



# ExperienceLab

Design guidelines | Handheld gaming

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## Summary

In an ongoing programme of research into gaming hardware and applications, Serco ExperienceLab has examined the latest handheld games machines from the likes of Nintendo and Sony. The hardware being released (in the UK) during 2005 offers a range of new features and possibilities in terms of games design. But is it all good news for the consumer? Are the novel control and input facilities offered by the Nintendo DS usable, and are they going to be *useful* in the long run? Can the Sony PSP succeed as a 'jack-of-all-trades' or is it better to focus on delivering one type of entertainment experience?

This document highlights some of the initial lessons we have learnt and presents guidelines that can be used to help design and evaluate handheld gaming solutions. For ease of reference, we have divided the guidelines into separate categories that are relevant to all manufacturers and developers in the field.

## Design guidelines

### Optimise the interface for the intended audience and the primary function(s)

- Be clear about the purpose of the device. If it is primarily for games ensure the hardware, interface and controls are streamlined to support this.
- Avoid complexity and desktop computing metaphors. A handheld gaming device should be 'instant-on' and ready for action, with a simple intuitive interface.
- If there are many intended roles for the device (such as music or movie player) strive to be as well designed as devices dedicated to those tasks. Note that in terms of functionality, it is better to be a master of one than none.
- Assist users to move between applications and games. Navigation between different functions may well be novel so ensure the menu system is intuitive.
- If there are novel features such as dual screens, and stylus or voice control, ensure these are used to add to the gameplay experience in meaningful ways.
- Ensure icons and symbols make sense to users in their local markets. Consumers should not have to rely on manuals to decipher what is on the screen.

### Offer games suited to playing on the move

- Gamers on the move may wish to play a game between stations, at the bus stop or when stood in queues. Games that are quick and simple should be made available.
- Provide an effective sleep mode. It should be possible to close or turn off a machine, and quickly return to the game at exactly the same point.
- Provide a headphone socket and mute option should users want to play in an environment where they could disturb other people.

- If the hardware supports location awareness consider incorporating this into the gameplay experience.

## Ensure the portable gaming ‘glove’ fits

- The gaming device should not be too heavy or large for extended use. The diversity of users from young to old may need to be catered for.
- Ensure the gaming device and the controls can be used equally well by both left and right-handed gamers.
- Ensure the hardware, particularly the screen, can withstand portable use and being transported in pockets and crowded bags. The device should feel robust.
- Display screens should be bright and legible. Ideally a backlight should be provided with variable levels of control to balance visibility with battery life.
- Try to make the device appear like an ‘aspirational purchase’ and less like a toy to appeal to a wider audience.

## Ensure controls are intuitive and comfortable to use

- All controls should be easy to reach, and comfortable to use – for various hand sizes. Touch screens should have large active areas to support finger control.
- If stylus control is available it should be easy to hold the device, use the stylus and hit a variety of buttons. Provide alternatives just in case!
- New forms of input, such as speech and stylus control, should be manageable when users are moving or standing and not just when they are stationary.
- Co-locate controls that are likely to be used in combinations, whilst ensuring that the users hands can still hold and balance the device.
- Ideally provide an analogue control for fine in-game movement, as directional ‘rocker’ pads often lack the sensitivity required.

## Make it easy to set-up and commence network play

- Gamers, young and old, should not need to be networking experts to commence a multiplayer game. The set-up process should be quick, simple and inviting.
- Ideally just one user, with one copy of a game, should be able to host a network gaming session. Furthermore, multiplayer games should not have a detrimental impact on the speed of a game.

## Keep the gamer informed about system resources

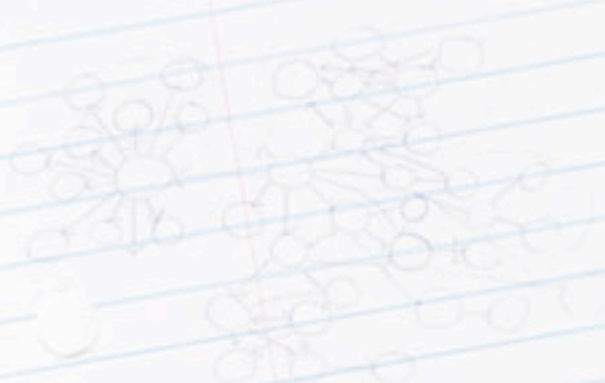
- All mobile devices require battery power. Users should be kept informed of the status of batteries, ideally via the screen or an LED light so they can manage their gaming sessions.
- Consider allowing users to turn off power hungry facilities (Wi-Fi, Bluetooth, GPRS etc) when they are not in use to maximise the available play time. It should also be quick to re-charge a battery and get back into a game.

### *About ExperienceLab*

ExperienceLab (formerly Serco Usability Services), are a global experience design research agency. They help organisations optimise their customer experiences, from web to TV and mobile, from advertising to physical environments. They've been doing this for a while, pretty much since the first computers and networks were created, so they know a thing or two about how to make people, processes and technologies work in harmony.

ExperienceLab use a wide range of techniques to tailor a research solution that fits your business objective, including ideation sessions, proposition analysis, customer needs mapping, usability testing, benchmarking and touch point integration studies. As a co-founder of the UXalliance we also provide research on a global scale.

Why not visit the ExperienceLab blog ([www.expericelab.info](http://www.expericelab.info)), which features the latest thinking on experience design issues.



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