**Software Project Management Assessed Exercise 1**

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**DOMAIN DESCRIPTION**

1. **Introduction**

Gaelic TV is a broadcasting network which broadcasts various TV programs between the hours of 19:00 – 00:00. Programs are broadcast at certain timeslots based on predicted viewing figures which are based on historical viewing figures. The programs should be scheduled in a way which brings in as many viewers as possible to maximise advertising avenue.

Currently, the administrator is tasked with creating the program airing schedule using a spreadsheet-based system. This manual system works but is problematic as it is time consuming and potentially error-prone.

A computer-based system would predict the viewing figures and replace the current spreadsheet-based system. This solution would optimise program scheduling and reduce the chances of human error, therefore save time and maximise profits.

1. **Glossary**

Head of TV Scheduling: Approves or rejects the proposed program schedules.

Administrator: Creates the proposed TV schedule to the Head of TV Scheduling based on the programs’ historical viewing figures.

Head of IT Support: In-house IT service responsible for system maintenance, database backup and IT-related issues.

Program: A TV program which is placed in a time-slot between advertisements

This is consistent terminology across the broadcasting sector at Gaelic TV.

1. **Domain Knowledge**

The Gaelic TV Network broadcasts programs of a variety of genres which focuses on serving a niche market of Gaelic speaker and topics of interest to Scotland. Programs are broadcasted in Gaelic and English which offer a Gaelic translation.

Gaelic TV provides 5 hours of programming daily in the evenings between the hours of 7pm – 12am, and shuts down overnight.

The schedule generally consists of a mixture of recurring programs (evening shows), running program (i.e. a tv series), the news and possible special event sports programs. The news is on a regular timeslot but it can be shifted to accommodate changes in the schedule. Schedule timeslots are filled with programs based of former viewing numbers with the intention of achieving maximum returns from advertisements.

A schedule proposal is created by the Administrator of Gaelic TV which needs approval by the Head of TV Scheduling. Once a schedule is approved, it will be passed on to various departments for use eg the marketing department will use the schedule to sell advertising space and the department that does the actual broadcasting.

The in-house Head of IT support is responsible for maintaining the database system, which is backed up on a daily basis.

When planning the schedule, major special events such as football matches must be taken into account as they will likely change the target audience of a particular program during that time.

1. **Customers & Users**

The customer for the proposed system is the Head of TV Scheduling at Gaelic TV.

The users will be the Administrator, Head of TV Scheduling and Head of IT support at Gaelic TV.

1. **Environment**

The staff of Gaelic TV generally use Windows computer, however there is a substantial minority who prefer to use Linux or Macs.

The in-house IT support team deal with maintenance and technical problems.

1. **Existing Procedures**

Currently, Gaelic TV use spreadsheets to create the schedule. There is a lot of tinkering involved as it can be very complex and this can produce errors.

With system automation, this process would be streamlined and eliminate mistakes.

1. **Competing Systems**

Within its limited scope, the existing spreadsheet-based system works reasonably well: program schedules are finished on time, programs are successfully aired and major events are considered when creating the schedule.

The new replacement system would be welcomed by the Head of Gaelic TV who wants to modernise the system. In addition, it’ll also be welcomed by the Head of TV Scheduling and the Administrator as the new system will assist them in their work process. There will be an initial temporary period of system conversion which may increase workload.

It would be less welcome by the in-house IT support team as the new system may require an increase in support and multiply their workload.

Other TV networks have probably developed their own systems because scheduling broadcasting times for TV programs is crucial to all networks.

1. Similarities with other organisations

The TV Broadcasting sector is very similar to other broadcasting sectors such as the radio in terms of their schedules are organised in order to bring in the maximum number of viewers/listeners to generate maximum revenues.

Most TV networks are broadly comparable but Gaelic TV differentiates itself from other stations in that it’s broadcast times are evenings and it targets a specific niche market interested in Gaelic.

Development of a generic system suitable for use by most TV networks is technically feasible. However, numerous competing systems probably already exist so it would not be financially feasible. In addition, it would be more costly for a generic system to support particular functionalities that will vary between networks.

1. System Scope

The proposed system will contain functionalities required to generate and approve schedules, extract spreadsheet information from databases and predict viewing numbers. Only authorized personnel can access the schedules so a login process is also required.

There may be additional functionalities such as suggestions to optimise schedules if time and budget allows for it. Otherwise, these and other use cases may be included in a later release of the system.

**SYSTEM REQUIREMENTS**

A succession of interviews was conducted with the Head of TV Scheduling, the Head of IT support and the Administrator to gather the system requirements.

The users of the system are the Administrator, who is responsible for schedule creation, the Head of TV Scheduling who approves the schedule and the Head of IT support, who is responsible for maintaining the system and solving technical problems.

The system needs to connect to the database.

The system needs to be compatible with Windows, Linux and Mac machines.

The system needs an algorithm to predict viewing figures from previous viewing figures.

The system needs to have a calendar functionality.

**NON-FUNCTIONAL REQUIREMENTS**

The system must be available at all times.

The system is a standalone system and will be run in-house and only on certain machines.

The network uses Oracle database known to be reliable

The system must run on a member of different types of machines including Windows, Linux and Mac.

The system’s user interface should be a GUI for ease of use and users can navigate the software comfortably and efficiently.

The information stored on the system must be accurate and consistent at the end of each working day.

USE CASES

MUST HAVE

* User log in
* Create new schedule
* Select date
* Select program
* Add program to schedule
* Remove program from schedule
* Approve schedule
* Reject schedule
* Save schedule
* View predicted viewing figures
* View proposed schedule
* Read in spreadsheets from database
* Set login privileges
* Retrieve crash logs
* Log out
* View historical viewing figures

SHOULD HAVE

* Select genre of program
* Highlight errors
* Send proposed schedule
* Optimise schedule
* Compare system predictions with viewing numbers

COULD HAVE

* Add deadline details
* Reminder of approaching deadline

WOULD LIKE TO HAVE

* Compare viewing figures during major events

"Create schedule"

Ron Kafta accesses the system

He creates a new schedule

He selects a date

He selects a program

He views historial viewing figures

He adds a program to the schedule

"Approve schedule"

ROn Watson accesses the system

He views the proposed schedule

He views the predicted viewing figures

He approves the schedule

"Log in"

Use Case 1: "Create

Use Case 3: "Log in"

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Rationale

Ensure only authorised personnel (Administrator and

Head of Scheduling) can access the program scheduling software.

Actors: Admin & Head of TV scheduling

Priority: High

Pre-conditions: Software system set up on computer

User accounts have been created

Post-conditions: Authorised user is logged in and system ready for use

Flow of events:

1. When program is started, the system asks user for username

& pasword

2. USer enters username

3. User enters password & clicks "Login"

a. If system recognises authorised user, provides user access to system.

b. Is login details not recognsied, loop step 2 and 3

4. User is logged on until user exits program

Scenarios

Happy Day

- Ron