

# PROJECT SPECIFICATION

**Course of study**

MSc Creative Media and Technologies with Software Systems

**Department**

Electronic Imaging and Media Communications [EIMC]

**Coursework**

Project one in Design For Mobile Content

**Module**

Design For Mobile Content [2007-8 SEM1]

**Project Type**

A Mobile Java Game

**Project Name**

Dizzlemania

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# 1. IDEA OUTLINE

Mobile phones have become tightly integrated into the modern lifestyle. They are the most commonly carried personal items together with keys and wallets. In recent times mobile games have gained popularity for providing personal entertainment on the go. Mobile games are accessible to anyone – anywhere, anytime. According to a recent news article from Rhonda Wickham on the Wireless Week website "the mobile gaming market is expected to more than quintuple by the end of 2011: growing from last year's \$3 billion to an estimated \$17.5 billion." (Accessed 26.10.2007 Available from: <http://www.wirelessweek.com/article.aspx?id=154484>) In order to serve this growing demand new mobile phone games have to be created. That's the reason why there are and there will be numerous consumers for a standalone 2D full-colour J2ME jump and run game.

The game will be called "Dizzlemania". The reason for that is that my nickname in real life is Dizzle (Patrick > Padizzle > Dizzle) and I thought "Dizzlemania" sounds promising as a game title. Furthermore it is a unique name for a game although there are some people on the internet that used exactly this name before. The brave hero "Dizzle" will be the main character of the game. His mission is to fight against hordes of enemies in order to make his way through the level(s). The setting of the game will probably be a city (like Bradford) and the enemies might be rats or mice. The final decision on this subject-matter will be made during the "Planning Phase" (see Figure 3).

## **The game will probably feature:**

- Side-scrolling gameplay
- Colour graphics
- Sprite based character design
- Level design using tile maps
- A splash screen when starting the game
- Front end featuring a basic user-friendly menu system
- Configuration options
- Main character called "Dizzle"
- Enemies
- Multiple levels (at least 2)
- Optimization for 240x320 pixel

## 2. OBJECTIVE TARGETS

As limited screen size and navigation options do have an impact on the usability of the game it is essential to keep the game simple so that it is playable preferably without any additional explanation.

As the game intends to address general consumers, not computer-savvy techies it will have a low learning curve. Additionally it's necessary to design the whole game and each level straightforward as the average gaming sessions are relatively short in duration. The reason for that is that a mobile user often has only small chunks of free time available between tasks e.g. when taking a short break from work or while waiting for any kind of public transport. As the device will be used for games and several other applications like calendar management, messaging, calling or photo functions at the same time it should also be interruptible. Last but not least it's essential to avoid explicit violent or sexual content since all age and gender groups shall play the mobile game.

## 3. PROGRAMME TYPE

The game will be realised using Java 2 Platform Micro Edition (J2ME) - CLDC/MIDP 2.0. The reasoning behind that is that the J2ME platform has emerged as the most prominent and most widely supported mobile gaming platform. J2ME applications run on various devices from numerous vendors. That is extremely important due to the large number of different devices. All major smart phone manufacturers have committed to support the J2ME platform. Furthermore J2ME is open source, highly portable across platforms and does not interfere with programs running natively on the phone.

## 4. TARGET AUDIENCE

As "Dizzlemania" will be a casual game that provides entertainment value to a broad range of players in all social settings no distinctions on gender, income or education can be made. However there are still some specific characteristics worth mentioning. The user does not have to be a mobile phone expert but in order to play the game he should know how to download, install and start a Java application. As mobile phone usability is getting better and better this shouldn't pose a problem. In the unlikely event of getting stuck anyway he can still get support from those around him or the mobile phone manufacturer itself. In 2005 the NPD Group published a report entitled „Mobile Games: Who's Playing“ that surveyed more than 8,500 teens and adults to look at consumer demand for mobile games. According to that report " teens between the ages of 13 and 17 (60 percent) are nearly three times as likely as adults (23 percent) to be mobile gamers."

That's why the age range will be defined going from 13 to 40 at the very most. People that are even older are very unlikely to play mobile games although there are certainly a couple of elderly people playing anyway.

## 5. RESOURCES

All Materials (Images, Scripts, etc.) will be created by the student.

If third parties provide material, this will be indicated.

## 6. LIST OF PROGRAMS

Programs that will be utilised to create the J2ME game:

- Adobe Photoshop for graphics creation.
- Adobe Illustrator for graphics creation.
- NetBeans 5.5.1 Open-Source Integrated Development Environment  
[Available from: <http://www.netbeans.info/downloads/index.php>]
- NetBeans Mobility Pack Add-on to build the mobile game.  
[Available from: <http://www.netbeans.org/products/mobility/>]
- Sun Java Wireless Toolkit 2.5.2 for CLDC (formerly known as J2ME Wireless Toolkit)  
[Available from: <http://java.sun.com/products/sjwtoolkit/>]

## 7. USABILITY TESTING AND EVALUATION

### 7.1 Who will be involved into tests and where will be tested

The usability testing will mainly be done by students living in the Arkwright Halls (The author of this report lived there during the game creation) in Bradford in a laboratory like environment e.g. in the kitchen or in a student's room.

Additionally testing on the field (probably in lecture rooms or in the Atrium on University Campus) will be performed, too. The reasoning behind this comes from the fact that the interaction of a mobile user with the mobile device/game involves interaction with the surrounding real environment, too.

### 7.2 Usability testing process

The usability testing will be done by participants that are executing predefined tasks. In order to get meaningful information some respondents will use their own mobile device another section will use the SonyEricsson K800i on which the game will mainly be tested throughout the software programming. If this is the case the user will be given a brief introduction to this specific handset i.e. basics compared to their own phones. In order to get a better understanding about each tester there will be some pretest questions. After this introduction the real interview starts.

During the interview users can decide whether they want to walk, stand still, sit or do

whatever they would normally do when using their mobile device. The game testers will be instructed to think aloud during the whole testing procedure.

Several tasks will be given orally in a predefined order. Then the respondent will be asked to accomplish these tasks. During the testing in the Halls, the setting will be well controlled which means that there will be no unexpected external interruptions like disturbing noises, varying lighting conditions and so on. Concerning all tests, the moderator is not supposed to give any help during the tasks or to distract the respondent in any way. However, in the case the respondent gets stuck the moderator can help him along so it is possible to proceed with the next task. Each task will be predefined before the testing sessions and results will be directly written down during each interview. The moderator has to observe the user's reactions and behaviour very carefully. All noticeable problems must be noted immediately.

Once all tasks are conducted the respondent will be asked a couple of open-ended questions regarding his thoughts and overall experience with the game.

But the respondents have to be encouraged to reply straightforwardly since they often tend to please the moderator. The feedback that they give through this procedure will be collected and then used to improve the application and correct possible design mistakes or problems with the programming.

## **8. INTENDED CONTROL SETTINGS AND DESIGN IDEA (see Figure 1)**

## **9. APPLICATION OVERVIEW (Figure 2)**

Front End: Immediately after starting the J2ME game a splash screen will appear to introduce the game, make a copyright and ownership statement and get the user a little excited. After that the main menu will be displayed. It will contain the various options to configure the game or get started playing. Once configured one will be able to start a new game using the „New Game“ menu option. After entering the game the goal is to navigate the main character (Dizzle) within the level, destroying any enemies that are encountered along the way. From within the game screen it will always be possible to get back to the main menu. As the exact process and menu flow needs to be developed in detail in the "Planning Phase" (see Figure 3) this won't be described at this stage.

When quitting/exiting the game the MIDlet will be destroyed to release all the resources that the application/game had allocated during its execution.

In order to guarantee the game is running well not only on the computer-based emulator and the Sony Ericsson K800i it will be tested on various mobile devices already during the production process.

## 10. WORKFLOW SCHEDULE (Figure 3)

Project Start (Hand in project specification)	01.11.07 (4pm)
Phase 1 - Planning	01.11.07 - 04.11.07
Phase 2 - Production	05.11.07 - 24.11.07
Phase 3 - Usability Testing	25.11.07
Phase 3 - Tweaking	26.11.07 - 28.11.07
Project End (Hand in project)	29.11.07 (4pm)

## 11. CONCLUSION

Although the project itself will probably have no innovative nature it will give me a good understanding of how a game works and it will serve as a chance for me to learn and become familiar with the Java programming language and other information required to develop a more sophisticated game. In my mind it's better to finish a simple game and feel sense of accomplishment and then tackle a harder game instead of ending up facing many hurdles and probably getting discouraged.

Figure 1 - Intended Control Settings and Design Idea



Mobile Phone Image downloaded on October 29th 2007 from:  
<http://www.livingroom.org.au/photolog/sony-ericsson-cyber-shot-K790.jpg>

Figure 2 - Application Overview

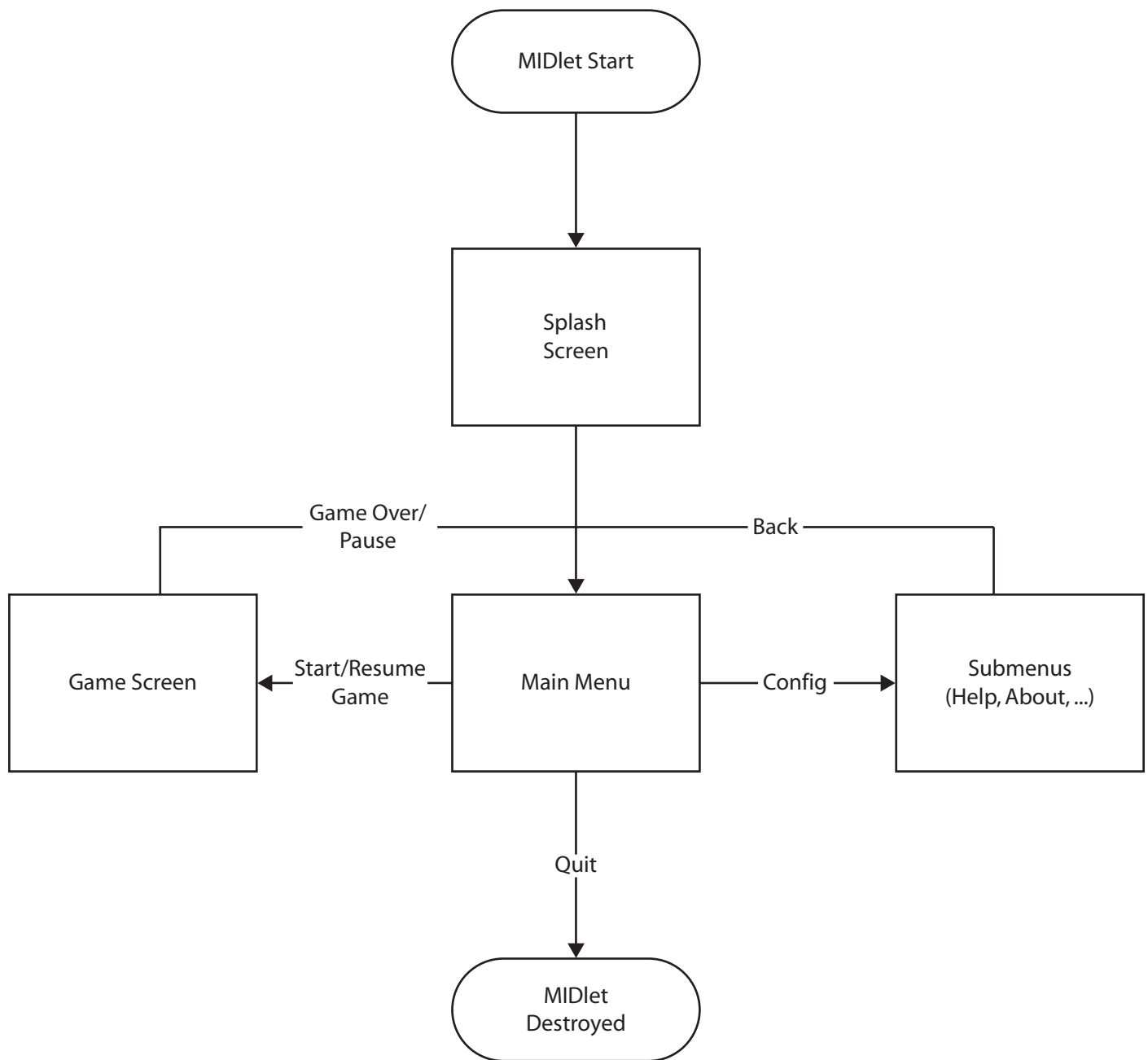
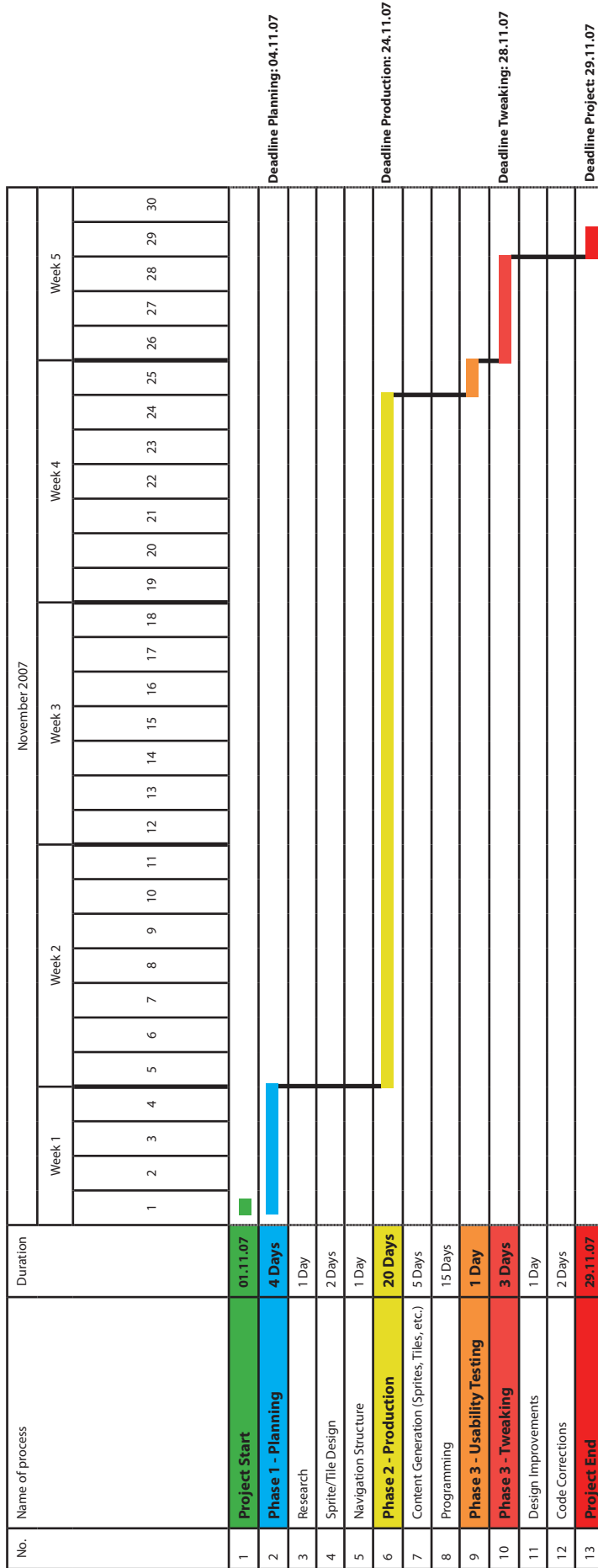


Figure 3 - Workflow Schedule

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