

October 2005

# R-EVOLUTION

Newsletter for the Developer Community

For Private Circulation only

## Editorial

Dear Developers:

The way mobile phones have transformed our lives is indeed worth pondering over. From an ordinary communication device, its metamorphosis into a more powerful gadget for accessing a variety of entertainment and information content on the go is truly amazing; even its utility as a business-enhancing tool is quite fascinating. And there's a lot more that the ubiquitous mobile phone can do. In many advanced cellular markets, the mobile phone is now facilitating wireless transactions - from purchase of tickets from railways and airlines to pizzas and from groceries in malls to food bills in restaurants. It will be interesting to note the user behaviour and response to these services in our country as and when mobile phones become 'mobile wallets' probably in the near future.

In the 'Tech tip' section, learn about the concept of 'Static caching' during an application development. This will help you in configuring parameters (like database user name, password etc.) and save considerable operation time.

In the 'Application of the Month' section, we present a very popular game among R World users - 1 Day Cricket. Read more about the application and we are sure that your fingers will itch to play the game.

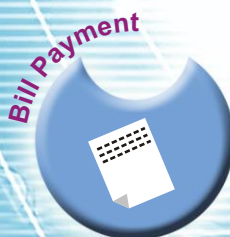
As always, we look forward to receiving your valuable feedback and useful suggestions.

Wishing you all a Happy Navathri and Delightful Dusshera.

Warm regards,

Saurabh Chakrabarti  
DADP Team

## Mobile Commerce gathers momentum



**Tech Tip**  
Static Caching



**Application of the Month**  
The 1 Day Cricket



**Interview of the Month**  
Saurabh Jain  
Director, SKJ Technologies



**Quiz**

# Mobile Commerce gathers momentum

## Great potential

The next time you shop in a mall or eat out in your favourite restaurant, you may not need to pay bills through credit card. Just flash your cell phone and the transaction could be completed. If this sounds unbelievable then take a look at this:

- More than three million wireless subscribers in Japan are using a mobile wallet service to purchase items at 20,000 stores and vending machines.
- As many as 100 new m-commerce companies are getting launched in Europe every month, according to Time Magazine Europe.
- Nearly 350,000 users (2,000 new subscribers each day) spread across Europe are using Internet-ready cellular phones to make purchases with m-cash.

As mobile phones are increasingly becoming an intrinsic part of our lives, mobile phone technologies are leapfrogging to change the ubiquitous cell phone to more than just a talking and entertainment device. In many advanced mobile markets users are more and more making transactions through their cell phones buying everything from food, groceries to paying parking charges. The numbers tell the whole story. Juniper Research predicts global mobile commerce market at \$40bn by 2009, fuelled by growth in micro payment volumes via mobile phones. It is expected that the average Western European will make approximately 28 transactions a year (@ \$ 3 per transactions) via mobile phone by 2009.

## The drivers for m-commerce

Convenience is the key driver of this trend. Since people carry cell phones everywhere, it is well positioned to replace traditional wallets to store money, credit cards etc. However, experts say that mobile commerce is much more than just e-commerce gone mobile and may have larger implications in terms of shaping global

economy in a big way in the future.

In markets where m-commerce has taken off it is dominated by transactions of digital goods such as ringtones, games, wallpaper, gambling and other entertainment. It is expected to extend to other application areas such as ticket purchases and retail, and person-to-person payments.

In the US, Motorola and Verizon Wireless had teamed in 2001 with Domino's Pizza in a trial of pizza orders over mobile phones. Another company called CellPark, in Canada, has initiated a payment method for car parking which allows drivers to dial the number assigned to each parking spot to activate charges.

The purchase of tickets (such as car parking and cinema tickets) using the mobile phone, will dominate the growth in m-commerce. Mobile users have started already to show interest in ticketing particularly in Europe and Japan, while in the retail sector, initial applications are geared toward vending machines.

NTT DoCoMo, the world's biggest wireless telecom, is far ahead in offering mobile transaction services to its subscribers with its contactless mobile wallet, "i-mode FeliCa." However, it still is facing a lot of resistance from recruiting merchants to accept the m-wallet. DoCoMo has now identified FeliCa, its payment service, as the engine for growth. In less than a year since its launch in August 2004, over five million FeliCa-enabled users have signed up and between February and April 2005, the number of FeliCa transactions more than doubled from 320,000 to 690,000 and the number is likely to go up in the coming days.

## The Indian scenario

In India, mobile commerce is driven mainly by the demand for ringtones, games, wallpapers and videos. Other application where mobile commerce in India is expected to have a good offtake in future includes music / movie downloads. However, there is still a long way off

till these services are made available to users given the regulatory and technology issues that need to be sorted out. Other applications like cinema ticketing and small ticket goods purchases will find initial takers as mobile users understand issues like convenience, trust and security and start exploring more uses for their increasingly powerful handsets.

One good example of a popular mobile transaction application is the Mobile Lotto launched in Mumbai by select mobile operators, which allow subscribers to play lottery through SMS. All they need to do is just select their lucky six numbers and SMS the same to a specific lotto code. Customers get a return SMS confirming their chosen number, and one is also informed through SMS if they win. Users are charged Rs 10 per game, (same as charged at physical terminals), plus Re 1.50 toward government levies (on operator), while they get billed for the SMS messages they send as per the policy of the Mobile Operator. This facility uses a proprietary software platform called Merchants Operators and Subscribers(MOS) offered by a third party solution provider, which brings together merchants, operators and subscribers to conduct various transactions.

### **M-commerce via RIM**

Reliance Infocomm has taken the lead in India in providing the necessary infrastructure and technology for the growth and development of mcommerce in the country. A number of applications such as mobile banking, railway booking and RIM bill payment have already been launched on its R World suite. Many such transaction-oriented applications are in the pipeline.

Not only are these applications easy to access and extremely secure, but also they offer users with an unbeatable cost advantage compared to similar services provided by operators internationally.

Launch of RIM Bill Pay, Railway booking and Mobile Banking have met with enthusiastic response from the RIM subscribers. Reliance is well-positioned to leverage its technological capabilities and its relationships with third party solution providers to shortly launch a slew of m-Commerce applications such as Shopping, Airline Ticketing, Auctions, Movie and Event ticketing etc.

### **Future prospects**

M-commerce is taking off due to a confluence of three major developments--rollout of advanced data networks, availability of enhanced data devices, and development of rich content for m-commerce applications. Successful mobile commerce deployments today mostly focus on digital content which calls for efficient systems to support transactions and processes across the entire digital supply chain.

As the number of mobile transactions continues to pick up, the need for a secure, reliable platform to process and manage those transactions will become critical for carriers, content providers and wireless subscribers. Other issues that are stifling the growth of m-commerce in many markets worldwide remain the same - poor time-to-market for new content, inflexible pricing and an inability to market products and, most importantly, outdated systems for managing mobile commerce business.

The key for m-commerce growth is simplicity. Finally the factors that will lead to its widespread adoption will be as basic as - will it be easier to use than a credit card for example? Can it ever be more convenient than cash? Ultimately the success or failure of mobile commerce, either macro or micro payments, will boil down to this.



## Static Caching

During the development of any application there are certain parameters whose values depend on factors like the operating environment, IP address, port of any other resource (say database server or file server) and various other factors. The values of these parameters cannot be hard coded in the application because any change in these values will result in changes in the source code of the application and this is definitely not an advisable thing to do. Hard coding these parameter values will result in the loss of generic nature of the application. To prevent this, these values can be mentioned in a property file as key value pair by providing an interface in the application using which one can read these parameters.

Now since these parameters will be mentioned in some file, it is not expected to engage in a File Read operation to get the parameters every time. Instead a File Read operation is done at the beginning of the execution of the application. The data read from the File will now be stored (cached) and the application can access this cache whenever it needs this data. This will save time as it obviates the need for performing a series of operations each time for getting the parameter values. This type of caching is called Static Caching because the cache remains static i.e. constant throughout the execution of the application. Any change in the parameter values will result in restarting the application so as to refresh the cache.

Below is an advisory piece of code which demonstrates this concept and acts as a Static Cache that stores values of these parameters. This Cache gets initialized as soon as the application is executed.

The class will be used to load the properties of the application defined in the properties 'AppNameServer' file

```
package com.xyz.appname.util;

import java.util.ResourceBundle;
import java.io.*;
import java.util.*;
import org.apache.log4j.*;

/**
 * This Class Acts as a PropertyLoader. It reads all the fields defined in .properties file and stores the information. this information
 * can be retrived through get Methods. This Class loads at the time of Servlet Initialization. */

public class PropertyLoader
{
    /* Initializes the Database URL to null. This field is read from the .properties file DBURL with value
    jdbc:oracle:thin:@IPAddress:PortNo:DatabaseName for Database URL */

    private static String dburl_str = null;

    /** Initializes the Database user to null. This field is read from the .properties file DBUSER with value EMPDETAIL
    for Database Name */

    private static String dbuser_str = null;

    /** * Initializes the Database password to null. This field is read from the * .properties file DBPASSWD with value EMPDETAIL
    for Database Passwprd */

    private static String dbpasswd_str = null;

    /** Constructs a PropertyLoader which initializes a ResourceBundle Bundle object which reads the .properties file and also it
    initializes all the fields defined in the * .properties file and initializes the log mechanism */

    public PropertyLoader()
    {
        ResourceBundle bundle = ResourceBundle.getBundle("AppNameServer");

        dburl_str = bundle.getString("DBURL");
        dbuser_str = bundle.getString("DBUSER");
        dbpasswd_str = bundle.getString("DBPASSWD");
    }

    /** * Returns DB URL */
    public static String getDBUrl()
    {
        if(dburl_str!=null)
        {
            dburl_str=dburl_str.trim();
        }
        return dburl_str;
    }

    /** Returns DB User */
    public static String getDBUser()
```

```

{
    if(dbuser_str!=null)
    {
        dbuser_str=dbuser_str.trim();
    }
    return dbuser_str;
}

/** * Returns DB Password */
public static String getDBPassword()
{
    if(dbpasswd_str!=null)
    {
        dbpasswd_str=dbpasswd_str.trim();
    }
    return dbpasswd_str;
}
} // ---end of class

```

This is a sample properties file (AppNameServer.properties)

```

# ORACLE DATABASE Connection Details LIKE DBNAME USER AND PASSWORD If connection Type is 1 otherwise
# keep these fields blank

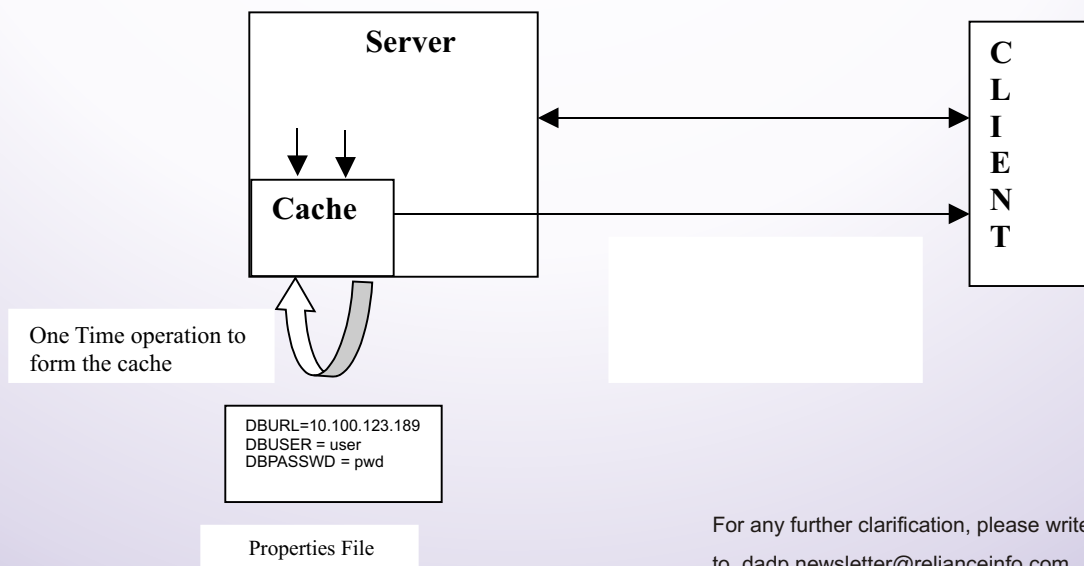
DBURL=10.100.123.189
DBUSER=user
DBPASSWD=pwd

```

The PropertyLoader class has to be instantiated in the base servlet.

Eg :  
public static PropertyLoader pLoader = new PropertyLoader();

You can then use the get method of this class to access its member variables or you can directly use  
PropertyLoader.memberVariableName to get the value of the member variable



For any further clarification, please write to [dadp.newsletter@relianceinfo.com](mailto:dadp.newsletter@relianceinfo.com).

# The 1 Day Cricket Thriller



## Excitement Extraordinaire

One Day Cricket is always exciting because it is result oriented. The One Day World Cup in Cricket held once in four years attracts over a billion viewers on television around the world making even The Time magazine to front page the Cricket extravaganza and extol its virtues.

For sports buffs particularly for Cricket lovers, RIM has developed a unique game called 1 Day Cricket on R World. It provides great learning experience as it helps users hone their playing skills. And it is quite enjoyable too.



## The Game:

The 1 Day Cricket is a one-stop solution to all die-hard cricket enthusiasts. They can play cricket both in the net-practice and tournament modes. Batting and bowling skills in net practice provide good opportunity for learners to polish their techniques. They can select from eight international teams and play against one in the tournament mode either in the single player format on the phone or two player mode against a human opponent. They also have a choice to select from easy, medium and hard levels, depending on the expertise they have gained.



## Coaching Manual

The 1 Day Cricket is the highest selling mobile phone game in India. Entertainment is guaranteed across all age groups. Life-like graphics and imaging engross the player right from the beginning. The users have the utmost satisfaction of winning the game. They learn to play different batting strokes in an innovative and interactive tutorial. Like in the real game they can play various shots (Square Cut, On Drive, Off Drive, Pull, Straight Drive, Hook, Late cut, Glance or Defend) and satiate their appetite for audacity. It is very easy to learn yet very challenging to master. Nothing is more comforting than defeating a live opponent in a multiplayer combat. The game is extremely addictive! Unlimited possibilities from different life like situations that arise in a Cricket match and the non-linear nature of the cricket match add oomph to the game. The game is targeted at all strata of society including boys, girls, men, women and even old people.

## Players' perspectives

Subscribers who have been playing the game feel that more than just value for money the game ensures high replay value owing to unlimited possibilities/ algorithms programmed into the system. As one can have a choice of eight top international teams, the player has the option of playing against the teams of his choice. Nail-biting match situations give a thrill as one comes out of it victorious. One can also play the game with a friend and have real fun. Good graphics add to the involvement too. Innovative net practice tutorial helps any novice to learn and play cricket, the right way, just like a professional. Players feel quite ecstatic.

## Unique

Life like graphics set this game a class apart from other contemporary cricket games available in the country. Net-Practice mode that teaches the player to play Cricket the way it is meant to be played so that the uninitiated can improve their strokes before the real matches. Even the old enjoy the game just as well owing to a slower response time which suits them well. The game also helps sharpen one's prediction faculties while judging the pitch of a ball by making use of the visual-mathematics. The 1 Day Cricket gives a real pleasure and one can play it without helmet and other accoutrements.

The lead which Reliance Infocomm has gained over its competitors in Value Added Services (VAS) is indeed vast and insurmountable.

**S**aurabh Jain, Director, SKJ Technologies is a Chartered Accountant with a flair for technology. He has written India's first book on J2ME technology titled 'Mobile Phone Programming'. Jain is a member of Microsoft's exclusive club of software architects, Microsoft Software Architect Program, American Association for Artificial Intelligence (AAAI) and The Indus Entrepreneurs (TIE). He has also been the lead consultant to 'Cellular Today' magazine. Researching on micro device software technologies and artificial intelligence are his lifelong passion. Apart from Reliance Infocomm, Jain has advised many other large organizations on J2ME technology.

SKJ Technologies is a pioneer in the field of mobile software development. The goal of the company is to develop a complete range of mobile lifestyle solutions based on the Java 2 Platform Micro Edition (J2ME) technology. The company is actively involved in developing mobile gaming, mobile business solutions and J2ME training.



*Saurabh Jain*

Director, SKJ Technologies

**Can you tell us about your relationship with Reliance Infocomm?**

Our company's relationship with Reliance Infocomm dates back to 2003. During these two years the bond with Reliance Infocomm have grown way beyond our business relationship. We have had the opportunity to learn a lot from Reliance Infocomm. In my opinion Reliance Infocomm is one of the most aggressive and technically sound mobile operators in India. The lead which Reliance Infocomm has gained over its competitors in Value Added Services (VAS) is indeed vast and insurmountable.

**In what areas are you currently working with Reliance Infocomm?**

At present we are working on games for the R World environment. We are developing original content after carefully studying the tastes of the masses. My gut feeling is that only content with local flavor can survive in the long run in India.

**What games are you developing for R World? How are they unique?**

As I said earlier, we are zealously developing mobile games like Diwali, Nishana and Jackpot to entertain the masses. The story line of the games has been specifically crafted keeping in mind the aspirations of the youth of India.

**Any interesting learning experience or memorable event relating to mobile games development that you would like to share with the readers?**

One of the most useful learning experiences while working for Reliance Infocomm is the emphasis on quality. I have personally played games of many leading games development companies but found them quite wanting as instances of getting 'NullPointerException' are rife. This is where Reliance Infocomm scores over others and all its games on R World are rock solid in their performance. The process at Reliance is so stringent that there can never be any instance of the end user getting exceptions.

**What are your views on mobile applications / gaming business in India? What are the future trends?**

According to Reliance Infocomm, mobile gaming and applications will generate upto one lakh jobs in India. I am confident that due to the key initiatives taken by Reliance Infocomm and the industry in general, the day is not far off when for all major computational tasks, except word processing and accounting, the mobile phone will become the number one choice tool of the nation. I think within two years mobile phones will replace the credit/debit cards. It will also become an important part of the film and television industries. The next generation network that Reliance Infocomm and the industry are putting in place will also solve all the problems relating to data transfer speed.

Dear DADP Team:

The Sept issue of R-evolution was very informative. The details on future prospects of mobile industry and the gaming world were mind boggling. It would be very helpful for the developers if you could provide information relating to the local contents in parallel markets like China, Brazil, and Europe.

Regards,

Abhay Chandak  
Developer, Mumbai.

**Editor's Note:** Thank you for your warm appreciation. We shall strive to fructify your requirements in the future issues.

## Quiz

- If you need to use a stored procedure with output parameters, which one of the following statement types should be used to call the procedure?
  - Statement
  - PreparedStatement
  - CallableStatement
  - GeneralStatement
- Which class contains the transaction control methods setAutoCommit, commit, and rollback?
  - Connection
  - Statement
  - ResultSet
  - RecordSet
- Which of the following can not be used as the scope when using a JavaBean with JSP?
  - Application
  - Session
  - Request
  - Response
- A constructor is used to...
  - Free memory.
  - Initialize a newly created object.
  - Import packages.
  - Create a JVM for applets.
- Servlets are typically used for...
  - Creating graphics.
  - Extending a web server by providing dynamic web content.
  - Storing information in applets.
  - Loading buttons and menus.

Answers 1. c) 2. a) 3. d) 4. b) 5. b)

## Monthly Poser

Kevin Mitnick entered the Guinness Book of World Records after he hacked most of the networks of leading telephone companies in America. He was banned from using a computer till January 2003. Subsequently he played a role in an ABC spy thriller 'Alias'. What role?

- FBI IT head
- CIA Computer expert
- NASACTO
- None of the above

Answer to last month's poser: Microcomputer & Software

Winner of the last month's poser (through a lucky draw) is: Zuno Verghese- Bangalore

Winner will receive the prize by courier.

Answers to the Monthly Poser should be sent to [dadp.newsletter@relianceinfo.com](mailto:dadp.newsletter@relianceinfo.com) mentioning Monthly Poser - October 2005 as the subject with the sender's location stated. The winner will be decided on the basis of a lucky draw and walk away with a prize.

You can contribute ideas and information to R-evolution at the following e-mail address: [dadp.newsletter@relianceinfo.com](mailto:dadp.newsletter@relianceinfo.com).

Please note that contributions may be edited for clarity, style or length.

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