

Checklist for designing better mobile games

Following a round of independent user research, PlayableGames uncovered design features that need to be considered when developing games for mobile devices. The research led it to produce the following design checklist.

Background

Mobile gaming devices like the Nintendo DS or PlayStation Portable PSP have been around for years, and have a loyal and substantial following. The release of the iPhone has taken mobile gaming to another level, where games are easily downloaded to the device, for small amounts of money; the casual game has arrived on the handheld.

However, there are considerations for mobile games that are occasionally overlooked by developers. It's not simply a case of porting a console game to a mobile device, and expecting it to be as popular and as fun as the original. A mobile game has to consider the environment in which it's played and how that affects the usability of the game. We designed a piece of research to look into this.

What we did

We took a Nintendo DS, iPhone and PSP and a variety of games, and spent time with them as part of our regular lifestyles. Getting to and from work was a key time when we played. Some of us commute on trains, some take the bus, some the tube (some cycle, but that's a bit dangerous).

We each noted our experiences over a couple of weeks: things that worked well, things that were annoying or frustrating, or even stopped us from playing the game altogether.

The output was a checklist of user requirements for games on mobile devices. These requirements are not an exhaustive list: they are just the key issues that faced our testing team when they tried to play games as they were out and about. They make a useful list of things to consider when developing a game for mobile devices.

User requirements checklist

Gaming on the go

- Quick pick up and play is important
 - Loading lag, or loading between set up options, makes a quick play impossible
 - Assassin's Creed on the iPhone took one of our consultants so long to load he only had one stop left of his journey to play it
- Quick and easy access to save points/pause for when the bus/train comes

- Auto saving after turning off the device, or putting it to sleep is essential for when the bus comes
 - If the user has to turn it off or throw it in his pocket quickly, the game needs stop and remember progress
 - Multiple checkpoints can really help this, if the ability to auto save isn't available

Visibility

- How does lighting affect screen visibility?
 - Consider using high contrast colours between the background and foreground items to aid visibility in bright sunlight
 - This is less of an issue for iPhone because of the auto brightness feature
 - Important indicators should be highly visible so that they can be seen in bad lighting conditions on a small screen

Touch screen issues

- Onscreen gestures often work better than buttons
 - But there are exceptions, e.g. buttons on the iPhone version of Peggle offer more precision than the onscreen ports
 - Also consider onscreen controls if occlusion, where a finger on the screen obscures the action, is a problem
- Ensure onscreen controls are not too small or too close together
 - We found the controls on Assassin's Creed too small and intricate to use easily, especially when moving – they failed the 'fat thumb test'
- Mobile phone games should ideally be playable with one hand

Phone issues

- What happens to the game when there's an incoming call, text, email?
 - Users should be able to pick up where they left off without penalty
- Consider how message alert sounds affect whether people can hear audio cues in-game

Audio

- Ideally the game should be playable without audio, for when in public without headphones
 - This includes tutorials
- It may be beneficial to provide in-game volume / mute controls
 - This is particularly important on mobile phones, as users may not want to mute the whole device
 - Consider giving users the option to turn game sounds on or off when the game loads up

- Provide users with the option to listen to their own music where appropriate

Inputs

- Consider how other input/outputs available on mobile devices affect gameplay when out and about
 - Microphones, motion sensors, accelerometer, cameras, touch screens, wi-fi, GPS, etc
 - To what extent are people willing to look like a plonker dancing in front of their camera or making frantic hand gestures while sitting on the bus?
 - If players can make sounds to interact with the game, ensure there is an alternative interaction for public situations
- If the game is dependent on a network connection that is liable to degrade as location changes, then the signal strength should be displayed at all times during the game

Situations where mobile games are commonly played

- On public transport during the daily commute
- On public transport during long trips, business trips
- At airports and in planes
- In school
- Waiting for someone or for something to happen
- At home

These are examples of how the context of use needs to be considered during the game development process. Some of them may seem obvious, but they are often overlooked.

If you are interested in us providing user research on any of your titles, we'd love to hear from you. We're flexible, and always happy to chat.

About PlayableGames

PlayableGames has studied gamers (and games) for years. We are a team of highly experienced gamers and user experience researchers, a team that shapes gaming experiences for console manufacturers, publishers and developers in the UK and globally.

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