrant spirit of public-private partnership that is now being witnessed in the telecom sector. However, we recognise that there is still great untapped potential for mobile communications to bring further economic and social benefits to my country and I assure you that the Indian Government is fully committed to continuing to deliver a progressive policy and regulatory environment to all stakeholders.”

“The Government of India has transformed the landscape for mobile telecommunications in the country over the past three years”, commented **Rob Conway, CEO and board member of the GSMA.** (Copy of GSMA Press release attached)

The 3GSM World Congress 2007 featured CEO and board-level speakers at both the keynote and breakout sessions and the number of visitors attending the conference sessions is estimated to have risen 10% to more than 9,200. This year delegates were addressed by mobile and media industry leaders such as Arun Sarin (CEO, Vodafone), Patricia Russo (CEO, Alcatel-Lucent), Edgar J Bronfman Jr. (CEO, Warner Music Group) and Sir Tim Berners-Lee. Observing, analysing and reporting on these developments were 2,250 international print, Web and broadcast media.

As penetration rates in many developed countries approach near saturation, mobile operators and handset makers are looking at developing markets, especially India, where lies a huge potential. The sheer numbers of potential subscribers make emerging markets a likely source of growth. “There is an massive opportunity for our business in India”, Arun Sarin, CEO of Vodafone, said during a keynote address. “We are really excited to move into the rural areas.”

While last year’s 3GSM themes were largely centered around convergence, mobile TV and the applications needed to drive 3G, this year’s event focused on true mobile broadband, the mobile internet, changing operator business models, a strategic long term approach to entertainment and the reinvention of equipment vendors as they respond to growing pressure from mobile operators to reduce their cost base.



Mobile entertainment and content formed a major theme throughout the show with an entire hall (Hall 7) dedicated to multimedia content for mobile devices. In addition, the Mobile Entertainment Summit session addressed hot industry topics such as mobile TV and mobile music delivery. Content continues to be seen as a key driver of value for mobile operators. Orange expressed its convergence services vision and explained that content is at the heart of its strategy. Canada's Rogers and Telus spoke about the importance of music, particularly for the youth market.

The wireless industry showed off a bevy of flashy new cell phones and faster networks, but it was entertainment geared for the small screen that took centre stage. Strategies to bring sleek content from Bollywood movie producers and the highly-regarded Sundance Film Festival were presented alongside projects to make it easier for poor migrant workers to transfer money. While the two initiatives may seem largely incompatible, it's a reflection of where the mobile sector is today.

This year saw some interesting developments in terms of mobile music handset and service developments. The LG Prada handset was the most notable example. Like the iPhone, the LG Prada is touch-screen based. It has a 2 megapixel camera, music and video player as well as document viewer capacity and FM radio. The look, feel and usability of the handset, which is expected to retail at €800, is very compelling. Another interesting announcement was that made by British mobile music company Omniphone, which announced its MusicStation service. The service will allow unlimited music downloads to mobile devices for a price of around \$3.99 per week. Omniphone has signed deals with 23 mobile network operators in 40 countries.

2006 was the year of vendor mega-mergers with Alcatel – Lucent and Nokia – Siemens tying the knot. The drivers of this M&A activity are threefold:

- Size and scale – as operators demand more savings from vendors, vendors need to look at ways of saving on R&D, production and delivery
- Convergence between fixed and mobile
- Geographic reach



Alcatel-Lucent's CEO Patricia Russo stated that consolidation is enabling vendors to focus their R&D expenditure in a more productive way. Vendors were unanimous in their view that their operating model needs to change as operators push for more network capex and opex savings. All vendors see opportunities in the managed services / outsourcing business.

The **12th Annual GSM Association Global Mobile Awards** were announced on Tuesday February 13, 2007 in Barcelona at a spectacular event that showcased the best of the mobile world. Awards were given for Entertainment, Services, Handsets, Marketing and promotion, etc. it is noteworthy that **Idea Cellular Ltd**, India, won the award for “**Best Billing and Customer Care Solution**” category.



III. Highlights of the 3GSM World Congress

1. Government Mobile Forum

The '**Government Mobile Forum**', started last year at Barcelona, this year too witnessed participation from Ministers, Regulators and Government Officials of several countries. A limited number of high-level CEO's were also invited. **The Hon'ble Minister of Communications & IT, Thiru Dayanaidhi Maran** was also attended the Forum.

The keynote address was given by **Rob Conway, CEO & Member of the Board GSM Association** on "Bringing Affordable Services to Consumers". The topics for discussion during the forum include Convergence for customers and opportunities for Mobile Media, Expatriate Mobile Money Transfer, Challenges for Regulators – Technology and Regulation at a Crossroad, Role of Mobile in Afghanistan, etc.

There was also an interactive Panel Discussion including **Mr. Houlin Zhao**, Deputy Secretary General, ITU, **H.E. Mr A. Sangin**, Minister Communications, Afghanistan, and other eminent personnel.

2. Expatriate Mobile Money Transfer (EMMT) Program

The GSMA EMMT program, led by Bharti Airtel and, involving also Cellular Operators Association of India (COAI), is a landmark initiative to use the mobile phone as a device to reach increasingly greater economic and social benefits to the growing community of mobile users. The EMMT program is focused on catering to the needs of the large expatriate community of people from developing countries who live and work away from their homes and families and regularly remit money back to their families and loved ones.

The EMMT project is particularly relevant and important for India, which is the largest recipient of international remittances worldwide. The World Bank has estimated that in 2005 Indian expatriates remitted over 22 billion US Dollars back home. It has been



estimated variously that there are at least around 15 to 25 million Indians who live and work abroad across 130 countries who send money back home to their loved ones. The bulk of the remittances to India come from the Middle East - primarily Kuwait and Saudi Arabia, and the United States.

A large proportion of this expatriate community who have gone abroad in search of higher salaries and to improve their financial situation, are sending money back to their families which reside in the small villages in rural India which are quite often deprived of a traditional banking infrastructure that will facilitate the easy remittances of funds. In such circumstances, remitting funds back home to their families in the villages becomes a complex and long drawn out process.

It is in such cases that the EMMT program will be particularly useful, as it will overcome the lacunae or absence of traditional retail banking infrastructure and will actually transfer money through a simple SMS. EMMT will thus be a simple, easy, expeditious and cost effective way to remit money back home. This would lead to an all round improvement in the economic and social well being of the recipients as the ease of access and lower costs will expand the use of EMMT as the preferred channel for foreign remittances.

The mobile phone could become the de facto bank for millions of Indians living in rural and remote areas and become the preferred vehicle for financial inclusion for those living in the remote and unbaked areas of the country.

EMMT will also have the advantage of converting the mobile into a device for conducting financial transactions, it would give rise to the use of the mobile wallet; it could provide an opportunity to grow micro finance disbursement and management, all of which would once again give India the opportunity to leapfrog over its legacy issues/concerns and catch up with the developed countries.

The Hon'ble Minister of Communications and IT, Thiru Dayanidhi Maran, at the occasion said, "Our Government is fully committed to making this project a resounding success and I assure you that we will do all we can to enable and facilitate the earliest implementation of this project to deliver the full benefits of the same to the Indian



citizens. I understand that for the success of this project, there is a need for an unambiguous regulation, which provides for growth in the market and improved access for users. I would like to state that I am committed to this objective and will extend all possible efforts to facilitate the same.”

"We believe that this coming together of the mobile and banking industry is a giant leap in mobile commerce," added **Sunil Bharti Mittal, Chairman & Managing Director, Bharti Airtel and Board Member of the GSM Association**. "It will revolutionise the money transfer industry with its advantages, such as reach, ease of use, and lower transaction costs and provide immense benefits to people in developing nations such as India."

Mr. O. P. Bhat, Chairman, State Bank of India, India's largest bank, added: "We are happy to partner with the GSM Association in this landmark project. We piloted a project in a small Himalayan village of Pithoragarh in India with Airtel and have seen the tremendous results in this unbanked village. This project has the potential of transforming the lives and economies across the globe"

Sanjeev Aga, Chairman, COAI & MD, IDEA Cellular also said, "This project is another landmark initiative by the GSMA to push the boundaries in mobile applications. International mobile money transfer as a concept, is especially relevant for India due to its very large expatriate population. The Indian Diaspora will welcome the opportunity to securely transfer funds back to their families in India in a simple, expeditious and cost effective manner. I wish the project all success."

The GSM Association launched this pilot program aiming at tapping the ubiquity and ease-of-use of mobile communications to enable the world's 200 million international migrant workers to easily and securely send remittances to their dependents, many of whom don't have bank accounts. By exploiting the extensive reach of the mobile networks, the programme will complement existing local remittances channels and make transferring money internationally significantly more affordable.

Spearheaded by a special group of 19 mobile operators with networks in over 100 countries and representing over 600 million customers, the GSMA believes the



programme could double the number of recipients of international remittances to more than 1.5 billion, while helping to quadruple the size of the international remittances market to more than \$1 trillion by 2012.

To combine the strengths of the mobile and financial ecosystems, mobile operators are partnering with banks at a local or regional level, while the GSMA is setting up a pilot with MasterCard Worldwide, a global payments leader whose cards and network provide international authorization, clearing and settlement.

"The creation of a global hub will enable the mobile networks, which now cover more than 80% of the world's population, to offer the world's burgeoning migrant population a convenient way to securely and cost-effectively transfer money to their families back in their home countries." said Rob Conway, CEO of the GSMA, the global trade association for mobile operators. "We are mobilising financial services for the billions of people who are unbanked and the underbanked."

International remittances, which total more than \$230 billion a year, are already a major source of income for many developing countries and a very important factor in their economic development. "The programme will resonate with governments because it makes the international payment market more transparent, encourages financial inclusion, reduces crime and boosts the flow of hard currency into their countries," Through its Development Fund, the GSMA will also work with mobile operators and financial services companies in individual countries to develop innovative approaches to using GSM mobile networks to further extend the role of mobile technology to deliver greater financial inclusion and lessen the digital divide.

3. Operators Exchange Instant Messages Across Networks

Since Personal IM was introduced one year ago at the 3GSM World Congress in Barcelona, the GSMA and mobile operators have enhanced the original concept to enable users to also exchange messages with SMS users, developed implementation guides and interworking agreement templates to ensure interoperability across networks and have worked with vendors on extensive interoperability testing. As a result, operators worldwide would now be able to easily rollout personal IM services, which are



interoperable with similar services from other operators, and would be able to transfer messages between IM users and their existing community of SMS users.

India is the first country to launch the Mobile Instant Messaging Services in the country. The launch was announced in January 2007 and the service would soon be commercially available for all.

The Personal IM campaign is also gaining momentum in Asia. In total, about 40 mobile operators in more than 55 countries with more than one billion customers are now participating in the Personal IM campaign. Operators in Malaysia, Pakistan, South Africa and Thailand, for example, are also planning to launch interoperable IM services this year.

Mobile operators in Spain and Italy are on the verge of launching services that will enable their customers to exchange instant messages across networks as part of the worldwide Personal IM campaign run by the GSM Association, the global trade association for mobile operators. These new services also allow instant messages to be transferred as text messages (SMS), where necessary, ensuring a large community of potential users right from launch.

Telefonica and Vodafone Spain and Telecom Italia and Vodafone Italy are ready to rollout IM services based on a technical and commercial framework developed by the GSMA to maximise ease-of-use, interoperability and reliability, while minimising spam and viruses. T-Mobile and Orange are also planning to launch IM services based on the GSMA framework during 2007, enabling mobile users in Germany, the U.K. and France to also exchange instant messages across mobile networks.

"We now have in place a global standard that will allow mobile users across the world to enjoy a rich IM experience, encompassing presence information, immediacy of delivery and a conversational-style dialogue," said Rob Conway, the CEO of the GSMA. "Crucially, we have also designed Personal IM to be fully compatible with SMS ensuring this new and exciting service will have a very large community of users right from launch."



Vodafone, Telefónica, Telecom Italia, T-Mobile and Orange have signed, or are about to sign, interconnect agreements with each other, paving the way for the rollout of interoperable IM services.

4. Bollywood Goes Mobile

The world's largest film industry, Bollywood – the Indian Film Industry joined forces with the global mobile communications world in spectacular fashion - as Bollywood premiered its first feature films for mobile viewers at the 3GSM World Congress. The Congress marked the start of the adaptation of thousands of vibrant Bollywood productions for the mobile screen - a development that could have a huge impact on the global mobile entertainment market, already worth some \$US23 billion.

The Bollywood Mobile Initiative was driven by Roamware, the global leader in roaming and mobile connectivity solutions; Hungama Mobile, the world's largest aggregator, developer and publisher of Indian entertainment and Bollywood content; Sanjay Gupta, a leading Bollywood director; and the GSM Association (GSMA), the global trade association for mobile operators.

Two Bollywood short films "Zahir" & "Matriomony" were premiered in Barcelona today. These films are a part of the feature film 'Dus Kahaniyaan' (10 Stories) produced by Sanjay Gupta of White Feather Films, starring more than 20 leading Bollywood stars including Dia Mirza, Suneil Shetty, Sanjay Dutt, Neha Mandira Bedi, Aftab Shivdasani and many others.

The films demonstrate the viral potential for Bollywood movies on the 'fourth screen' – the mobile device. Set pieces with action and dialogue scenes interspersed with song and dance make the vibrant, fast moving movies a compelling entertainment experience for the mobile viewer. "Bollywood today is the world's largest movie industry, producing more than a thousand movies a year with an audience of more than two billion viewers across 127 countries. Formatting that content for the mobile audience and ensuring simplicity of delivery and accessibility provides staggering reach and revenue possibilities," said Bobby Srinivasan, CEO and Chairman, Roamware.



"We are excited by the tremendous potential for Bollywood entertainment on mobile phones, and delighted to support the efforts of Roamware and Hungama Mobile in their commitment to bringing a rich array of Indian film entertainment to the fourth screen for a global audience of millions." said Bill Gajda, Chief Marketing Officer of the GSMA.

"India is the fastest growing market in the mobile world, and the world's fourth largest market. It has the potential to be the largest market globally by 2010. It is the most logical market from which to launch the mobile movie industry and present a brand new avenue of cinematic entertainment for mobile users everywhere. The potential is truly amazing. said Neeraj Roy, Managing Director & CEO, Hungama Mobile.

Bollywood is one of the fastest growing entertainment industry segments and has an appeal not only for the 150 million mobile phone users in India but for markets across all continents. Indian cinema is now dubbed in over 35 languages and accounts for as much as 16.5% of theatrical business in markets such as UK. Indian films have made it into the top 10 charts in markets such as USA, UK, Germany, Australia, Singapore and South Africa. More than 3.6 billion admission tickets are sold each year, across the world and now Hungama Mobile and Roamware will take this to some 2.5 billion mobile screens.

5. Mobile Broadband

The hottest subject for discussion everywhere in the world these days is Mobile Broadband. HSPA is veritably providing the real mobile broadband in many parts of the world. HSPA is taking the lead as it is a natural migration path for a large number of GSM and UMTS operators already operating commercial networks in 3G spectrum. This gives rise to significant economies of scale on handsets and user devices and a large ecosystem of global suppliers of components, subsystems, equipment and network design and implementation services. Hence this is the least risky and best understood route to offering broadband mobile services, which can offer speeds comparable to first generation fixed DSL services.



The momentum in HSDPA deployments has been stimulated by competition from other broadband wireless technologies and by the prospect of competition from mobile WiMax. However, there is as yet no convincing real-world evidence of the actual relative performances of these technologies in large scale deployments. Nevertheless, it is likely that these two technologies will achieve comparable levels of performance in typical real-world situations, contrary to the notion that mobile WiMax should be regarded as a "Killer" technology.

As Nokia's Simon Beresford-Wylie commented, there is huge potential for mobile broadband given that, today, penetration of both 3G and DSL is only a few hundred million and that 100 times more traffic is carried on fixed networks than on mobile. HSPA is already delivering on the mobile broadband promise, taking 50% of 3G traffic within the last six months. There was much discussion about what technology will ultimately win the mobile broadband battle. Most speakers agreed that, while it would be ideal to have one mobile broadband standard, in reality, a number of standards are likely to co-exist. The view, endorsed by Arun Sarin, was that LTE based on OFDM/MIMO technology is likely to be the most prevalent technology with Wimax gaining more prominence in markets, which are spectrum constrained (e.g. India).

The switch to true mobile broadband was seen to hinge on the successful implementation of all-IP networks, which can act as the "glue", bringing together data and voice, content and communications, unicast and broadcast applications.

Telstra is using HSPA (high-speed packet access), which is an "add-on" to existing 3G networks and currently being deployed by many operators around the world. According to the GSM Association, there are now 149 HSPA networks in use or in trial in 69 countries.

"It's a marriage of 3G with HSPA, what we call mobile broadband, and that's where the opportunity is," said Rob Conway, CEO of the GSM Association. Development won't stop there, however, and many vendors were openly talking about a new technology called "LTE" (for long-term evolution) that is expected to offer peak download speeds of up to 100Mbps _ although it will be up to five years before such networks and phones are widely available.



6. Mobile Advertising Initiative

As many might be aware, Cellular Operators Association of India (COAI) and the GSMA had launched the initiative of Mobile Advertising in India in January 2007. A meeting of all the GSM operators (Public and Private) was held in Mumbai, Chaired by Bill Gajda, CMO, GSMA to investigate the value of industry-wide mobile advertising standards, metrics and advertising service solutions. Indian operators are working on the development of solutions to propose a cross-network mobile advertising trial in India. India had been selected as a launch of this trial activity due to the high level of innovation and enthusiasm in the country.

At the 3GSM World Congress 2007, there was ample opportunity to see the work in other parts of the world on mobile advertising. The Congress was a great platform to discuss the learnings of other operators and also their progress on this project.

From the discussions, it was evident that with its unique advantages of personalization, immediacy, the mobile phone has emerged as an attractive advertising tool for brands and advertisers to reach new customers and target audiences. The industry is now seeing mobile advertising generate significant interest among mobile operators, advertisers and ad agencies.

A key requirement for mobile advertising would be standardisation and a code of conduct for the industry. As a result, the association recently set up a Mobile Advertising Forum that would address such issues. If operators can agree on things such as common formats for mobile ads, there is a lot of potential, according to Vodafone CEO Arun Sarin. "We are clearly in a good environment to monetize what we can get from advertisers."

"If this information is used intelligently, mobile operators have an opportunity to gain significant new revenues from mobile advertisers, who may be willing to pay a premium for access to a well-segmented audience," said Analysts consultant Andrew Kloeden. "Provided a business model that does not bypass the operators' networks emerges as



dominant, mobile advertising may represent a source of significant ARPU [revenue] gains from mobile data services," he added.

Orange in France has been running a mobile advertising trial involving SMS/MMS and WAP push, display / pull advertising as well as ad-funded /sponsored content. Customer reactions to the trials have been positive, but it is clear that customers want something back in return for accepting to view advertising, namely lower priced services or more value for the same price. O2 announced that it will be launching its own mobile advertising trial in May this year. In addition to running portal banners for 3G users, O2 will be offering ingames advertising. This will be done on a sliding scale basis, whereby a standard game that would normally cost £5 will be charged at £2.50 if the user accepts some advertising or offered for free if the user accepts more advertising. Both O2 and Orange commented that a number of things need to happen to make mobile advertising a success. These include the development of new metrics for measuring audience impacts, a good customer experience and the organisational restructuring of operators to make it easier for media buyers to transact with them.

In the US, Verizon Wireless and Sprint Nextel have launched initiatives to test how consumers react to short video ads on their phones. In Europe, 3 and Orange have begun selling banner ads on their portals to drive users to click on games and video downloads. In Asia, China Mobile and China Unicom recently announced plans to sell advertising space via SMS/ MMS, games, IVR and mobile Internet services. Operators like 3HK and SmartTone-Vodafone are partnering with media agencies and advertisers rolling out mobile advertising campaigns.

Not surprisingly, the recent buzz over mobile advertising is partly from the fact that mobile services are becoming increasingly content driven. The increased rollout of 3G and HSDPA, mobile users' growing interest in multimedia content and emerging services like mobile TV and "off-portal" search also open doors to advertisers to exploit the mobile channel for advertising opportunities. If nothing else, consumers' increased acceptance of mobile advertisements also helps push cellcos and advertisers to explore the business opportunities.



7. LG Handset to Lead GSMA's '3G For All' Campaign

Twelve leading mobile operators have selected a slim, multimedia phone developed by LG Electronics as the winning handset to spearhead the GSM Association's 3G for All campaign, which aims to make third-generation mobile services accessible to a much wider user base. By agreeing on a common set of requirements, the 12 operators will enable LG to achieve major economies of scale in manufacturing, logistics and marketing. The LG-KU250 handset will be available at a wholesale price about 30% less than the typical entry-level 3G phone and fully-competitive with the multimedia second-generation handsets on sale today.

Twelve of the largest mobile operators in the world selected the LG-KU250, which is only 15mm thick, from 19 handsets submitted by eight vendors. Containing a chipset supplied by Qualcomm, the handset supports video calls, high-speed Internet access, multi-tasking and a wide range of other multimedia services.

"The 3G for All campaign has had a great response from both handset and chipset vendors demonstrating their commitment to work with operators to drive usage of 3G services," said Craig Ehrlich, chairman of the GSMA, the global trade association for mobile operators, and a board member of Hutchison Mobile Communications, which is sponsoring the project.

"Through this partnership, we will bring all people closer to new mobile capabilities and they will benefit from higher-quality wireless multimedia 3G services. LG will provide them with attractive and feature-rich 3G devices while at the same time breaking price barriers for subscribers in the global market" said Dr. Skott Ahn, President and CEO of LG Electronics Mobile Communications Company.

Unveiled to CEOs from across the mobile industry at the Leadership Summit of the 3GSM World Congress in Barcelona, the LG-KU250 handset will be available to all 3GSM mobile phone operators from the second quarter. The 12 operators steering the GSMA programme have also highly commended a 3G handset submitted by Nokia. Also capable of supporting a range of 3G multimedia services, the handset, which is built on



the Nokia 6151 platform, uses a Texas Instrument chipset designed to Nokia's specifications.

The 3G for All campaign is the second programme designed by the GSMA to create economies of scale for handset makers and their component suppliers. The GSMA's Emerging Market Handset programme stimulated the development of a range of ultra-low cost mobile phones aimed at first-time buyers in developing countries.