THE RIGHT VENUE FOR YOUR SIMULATION

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ABSTRACT

There are three venues that support simulations, stand alone PCs, local area networks (LAN) and the Internet. We discuss the pros and cons of each.

INTRODUCTION

We will use five criteria to evaluate the venues: ease of installation, ease of use, control, time required to administer and security.

PC BASED GAMES

Installation requires a setup routine in which the administrator specifies the location of files required to run the game. This is normally quite easy and can be accomplished by anyone having minimal computer skills.

Games are run by pulling down menus and clicking upon the desired operation. Nested menus are used where several selections must be made. One simply clicks on the desired choices.

The game administrator has complete control over game operations including decision input, game processing and game output. He/she also controls game file locations. If a disk failure occurs and files were backed up properly, operations can be resumed quickly by simply moving the game to another PC.

Players often utilize separate programs to enter team decisions. These programs may also be used to examine and/or print game output. If separate programs are not available, the game administrator must enter decisions centrally, an option also available with most games which provide separate programs.

The user interface has become quite friendly with context sensitive help widely available. Decision support software has enhanced the gaming experience (Fritzsche, et. al., 1987) via spreadsheet type tools and graphing routines

The growing use of laptops allows PCs to be taken directly into the classroom. The PC can be used to demonstrate the use of players= software and decision support software. It can also be used to process the game in the classroom. Output from a game can be shared using projection equipment.

PC NETWORK

Many games that run on PCs also run on PC networks in one of three modes. 1. All programs and files are on the network and access is limited to PCs that are or can connect to the network. 2. The network is used as a common storage medium for game decisions and output with PC access provided via direct connection, modem or the Internet. 3. Some combination of the above two alternatives may be utilized.

Network administrators must be consulted to obtain file permission and file location information when games are installed on a network. When using a network as a storage location there are additional complications involving provisions for uploading and downloading files without corruption while providing security for individual team data. In both cases some control is ceded to the network administrator relative to using stand-along PCs. There may also be sticky issues of time and hardware access to the network.

A game running totally on a network should be easier to run than one running on a PC. There are no floppy disks involved. No game history backups are required as network personnel handle that. When a network is used only as a storage medium, running the game will likely be more complicated. Decision files will have to be downloaded prior to running the game and output will have to be uploaded following the game run.

Running a game on a network is likely to be faster than running on a PC as there is no floppy disk shuffle. However if the network is used as a storage medium, the time required to run the game may be longer due to the necessary downloading of decisions and uploading of game output.

If the network and the game are correctly installed, security should be quite good. However networks are exposed to hackers while stand-alone PCs are not.

WEB BASED GAMES

The Web provides a platform independent venue. The administrator's program and/or the player=s program may reside on the Web. Installing a game is similar to installing a game on a network, as a Web location is part of a network. Thus cooperation of a network administrator is needed and time will be required to install and test the game.

The game administrator is dependent upon an operating network. Access to the Web may be difficult during busy times of the day. With the growing use of the World Wide Web, some sites are becoming saturated during hours of heavy traffic.

Administrators and teams that use the Web to run a game and/or to enter decisions should find the programs easy to use. Both PCs and Macintosh computers may be used. When only one of the programs is Web based, the issues

associated with networks used as storage locations come into play.

The time required to run a game will depend upon the configuration. A completely web-based game should be competitive with a completely networked-based game. A hybrid configuration where one of the programs is sited on a network and one on a PC will degrade the time required to run the game.

Security of a web-based game may be somewhat more of a question than for a networked game. Webs appear to be more vulnerable to hackers than standard network operations. This may be due to security problems associated with Java and/or web browsers. Hopefully time will resolve these issues.

SUMMARY

Each of the game venues offers advantages and disadvantages to designers and administrators. Comparing stand-alone PCs to purely LAN and Web-based games, our judgement can be summarized below. (The question mark in the time to run--Web cell refers to network overloads.) Hybrid combinations of local area networks and web based games become less clear regarding issues of control, ease of use and run time.

Criteria:	Standalone PCs	Local Area Networks	World Wide Web
Ease of setup	Easy	Difficult	Difficult
Control	Complete	Limited	Limited
Ease of use	Easy	Very easy	Very easy
Time to run	Quick	Very quick	Very quick (?)
Security	Excellent	Good	Good