

## Considerations for Running a Pile Up Competition Using PileUpNet

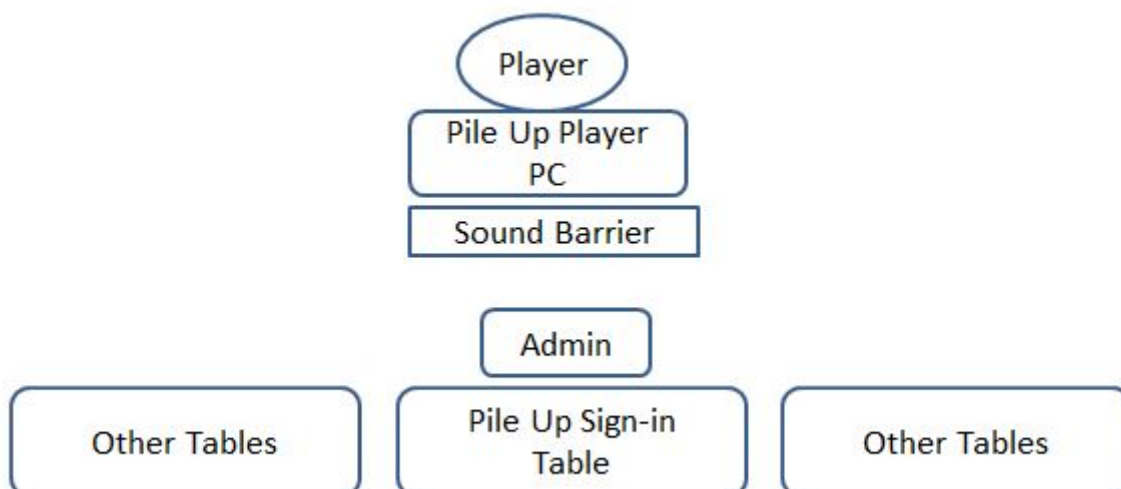
**Introduction** – There are two basic ways to use the PileUpNet software to run a competition.

- Single Player Method – A single player machine is set up as a kiosk for competitors to stop by and take the test. Scores are tabulated after each test and posted on a scoreboard.
- Multi-Player Method – Multiple Player machines (up to six) are setup and networked with a Host machine that manages the running of the test and provides real-time scoring via a Scoreboard application.

This note provides some things to consider when deciding which of the two to use since the resource requirements of each of the methods are quite different. Resources to be considered are:

- Computers – How many computers will be available?
- Manpower – How many people will be available to manage the competition?
- Participants – How many players are anticipated to participate?
- Facility – How much and what type of physical space will be dedicated for use and for how long?
- Setup Time – How much time will be available for setting up the competition?
- Testing Time – How much time will be available for running the competition?
- Pre-Event Testing – How much time will be available for testing the setup beforehand?

**Single Player Method** – In this method a single computer is setup running the PileUpNet-Player application in Kiosk mode administered by a single person who helps the participant get started with the test and records the results at the end of the test. Each player requires 8-10 minutes to take the five minute test so it can be anticipated that a continuous stream of 6 or 7 players can be processed per hour. There is no real-time scoreboard for this method but the scores can be posted by the administrator as each participant completes the test. Posting of scores is done manually on either on a flip chart or a second computer using a spreadsheet application. This method is ideal where the physical facility is limited as would be the case wherein the sponsor has only a table in the general assembly room of the ham fest or convention. To block out noise it is advisable to locate the computer behind a sound barrier of some sort.



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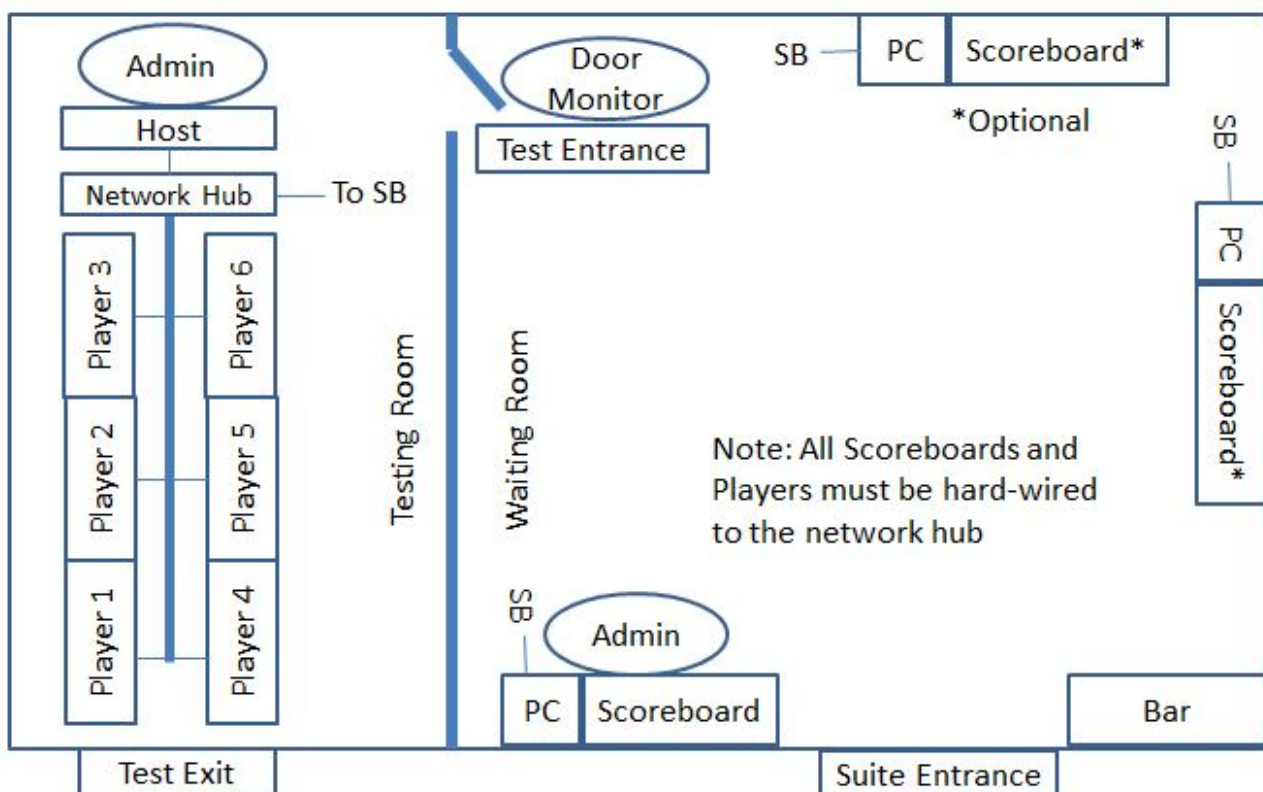
Advantages to this method are:

- Ease of Setup – only one computer needs to be prepared. The site can be prepared in minutes and pre-event testing is minimal since no networking is involved.
- Limited Manpower Requirements – only a single administrator is required
- Limited Space Requirements – no special room or suite of rooms needs to be acquired

Disadvantages are:

- Only a small number of Participants can be handled in a given time (6-7 per hour)
- There is limited audience due to lack of a real-time scoreboard

**Multi-Player Method** – In this method multiple (up to six) Player machines and a Host machine are located in a testing room and multiple (up to four) Scoreboard machines are located in a separate room where players wait to take the test and general audience members watch the real time scoreboard while enjoying a beverage or two. All player and scoreboard machines are networked to the Host which serves as a communications hub and provides real-time scoring information to the scoreboards. Here is a diagram showing a setup similar to the one used by the KCDXC group at Dayton Hamvention.



The **Host Admin** uses the Host machine to reset each of the player machines at the completion of each session, seats the in-coming players for the next session, explains how to take the test, starts the test from the Host, and monitors the progress of the test on the Host making sure that the score of all players is being updated. The Host Admin should be the team member most familiar with the software and most importantly should be knowledgeable regarding how to restart the competition should a problem develop. Typically this is the person who has set up and tested the machines beforehand.

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A **Door Monitor** keeps the door closed during each test session, sets up the group that will take the next session of the test, and admits the next group when requested by the Host-Admin.

A **Scoreboard Admin** should be present to monitor the scoreboards and to switch between views requested by the audience – tabular view of all scores, Morse Race view of current top five players and current players taking the test, and an instant replay of the most recent Morse Race. Each scoreboard display is typically realized by a large flat screen TV with HDMI input from a local PC running the PileUpNet-Scoreboard application. If the physical arrangement allows it, an alternate display method would be via a digital projector. The main requirement is to provide a display that is viewable and readable by most of occupants of the Waiting Room.

All machines in the system are typically laptops. The player machines should be as identical as possible to avoid complaints by the players. The applications will run on XP and Win 7. On Win 7 they may need to be run in Admin Mode since they write data to files in the Programs area. An alternate approach would be to install the Player application in a directory outside the Programs area.

**Do not be tempted to use a wireless network.** As mentioned on the drawing all machines must be hard-wired to the hub to form a reliable network. Theoretically a wireless network could be used but it has been found from (painful) experience that as the crowd in the waiting room grows, each one having a cell phone, the wireless network becomes overwhelmed with collisions and the resulting time outs eventually causing the network to crash. At that point the only fix is to restart the PileUpNet. Test results will be retained across such an event but the lost time will seriously impact the ability to process all that are waiting to play.

Advantages of the multi-player method include:

- Ability to process up to six times as many players as the single player method
- Ability to show in real time the progress of the competition making the competition much more interesting to the audience and waiting to take the test.

These significant advantages do not come without some cost including

- More Computers - six player machines, a host, and at least one scoreboard machine
- More Admin Personnel – a Host-Admin, Door Monitor, and a Scoreboard Admin
- More Physical Space – a testing room, and an adjoining waiting room containing at least one large flat screen TV
- More Pre-Event Test Time – The computers to be used should be available for software installation and testing for about a week prior to the event
- More Setup Time – On the day of the event at least 2-3 hours should be allotted for adequate setup and testing of the system

**Summary** – In summary careful consideration should be given to which of the two basic methods best fits the ability and needs of the intended competition considering the number of potential participants, the number of personnel that are available to support the running of the competition, and the ability to gather the necessary equipment for the necessary time and to acquire the necessary space.