



# Gluon Player

for Maemo and MeeGo

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## What?

Gluon aims to create a system which enables everybody to **create** the games they envision, and **distribute** them to the players. It also aims to allow those players to **communicate** back to the game makers on how they liked it, as well as with each other. Furthermore it suggests a new **payment** model for games, based on donations. Based on the pay-what-you-want model so successfully employed in various other fields, as well as in a few places in the indie games scene, Gluon bases its payment model on this concept.

## Who?

Gluon as a project is aimed at everybody along the line of the game creation scene - all the way from the people who get the ideas to the people who play the games. The project presented in this paper, however, is aimed primarily at the **players of games**. The idea here is the Gluon Player for Maemo will be able to view and discuss new Gluon games before and after download. Also to make donations to support them. And, of course, play the games directly on their device.

## How?

The Gluon libraries are created using the **Qt** development framework, and are thus already prepared for use on Maemo based devices. For instance, GluonGraphics is based on Qt OpenGL, and fully supports **OpenGL ES**. The client itself is designed to be finger-friendly and uses the Qt User Interface Creation Kit (**QUICK**) on top of the GluonClient library for a smooth, Maemo-like experience. Getting the client onto the end-users devices happens through the Nokia **Ovi Store**, where the client will be available for free.

## Why?

The status quo of game creation is the Danish produced game engine Unity. It stops its innovation at the desktop: It will help you create games, but the distribution you will have to take care of yourself. While this may be enough for some, the Gluon team believes otherwise. More than that: Gluon is a 2D game engine, and while Unity is great for 3D games, the 2D capabilities are greatly lacking. As such, Gluon itself has a niche to fill, as there really are no proper alternatives. A further exploration of this follows...





# Introducing The Gluon Vision

The Gluon project is an open framework for creating and distributing games - supporting the flow of the idea all the way from the author to the player of the finished game. The primary use of Gluon is to create games using 2D graphics. The reasoning behind this is that the niche for this type of visual is very large and so far untapped by specialised tools. In the world of 3D games there are solutions such as Unity3D, which provide a distribution system, but in the 2D game development world there are no tools to provide a complete eco system for both the creation, distribution and feedback gathering.

Read on at [http://gluon.tuxfamily.org/wiki/index.php?title=The\\_Gluon\\_Vision](http://gluon.tuxfamily.org/wiki/index.php?title=The_Gluon_Vision)



To assist in understanding what the Gluon Player for Maemo is, an explanation of the tools it is based on might be needed. As the text and the infographic above indicate, the concept is based around the Gluon Creator, a tool which creates the games. After creating the games it also allows the game creator to upload those games to a website, based on the Open Collaboration Services framework also used on openDesktop.org, from which the various Gluon Player programs can download the games and play them.

While users can use the website itself, the clients allow the players of games to interact more effectively by providing a specialised user interface directly on their device - be it a desktop computer, a mobile phone, or indeed a tablet, such as the Nokia N900.

Similar things to the Gluon Player already exist, such as the Steam Powered and Impulse Driven clients, except they are controlled by a company with development methodologies which do not fit into an open and free ecosystem.

As such, the Gluon Player's concept is one which does not incorporate Digital Restrictions Management (DRM) or similar limiting technologies, but rather it is a way for the members of a highly creative community to work with each other, and a way for the members of the community to reward other members for their contributions - whether that member is a company or a single person - using a variety of donation options (such as paypal, flattr...) as well as comments and ratings.

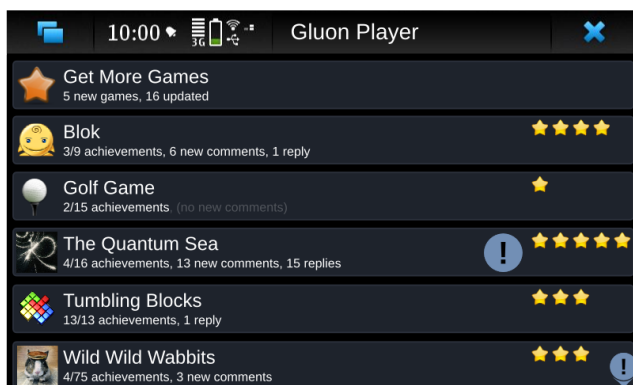


# Designing the Gluon Player for Maemo



## Entering The Gluon World

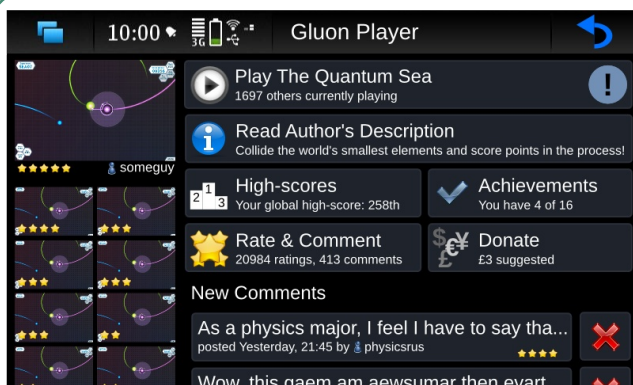
This is where you get into the Gluon Player. Enter your username and password and tap Log On. After logging on successfully (optionally saving your details), you are shown your Gluon Home... If you would rather not log on (which will disable all the high-scores and other online features), this is done by tapping Play Without Logging On. If you are somewhere without an internet connection, or simply don't want to interact - the choice is yours!



## Your Gluon Home

Gluon Home shows you games already downloaded in an alphabetical list, with the ability to get more games at the top. Tap that to show a similar list.

The list shows world-wide ratings and comments, and shows friends wanting to play with you. Tap the little at the bottom to scroll down to the item outside the screen with a notice on it. Tap the to accept the challenge and launch the game immediately!

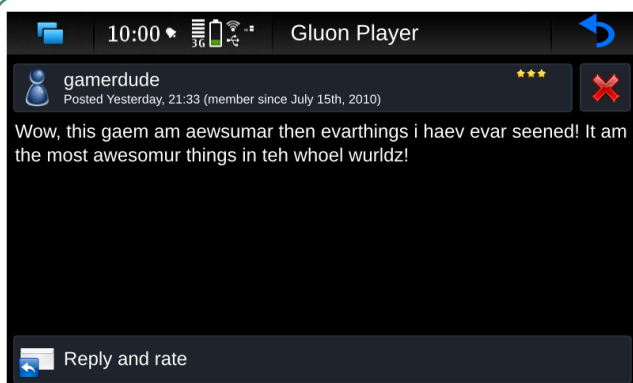


## Viewing a Game's Details

When viewing the details of a game, the player is presented with numerous options: Of course they can start playing the game, but they can also donate, communicate their opinion on it and communicate with other players of the game.

The high-scores table is available to everybody, and they are both local and global.

The screenshots are player provided, and rated by the other players, same as everything else, including comments.



## Looking at what people say

Viewing comments not only allows the player to reply to a comment, but also allows them to rate the comment being read, and of course delete it from the reading queue. Pressing delete will do that, and show the next comment in the queue, or take you back to the game details when there are no new comments to read.



The **KDE Development Platform** is a large, cross platform software development platform based on the world-renowned Qt framework, which is now the official framework for the MeeGo project. It allows for a wide range of powerful features to be added to software with very little effort.

For example, the KHotNewStuff3 library allows for easy integration of the Open Collaboration Services into any software based on the KDE Development Platform.

Others include such powerful tools as KIO, which allows for network-transparent interaction with files, to a level usually only available through linux-based mounting systems such as the fusefs system, but similarly cross-platform.



**GluonInput** is a powerful, cross platform input library created specifically with Qt based games in mind. It solves the common problem for game programmers working with traditional toolkits which is input latency. It wraps the lowest level input system available for each platform and provides a pleasant, Qt-style API, including the necessary code to interact with special hardware like touch-screens and accelerometers. GluonInput lets the programmer create cross platform games without having to worry about all the many issues.



While Qt already has a powerful media playback system, Phonon, this system lacks certain features such as 3D positional audio and millisecond exact playback control. As such, **GluonAudio** wraps the powerful OpenAL library in a more Qt-like API, providing easier access to the features to users of the Qt framework.



Since Qt 4.2, the QGLWidget has been available, providing direct access to the OpenGL system in the aforementioned Qt-like fashion, but lacks a way of managing items in the scene. **GluonGraphics** provides this layer on top of the existing Qt OpenGL system, further extending it with for example text rendering supported on OpenGL ES platform, not easily available in Qt itself.



The two libraries GluonEngine and GluonPlayer are the last bits that make this venture possible:

**GluonEngine** is the library containing the game engine itself, which allows for distribution of games as a simple collection of assets: Using QtScript allows for game-logic to be scripted, leaving the heavy calculations to existing functions in the C++ based libraries.

**GluonPlayer** contains all the functionality needed by the different Gluon Player applications on the different platforms - in the case of this document Maemo (and consequently MeeGo).



Furthermore **Gluon Creator** should be viewed as an enabling technology for the Gluon Player for Maemo/MeeGo. Without the ease of game creation that it brings to the game, the various Player applications would have to rely on game makers writing the games by hand and manually upload them to the website. While this is certainly possible, it is much more pleasant to be able to drag and drop items into place, and only write the game logic yourself.