

Vol II Issue X

ISSN No : 2230-7850

Monthly Multidisciplinary
Research Journal

*Indian Streams
Research Journal*

Executive Editor

Ashok Yakkaldevi

Editor-in-chief

H.N.Jagtap

Welcome to ISRJ

RNI MAHMUL/2011/38595

ISSN No.2230-7850

Indian Streams Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial Board readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

International Advisory Board

Flávio de São Pedro Filho Federal University of Rondonia, Brazil	Mohammad Hailat Dept. of Mathematical Sciences, University of South Carolina Aiken, Aiken SC 29801	Hasan Baktir English Language and Literature Department, Kayseri
Kamani Perera Regional Centre For Strategic Studies, Sri Lanka	Abdullah Sabbagh Engineering Studies, Sydney	Ghayoor Abbas Chotana Department of Chemistry, Lahore University of Management Sciences [PK]
Janaki Sinnasamy Librarian, University of Malaya [Malaysia]	Catalina Neculai University of Coventry, UK	Anna Maria Constantinovici AL. I. Cuza University, Romania
Romona Mihaila Spiru Haret University, Romania	Ecaterina Patrascu Spiru Haret University, Bucharest	Horia Patrascu Spiru Haret University, Bucharest, Romania
Delia Serbescu Spiru Haret University, Bucharest, Romania	Loredana Bosca Spiru Haret University, Romania	Ilie Pintea, Spiru Haret University, Romania
Anurag Misra DBS College, Kanpur	Fabricio Moraes de Almeida Federal University of Rondonia, Brazil	Xiaohua Yang PhD, USA Nawab Ali Khan College of Business Administration
Titus Pop	George - Calin SERITAN Postdoctoral Researcher	

Editorial Board

Pratap Vyamktrao Naikwade ASP College Devrukh,Ratnagiri,MS India	Iresh Swami Ex - VC. Solapur University, Solapur	Rajendra Shendge Director, B.C.U.D. Solapur University, Solapur
R. R. Patil Head Geology Department Solapur University, Solapur	N.S. Dhaygude Ex. Prin. Dayanand College, Solapur	R. R. Yaliker Director Managment Institute, Solapur
Rama Bhosale Prin. and Jt. Director Higher Education, Panvel	Narendra Kadu Jt. Director Higher Education, Pune	Umesh Rajderkar Head Humanities & Social Science YCMOU, Nashik
Salve R. N. Department of Sociology, Shivaji University, Kolhapur	K. M. Bhandarkar Praful Patel College of Education, Gondia	S. R. Pandya Head Education Dept. Mumbai University, Mumbai
Govind P. Shinde Bharati Vidyapeeth School of Distance Education Center, Navi Mumbai	Sonal Singh Vikram University, Ujjain	Alka Darshan Shrivastava Shaskiya Snatkottar Mahavidyalaya, Dhar
Chakane Sanjay Dnyaneshwar Arts, Science & Commerce College, Indapur, Pune	G. P. Patankar S. D. M. Degree College, Honavar, Karnataka	Rahul Shriram Sudke Devi Ahilya Vishwavidyalaya, Indore
Awadhesh Kumar Shirotriya Secretary, Play India Play (Trust),Meerut	Maj. S. Bakhtiar Choudhary Director,Hyderabad AP India.	S.KANNAN Ph.D , Annamalai University,TN
	S.Parvathi Devi Ph.D.-University of Allahabad	Satish Kumar Kalhotra
	Sonal Singh	

**Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India
Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.isrj.net**



HTTP BASED STREAMMING ON MOBILE DEVICE

VIJAYSINH K.JADEJA AND NOOR MOHAMMED

Science &Engineering Department, Shekhawati Engineering College,
Dundlod. (Rajasthan)

Abstract:

In this paper, we have explain the HTTP Based Streaming on Mobile node in the field of Mobile Computing. It also suggests various technologies in the field of Mobile computing to help and to integrate to develop a Mobile Augmentation Technology. In this paper We are using the pt of Mobile Augmentation Architecture and also Develop and implement a mobile Augmentation Streaming Media algorithm. We have implemented Streaming Algorithm for Image and Video Using J2ME Platform. concept of Mobile Augmentation Architecture and also Develop and implement a mobile Augmentation Streaming Media algorithm. We have implemented Streaming Algorithm for Image and Video Using J2ME Platform.

KEYWORDS:

Technology, Mobile Device.

INTRODUCTION

Smart phones give the new market in the field of mobile communication called Mobile Application development . By using the smart phone a developer can develop many applications that can be run on given application environment. Mobile Application provides features called custom or user defined functionality in Mobile Phones. Mobile Augmentation is the technique or concept to increase the functionality of mobile device with custom application. We describe mobile Augmentation later in this report; it can be the new era of mobile application development in which it is possible to exceed limitation of mobile phone and wireless technology used by mobile like GSM, GPRS, Wi-Fi and Bluetooth. By using the concept of mobile augmentation existing smart phone can able to work a function that can't possible with features of smart phone with existing cellular network. Mobile Augmentation concept is the thought of one of the layer in mobile application. It can be thought of middle layer between application layer and mobile platform. The wireless devices such as cell phones keep their owners connected to the outside world at anytime from anywhere. They offer great connectivity that other types of devices couldn't offer. Application development for these wireless devices is going to be in great demand for the next couple years. Network programming plays an important role in wireless application development to take advantage of the connectivity these devices have to offer. Mobile applications provide a new set of wireless design challenges for application designers. Mobile smart phones, magnifies and reveals data and activities in real-time. The mobility of devices and smart phone make new challenges in which everyone like to wireless services and application. The Smart phone makes them to create user defined application for user as well as large organization. Scope and Objective of Research is

Today Mobile Application become more and more advance with the advance technology of mobile computing so, There is need of a Mobile Application that can provide a robust functionality and

provide a way to increase a performance and features of mobile device by the use of Architecture like a Mobile Augmentation. Streaming is a method of transferring digital data with real-time characteristics in such a way that the recipient can view the content continuously while receiving the data. The data can be basically any content, like audio and video content. The advantage of streaming is that it makes possible for the recipient to start viewing the content almost immediately, and the entire content does not have to be downloaded and stored on the client device. The disadvantage is that the quality of a presentation is highly constrained by the network. A stream is a flow of data packets containing media content. The packets are normally generated by a streaming media server from an arbitrary data source, which can be media content stored on the server or captured from a live source (e.g. camera, microphone, television broadcast, etc.). Streaming of previously stored data is called on-demand streaming, while streaming of live content is called live streamin. The generated data packets are continuously sent to the recipient over a packetswitched network using some streaming protocol. The recipient is running streaming media player software, which receives the packets, decodes the content data with an appropriate codec, and finally shows the presentation to the user.

II ARCHITECTURE AND PROPOSED WORK

My objective of research to find the HTTP Streaming based on the field of Mobile Application development so, that a smart mobile phone able to perform task using Mobile Augmentation that it was not performed due to hardware constraints , n/w constraints or s/w constraints.

II.1 Problem Definition

The Mobile Platform for smart phone are limited for their memory usage, processing power and limited API. Any Window Application can't build as mobile application. The main problem and challenging task in mobile application development is that how to create application when API to develop a specific process is not available. The JAVA JMF API is available for pc environment so, a mobile streaming application is not built using JMF API. And the JAVA ME MMAPI supports function for multimedia playing but it do not have function for streaming media. There is also no any API available in JAVA ME to built streaming application.

II.2 Architecture to solve a problem. (Mobile Augmentation)

Augmentation layer is a virtual layer between the application layer and mobile platform. In mobile augmentation application there are four layers. Application layer, Augmentation Layer, Mobile platform and Hardware Layer.

II.3 Proposed Algorithm to solve a problem.

The streaming using smart phone can't be possible using available API Directly. So, Here It must be use a advance concept like mobile augmentation. In mobile Augmentation Architecture we think that Augmentation layer built using mobile smart phone platform that work as a virtual layer and communicate between application layer and mobile platform. Proposed algorithm for mobile streaming is given below.

Capture a live Multimedia using Application Layer.
Transmit multimedia using Augmentation layer. (Real Work to carried out) Receive the transmitted multimedia using Application Layer.

III ALGORITHM IMPLEMENTATION

Step 1 Select Platform

Here we select J2ME platform to develop application. Java Platform, Micro Edition (Java ME) provides a robust, flexible environment for applications running on mobile and other embedded devices mobile phones, personal digital assistants (PDAs), TV set-top boxes, and printers. Java ME includes flexible user interfaces, robust security, built-in network protocols, and support for networked and offline applications that can be downloaded dynamically. Applications based on Java ME are portable

across many devices, yet leverage each device's native capabilities. At the heart of Java 2 Micro Edition (J2ME) are three core concepts: configurations, profiles, and optional packages. You can't write a J2ME application without understanding these concepts, because they determine the features of Java that you can use, which application programming interfaces (APIs) are available, configurations. A configuration is a complete Java runtime environment, consisting of three things A Java virtual machine (VM) to execute Java bytecode. Native code to interface to the underlying system. A set of core Java runtime classes. To use a configuration, a device must meet certain minimum requirements as defined in the configuration's formal specification. Although a configuration does provide a

complete Java environment, the set of core classes is normally quite small and must be enhanced with additional classes supplied by J2ME profiles or by configuration implementer. In particular, configurations do not define any user interface classes. J2ME defines two configurations, the Connected Limited Device Configuration (CLDC) and the Connected Device Configuration (CDC). The CLDC is for very constrained (limited) devices -- devices with small amounts of memory and/or slow processors. The VM used by the CLDC omits important features like finalization, while the set of core runtime classes is a tiny fraction of the J2SE core classes, just the basics from the java.lang, java.io and java.util packages, with a few additional classes from the new javax.microedition.io package. The CDC, on the other hand, includes a full Java VM and a much larger set of core classes, so it requires more memory than the CLDC and a faster processor. The CDC is in fact a superset of the CLDC. We'll discuss the configurations in detail in the next two articles in this series. A profile adds domain-specific classes to a configuration to fill in missing functionality and to support specific uses of a device. For example, most profiles define user interface classes for building interactive applications. To use a profile, the device must meet all the minimum requirements of the underlying configuration as well as any additional requirements mandated by the profile's formal specification. There are several profiles in various stages of development. The first profile to be released was the Mobile Information Device Profile (MIDP), a CLDC-based profile for running applications on cell phones and interactive pagers with small screens, wireless HTTP connectivity, and limited memory.

Step 2 Data Generation :-With some MIDP-enabled mobile phones implement the Mobile Media API (MMAPI)

which allows MIDlets to have more powerful use of media types. In particular, image capture via the device's camera may be supported. Capture Using the Mobile Media API The Mobile Media API specification includes a code fragment that describes how to capture an image using the device's camera. The Camera MIDlet uses the same technique .

First, a Player must be created, which takes its input from the camera.

The player must be initialized.

You must then get the visible "video control," which will show the live viewfinder. The video control has two display

modes: It can draw itself in a MIDP low-level UI Canvas object, or it can be added to a MIDP high-level UI Form as an Item.

Step 3: Augmentation of data

(Convert data in to byte array stream)

Step 4: Create a File

(Actual File on Free Space OR Temporary file)

Step 5: Upload to any central medium

(Like WEB Server, Mobile Memory Card)

IV SOFTWARE IMPLEMENTATION FOR MOBILE AUGMENTATION

In Mobile Augmentation Application for Streaming, we need to develop three software program mentions below.

1. Transmitter or Broadcaster for Streaming Media. 2. Receiver or Player for Streaming Media. 3. Proxy Server for storing of Streaming Media. Mobile Broadcast Application (Mobile Media Transmitter Application) :-This application can broadcast live video. The important part and logic of broadcast for transmitting is explained below.

Creating Camera Form

```
mPlayer = Manager.createPlayer("capture://video"); mPlayer.realize();

mPlayer.start();
```

- ? In video Broadcast Application to capture video a instance of player is required.
- ? Instance of player is created using Manager static class.
- ? To realize player realize() method is used.
- ? To start player start() method of player is used.

Creating Record

```
Rc=(RecordControl) mPlayer.getControl("RecordControl");

ByteArrayOutputStreamoutput=new ByteArrayOutputStream(); rc.setRecordStream(output);

mPlayer.start();

rc.startRecord();
```

V CONCLUSION

As the functionality of mobile smart phone increased day by day and Smartphone being more interactive today so, it always be happened new smart phone comes with new features that previous version of smart phone doesn't support. The user of smart phone always like to use latest available functionality in their phone. The every new smart phone comes with new mobile architecture and with latest protocom implementation and support. So, due to protocol or platform constraint previous version os smart phone can't have feature of new version. By using concept of Mobile augmentation we can develop application such that previous version of smart phone can have some of the functionality of newer version. For example we have created mobile broadcast application for 2G supported phones using mobile Augmentation architecture concept. Using mobile augmentation it is possible to added new features but the performance may be degraded as per capability of smart phone and available network. In this thesis we implemented following program using mobile augmented concept. We can generally Used by

Streaming Server
Mobile Video Broadcast
Mobile Video Broadcast Player

Using Video Broadcast we can broadcast live video and using Video Broadcast Player we can play Broadcasted video.

VI REFRENCES

- [1].Andre N. Klingsheim,Vebjorn Moen,and Kjell J. Hole, "Challenges in Securing Networked J2ME Applications", *IEEE Journals, Volume:40,Issue:2,2007, ISSN : 0018-9162, Page:24 -30.*
- [2].Jochen H. Schiller, "Mobile Communications" *Pearson Education Limited2003, ISBN 0 321 12381 6.*
- [3].Fan Jiang, Zhigang Feng, Lei Luo, "xFace - A Lightweight Web Application Engine on Multiple Mobile Platforms" *IEEE Conference Publications, 16 September 2010, ISBN: 978-1-4244-7547-6, Page: 2055-2060.*
- [4]. "Mobile Operating system", Wikipedia. http://en.wikipedia.org/wiki/Mobile_operating_system

Publish Research Article International Level Multidisciplinary Research Journal For All Subjects

Dear Sir/Mam,

We invite unpublished research paper.Summary of Research Project,Theses,Books and Books Review of publication,you will be pleased to know that our journals are

Associated and Indexed,India

- ✍ International Scientific Journal Consortium Scientific
- ✍ OPEN J-GATE

Associated and Indexed,USA

- ✍ Google Scholar
- ✍ EBSCO
- ✍ DOAJ
- ✍ Index Copernicus
- ✍ Publication Index
- ✍ Academic Journal Database
- ✍ Contemporary Research Index
- ✍ Academic Paper Databse
- ✍ Digital Journals Database
- ✍ Current Index to Scholarly Journals
- ✍ Elite Scientific Journal Archive
- ✍ Directory Of Academic Resources
- ✍ Scholar Journal Index
- ✍ Recent Science Index
- ✍ Scientific Resources Database

Indian Streams Research Journal
258/34 Raviwar Peth Solapur-413005,Maharashtra
Contact-9595359435
E-Mail-ayisrj@yahoo.in/ayisrj2011@gmail.com
Website : www.isrj.net