

March 2005

R-EVOLUTION

Newsletter for the Developer Community

For Private Circulation only

Editorial

Dear Developers,

With the steadily increasing penetration of mobile telephony, its usage as a viable medium for advertising and sales promotion is gaining momentum. Mobile phones may be used as a vehicle to acquire customers, strengthen existing and prospective relationships, disseminate information and ultimately drive up sales. Successful mobile-based marketing requires understanding of the possibilities of employing the medium in a traditional one-to-many 'broadcasting' way for maximum reach, as well as of the interactive one-to-one or one-to-few 'narrow casting' way for minimal waste.

In addition, the most successful of all mobile-based marketing campaigns and services tend to concentrate on incentives, interactivity, mobile relevance and response to the real-time needs of wireless users. Our lead story focuses on this new way of marketing through the mobile medium and details how promoting products and services of a company through R World can be done in an effective and yet non-intrusive way.

In our Application of the Month section, read about 'Brand Zone' on R World, illustrating how companies like Castrol, LML, Kotak Securities and others are successfully marketing their products / services. 'Brand Zone' has great potential to become a powerful marketing tool in our country in the near future.

In our Technology Tips section, we continue with our articles on Reliance APIs. In this issue, we have outlined on the use of Reliance APIs for the RMS package, which would help deal with persistent memory requirements for your application.

Looking forward to your useful feedback and valuable suggestions.

- S P Narayanan

Marketing through the mobile medium



Tech Tip
RMS Package



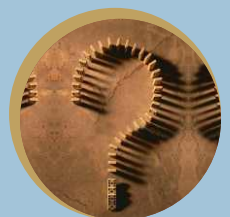
Application of the Month
Brand Zone



Interactive
JDTS



Interview of the Month
Vijay Kumar Jain
Astute Systems Technology



Quiz



Marketing through the mobile medium

As mobile phones become the most widespread and frequently used consumer device, available with users at all times, marketers across products and service categories have realized their importance as a potent marketing tool, be it to talk to customers about the latest offerings or to carry out exciting promotions.

Across the world, agencies, advertisers, hand-held device manufacturers, carriers and operators, retailers, software providers and service providers are now capitalizing on this realization of using the mobile phone medium for marketing. Experts believe that the mobile as a medium allows for a great communication channel through which one can effectively pinpoint the target audience, which ensures more bang for every advertising buck.

In advanced mobile markets such as the US, Europe and Japan, companies representing almost all product/service segments have hopped on to the 'mobile marketing' bandwagon in the hope of garnering a slice of the market. One can see marketing campaigns covering Automotives, Consumer goods, Financial Services, Leisure & Travel, Media and Entertainment, Pharmaceutical / Healthcare, Publishing, Retail, Sports, Fund raising / Non-profit, General, Information Services, Chat / Social Communities et al, on mobile phones. For marketers, it presents a great opportunity to not only reach out to millions of consumers but also more importantly, make them interact with their brands. In effect, it represents marketing that is not only cost-effective but also measurable.

Rapid changes in the handset landscape with the emergence and wide acceptability of multimedia-enabled handsets, offering audio-visual capabilities, PC functionality, and WAP Internet connectivity have led to mobile phones becoming popular for effective marketing

campaigns. Experts believe that increasing ownership of such handsets along with enhanced capacity and better connectivity of networks with introduction of high-speed data services into the marketplace will lead to increase in marketing communications through mobile phones.

This is also fostering extensive use of branded mobile content and applications. A soft drink company, for example, is offering users branded stuff like wallpapers, logos, and icons as incentives to participate in its mobile-based promotional campaigns. In France, a leading FMCG company has developed a mobile 'advergame', a Grand Prix style racing game for promoting its leading brand of shampoo. In the UK, an optical services company is sponsoring an 80-episode comic strip delivered over sixteen weeks by MMS to users. Many companies offer marketers WAP-enabled, downloadable Java applications and user interfaces that give brands permanent space on their customers' handsets, which guarantees rich media mobile messaging for greater brand impact. Marketers now have at their disposal MMS, WAP push (click-able links to WAP-based multimedia content incorporated into SMS messages), and video short codes (consumers directly receive a video stream on their handset in response to texting to a shortcode).

In Europe, a branded jeans company has launched a mobile marketing campaign, using WAP for the first time as part of the launch of its new advertising campaign. Mobile users were able to preview the new television spot of the jeans brand on their mobiles a week before the advertisement's official launch and also view the full television advertisement via a specially created WAP website. The site also offered exclusive mobile content in support of the overall campaign, including downloads. This very clearly illustrates the importance of mobile handsets

as a fantastic pull medium and its ability to offer the target audience downloadable content that they can send to each other, or applications that enable their own creativity, thereby adding to the overall customer involvement with the brand. This also buttresses the point that over a period of time, wireless marketing will be used to effectively reach, acquire and retain customers and ultimately generate sales by way of direct response contests and promotions.

However it is important to understand the limitations of 'anywhere-anytime' marketing provided by mobile phones. A not-so-well thought out campaign of such a nature may result in being considered intrusive and spamming by consumers and result in unfavorable opinion towards the brand. A carefully managed opt-in database with tight control on the frequency of messages sent for achieving optimum results is therefore imperative.

The 'Brand Zone' offering on R-World suite of data services of Reliance India Mobile has been developed to allow companies to promote their products and services, run contests, generate leads and increase sales through targeted communication programs that reach out to over ten million RIM subscribers. Advertisers can create and run tailor-made marketing campaigns suited to particular consumer segments incorporating rich text, graphics, audio and video features that make the campaign appealing and exciting. Reputed companies

like Castrol, LML, Kotak Securities have already launched their marketing campaigns on 'Brand Zone' and have reported excellent results. Speaking on the success of 'Brand Zone', Anil Pande, Head of Enterprise Solutions, in the Applications, Solutions

and Content Group, says, "In today's competitive world, brands are looking for innovative avenues to reach out to target customers. R World provides a potent yet cost effective medium for brand promotion. Brand Zone can segment advertising on various services as per target audience. It can supplement this with more details about the brand, including video, audio, images, product info, prime contact details, contest and a lead generation mechanism through Poll. The Customer Care Zone can have detailed product info with detailed contact list. Thus, R



World provides brands with medium to launch / relaunch product and services and create brand awareness. We have over 10 million RIM subscribers, most of them having R World enabled phones. Many brands have successfully used this medium and many more brands are approaching us."

In India, mobile marketing is relatively restricted to SMS based campaigns, which are simple, inexpensive marketing medium, especially when linked to a broader traditional campaign. Companies have experienced significant success in their initial efforts with most campaigns largely promoting subscriber participation by offering lucrative prizes and/or tie-ins. With the advent of 3G networks and more phones capable of downloading photo content, new possibilities beyond text messaging, such as cartoon and video messaging, are opening up. Integration of mobile with television, radio and print is also catching up in India.

However, various factors have to be borne in mind to make mobile-based campaigns successful. For example, a good time to catch a customer would be at locations or occasions when he can act on impulse and enter a contest or ask for more information through SMS by reading a short code on a bill board. Also, mobile marketing must incorporate the fun element for better interactivity. Wallpapers and ring tones are some effective ways to disseminate brand messages since people like to frequently change wallpapers and ring tones on their mobile phones.

Though most companies are cautiously treading before committing big budgets, mobile marketing campaigns are clearly poised to evolve in the near future, whether it is for Customer Acquisition, Customer Relationship Marketing (CRM), enhancing brand awareness and customer retention schemes, sales support programs, promotional campaigns or text-to-win competitions linked to interactive television.

With mobile users in India consuming more and more data services, it can be anybody's guess that the mobile phone as a communication channel will provide excellent opportunities for brand building and promotions in the days to come.

RMS package of Reliance APIs

Part 1

RMS package of Reliance APIs consists of classes written to facilitate the management and processing of data in Record Store. This issue of R-evolution presents the same RMS package of Reliance APIs. The RMS package has four classes, namely RAPRecord, RAPRms, RAPFilter and RAPComparator. RAPRecord provides user-friendly methods to handle fields within record. The class has five constructors:

RAPRecord(): This method creates a new record. The first field is the record ID.

RAPRecord(byte[] input): This creates a new record. This constructor needs byte array of records in RAPRecord format. The method throws `java.lang.IllegalArgumentException`, if the input data is not in RAPRecord format.

RAPRecord(java.lang.String name): This creates a new record in the specified record store.

RAPRecord(java.lang.String name, byte[] input): This method creates a new record with the specified data that (if saved) would be inserted into the specified record store. The method takes the name of the record store and byte array of records in RAPRecord format as input. The method throws `java.lang.IllegalArgumentException`, if the input data is not in RAPRecord format.

RAPRecord(java.lang.String name, int recordId): This method retrieves the record from the record store with the specified record ID. The method takes the name of the record store and a unique ID as input. The method throws `java.lang.IllegalArgumentException`, if the input data is not in RAPRecord format and throws `javax.microedition.rms.InvalidRecordIDException`, if the specified record ID does not exist and throws `javax.microedition.rms.RecordStoreException`, if any record store exception occurs.

RAPRecord also consists of a field named **MAX_FIELDS**. This is the maximum number of fields allowed in a record and is currently limited to 32.

Format of the RAPRecord is as follows:

1st bit of 1st byte = dirty bit
 2nd to 8th bit of 1st byte = number of fields in the record
 2nd byte = reserved (header offset = 2)
 3rd & 4th byte = offset of field 0
 ...
 2n+1th & 2(n+1)th byte = offset of field n-1
 2n+3th & 2(n+2)th byte = offset of field n
 2n+5th & 2(n+3)th byte = offset of end of field n
 Record data

The first field is the record ID. The maximum size of RMS for any application permissible on Reliance handset is 9KB only. The various methods available in the RAPRecord class managing and processing data in Record store will be discussed in the next issue of R-evolution.

(This is the first part of the article. For more, watch out for Part II in the next issue.)

Building reputation through 'Brand Zone'

Brand Zone, which features as 'Cool Prizes' on R World is a mobile zone, exclusively dedicated to a brand on R World suite of applications of Reliance IndiaMobile (RIM) phones. Using this zone, a company can advertise its products, give details about the services it offers, run promotional campaigns and generate leads.

'Brand Zone' has already successfully created a host of enterprise Brand Zones for corporate houses like LML, Kotak Securities and Castrol. The best part about Brand Zone is the reach that it provides what with the brand message reaching out to over 10 million customers of RIM, who can be potential customers for various products and services. More importantly, 'Brand Zone' provides marketers with an opportunity to communicate information in a well formatted and an easy to search manner by categorizing it into meaningful sections

Brand Zone allows companies to communicate information about:

- ⌘ Products / Services (FAQs, Features, comparisons etc)
- ⌘ Customer Care Information and call center numbers, with the facility to dial directly from the application.
- ⌘ Price Lists and discount offers etc.

Companies can also use this medium smartly for marketing campaigns like conducting a consumer survey where the customer response, feedback, preference etc can be captured and stored in a database, for use by the enterprise as part of future branding and market research activities.

'Brand Zone' also enables companies to launch various loyalty programmes for their brands and to increase brand awareness through a host of features, like:

- ⌘ Clippings of advertisements
- ⌘ Branded Wallpapers and images.
- ⌘ Ring Tones
- ⌘ Splash pages displaying brand Logo.
- ⌘ Polls (enabling direct feedback from the user)



- ⌘ Contests (with questions related to the brand)
- ⌘ Tickers on the Top of the screen displayed continuously through the use of the application
- ⌘ Special screens to display brand messages.

The best part is, Brand Zone can segment advertising on various services as per target audience. Brand Zone also incorporates richness of content (text, graphics, audio and video) for better user experience and subscribers can view the content anytime on need basis. It is user friendly and non-intrusive providing a high level of customer interactivity.

Brand Zone helps create leads for companies. Further, enterprises can also display a list of their office locations and add contact numbers, which can be directly called while using the application. Moreover, a list of the products, processes and services can be displayed in the customer care section of Brand Zone.

Brand Zone has been used very creatively by Enterprises for brand promotions, lead generation and customer care. Some key examples are:

- ⌘ Kotak Securities, a reputed stock broking firm, used Brand Zone to inform customers about investment options. It has also used Brand Zone to disseminate investment-oriented information about its products and stock tips. Kotak also ran promotional campaigns to generate leads for its various schemes of Mutual Funds.
- ⌘ ICICI and HDFC banks have used the 'Customer care' feature of Brand Zone' to facilitate mobile banking and other transactional and customer care services which have resulted in huge cost savings for the company.
- ⌘ Creative use of 'Brand Zone' on the cricket application by LG to promote its products has resulted in excellent brand visibility and top-of-the-mind recall for the brand.
- ⌘ Brand Promotion and customer care initiative by LML for a particular brand of their mobike on Brand Zone generated excellent leads for the company.

Acceptability of Brand Zone among companies and marketers has established it as a innovative marketing medium. Already many enterprises and leading companies have finalized their deals with Reliance India Mobile (RIM) for promoting their brands / services through this unique channel in the coming months.



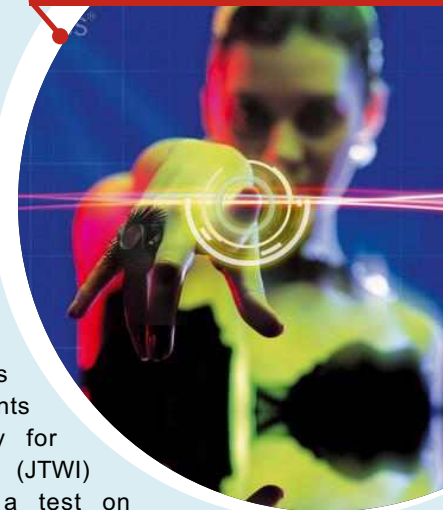
Pinaki Shah

"Brand Zone has created a new way of Multimedia and interactive Marketing on the R World data services of Reliance IndiaMobile, resulting into brand promotions reaching a new realm and a wider audience," says Pinaki Shah, Product Manager for Brand Zone.

Developer Forum

Unraveling JDTS (contd.)

By Avinash Mangipudi



Continuing from the previous issue wherein we talked about the various aspects of the popular J2ME platform, we would now brief you on what JDTS actually is, how it works, various tests involved in it and the types of report that it contains, **in this concluding part.**

What is JDTS?

The Java Device Test Suite helps Java wireless network operators and device manufacturers maximize product quality and minimize time to market. The Java Device Test Suite is an extensible set of test suites, a centralized management facility, and a distributed test execution framework that can be used to assess the quality of any device that implements a compatible combination of the following J2ME™ technologies:

- Connected Limited Device Configuration (CLDC) 1.0 and 1.1
- Mobile Information Device Profile (MIDP) 1.0 and 2.0
- Wireless Messaging API (WMA) and 1.1 and 2.0
- Mobile Media API (MMAPI) 1.0 and 1.1
- Java Technology for the Wireless Industry (JTWI) 1.0
- Java APIs for Bluetooth 1.0
- Mobile 3D Graphics API 1.0
- PDA optional packages 1.0

The Java Device Test Suite also has benchmark (performance) tests that span multiple technologies. Its total of over 8,000 tests can be extended with customer written tests.

How does it work?

Download the Java Device Test Suite version 1.1 Zip file from the Java Device Test Suite licensee website: <https://javapartner.sun.com>. The file name has this form: jdts-1_1-rr-src-bnn-mm_dd_yyyy.zip. You can find the exact name in the Java Device Test Suite Release Notes. You might also want to obtain Sun's J2ME Wireless Toolkit (WTK) software to

use as a reference implementation (RI). Among other functions, the WTK emulates a wireless phone that implements the Java Technology for the Wireless Industry (JTWI) interfaces. Running a test on the RI can help you (and users) decide whether a test device is correctly not running the test or the test itself is incorrect. For more information on the WTK, including download instructions, see <http://java.sun.com/products/j2mewtoolkit/>

What are the tests?

1. API Specific Tests (CLDC, MIDP, WMA)
2. Benchmark Tests for checking Minimum Compliance and Setting Thresholds
3. Performance and Stress Tests
4. Over The Air Testing for Network Providers
5. Automated and Interactive Tests

What types of reports exist?

JDTS automatically generates reports on the performance of a particular device or network and these can be saved along with the session in which a particular test is conducted. Further reports can be merged or data can be exported for analysis purposes. As the data is stored in standard XML format, it facilitates easy import and export.

Is JDTS a mobile software-testing tool?

Finally, JDTS can be said to be an eXtensible mobile software-testing tool. The extensibility comes from the fact that the developer can write his own test cases by using a Developer Toolkit and Framework provided by JDTS.

More information on JDTS is available at official SUN url: <http://java.sun.com/products/javadevice/overview.html>

Disclaimer: DADP is not responsible for the validity of the contents of this article.



The author, Avinash Mangipudi (panchadara@yahoo.com) is working as a Senior Software Engineer with Tarang Software Solutions Pvt Ltd (www.tarangtech.com). Tarang Software works in the domain of Mobile Testing related activities.

Post your query on DADP Discussion Forum and win a surprise gift from DADP!

If your query is selected by the DADP technical team, as the most innovative and challenging of all postings in a month, you will win a surprise gift. And yes, your query along with your photograph will be published in 'R-evolution' as well! So visit www.dadp.com, register (if not registered already) and start sending in your queries.

'There is infinite space for mobile gaming'

A software engineer by profession, Vijay Kumar Jain (Founder and CEO of Astute Systems Technology) is the entrepreneurial spirit behind Astute, a developer and publisher of mobile applications committed to providing innovative concepts and high quality content to end-users. Vijay guides a team of 50 engineers and designers in the hi-tech field of Mobile Value Added Services. In an exclusive interview with R-evolution, Vijay spoke on several issues in the field of mobile applications...



Vijay Kumar Jain
Astute Systems Technology

Can you tell us something about your work experience with Reliance?

It has always been a pleasure to interact with all the mobile operators out here. And, working with Reliance's huge market has given that 'working with big' zing. As the handsets offered by Reliance are all of a higher-end variety, it enables us to supply hi-quality content in an easy, fast and secured manner.

Which games have you developed for Reliance? How are these games unique?

Golden Boot, Check 'N' Mate and Crazy Bowman are some of these. Astute specializes in Mobile Entertainment and our strategy is based on a survey conducted across numerous towns and clubs about how people really like to be entertained. On this basis, everyone in the mobile space has appreciated recreating our traditional Indian games on mobile.

We believe that the ruling factor behind playing any game is an innate desire to win that game. All our games revolve round this 'winning spirit' of an individual. Secondly, when we look back, some of our childhood games still fascinate us and their charm has not disappeared despite the influx of hi-fi games from the West. Most of our games recreate those traditional Indian games. So, we thought of marrying latest technology with tradition, while retaining the best of both worlds. Some of these are skill-based, some demand your total awareness or test your vocabulary skills or just give you a fun-filled, thrilling experience. They have attractive graphics with 3D effects and look really good on R World.

Anything interesting that you would like to share with our readers?

The response from DADP's technical team has been prompt

and focused for any queries encountered during game development and documentation. Their friendly disposition has made the whole process, right from the conception of a game to its final touch, quite easy and enjoyable.

What was the response to the games developed by your organization?

The best experience till date has been the end-user response for our gaming application - Golden Boot. We directly received innumerable calls from users saying that they really enjoyed playing the game on their mobiles. The other incidence that I would like to mention is a call from the State Chess champion of Andhra Pradesh who said he was thrilled to play 'Check N' Mate' on his mobile and won at all levels till the end.

What are your views on the mobile gaming applications business in India? Future trends?

One of the core trends driving the multimedia experience today is the convergence of the wireless and consumer electronics markets. The intersection of these two hot markets presents big opportunities for everyone in the value chain. This seems the ideal time for value-based pricing for quality content, as it is sure to make value-added mobile features a 'must-have' revenue generating services. So, the need for innovative and consumer-driven content and concepts for mobile technology comes naturally. There seems to be infinite space for such applications and the future is bright for those who have captured the pulse of the user's mind.

