**PlayJam Game Chat**

Where gaming and messaging meet

Specification

Version 0.0.2

Confidential

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Revision history

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# Introduction

## Purpose

The main objective of this document is to outline the requirements for the PlayJam Game Chat project. The document gives detailed descriptions of both functional and non-functional requirements proposed by PlayJam and verified by Solpeo.

The purpose of the system is to provide game developers with a social gaming platform built around a messaging application, along with a set of tools to incorporate all desired social features into their games.

## Project Scope

The development of the project is broken down into the following stages:

1. Pre-production, which involves defining the requirements, describing the MVP (Minimum Viable Product), and planning the subsequent phases of production
2. Production, which is divided into the following sub-phases:
   1. Phase I – the MVP is launched, the platform is stable and allows for the community to start building
   2. Phase II – additional social functionalities and monetization mechanisms are added
   3. Phase III – content management functions, analytics dashboards and interactive ad creators are added
3. Maintenance and further development

## Project Methodology

The project is managed using the AGILE methodology, which means the production team is focused on quick delivery of prototypes and proof-of-concept builds, which allows for quick scoping out all technological constrains. The developer is using a mix of Scrum and Kanban methodologies, with PlayJam having access to production metrics, reports and tickets via the YouTrack system (<https://www.jetbrains.com/youtrack/>)

A Project Manager (PM) is provided by Solpeo, whereas a PlayJam representative serves as the Product Owner (PO).

## References

* <http://playcanv.as/p/aP0oxhUr> - Tanx game by PlayCanvas – a reference to how seamless multiplayer invites and sharing via URL will work
* <http://www.kik.com>, <http://www.whatsapp.com>, <http://www.snapchat.com>, <http://www.wechat.com/en/> - most popular chat applications, which serve as a reference to how the chat will look and feel

# System Description

The system, in form of an SDK, is meant to be used by game developers and content managers to introduce chat and social mechanisms into their games.

Once implemented into a game, the chat remains in the background, and is accessible to the players by clicking a dedicated on-screen button. The player is then able to chat with his friends, while the game continues to play in the background. The experience is very similar to that of the Steam Overlay, the Origin Overlay etc., while the chat replicates the common functionalities of applications like WhatsApp, Kik or Snapchat.

The key requirement is that the chat functionality is available to the player at all times, and that the application working in the background does not impact the performance of the main game (and vice-versa).

If a player wants to use the chat functionality for the first time, and is not logged in, he is asked to register a new account on the PlayJam servers.

The registration process is designed to be as simple as possible – the only user credential taken at registration is the player’s email address – everything else (password, screen name etc.) is either randomly generated, or generated based on the data provided (the email username – before the ‘@’ symbol – becomes a temporary screen name, etc.). The accounts are stored on PlayJam servers. The player also has the option to log in via a Facebook account, which skips the process and fills out all necessary fields using the data obtained from Facebook.

If the player doesn’t create his account via Facebook and decides to only provide his email address, the first time he logs in he will be asked to provide more details about himself - his mobile number, his desired screen name, and his permissions. He also has the option to reset his password from the auto-generated one, to a password he can more easily remember.

After this step, he is prompted if he wants to find his friends over popular social media channels. This runs a cross-search between his friend list (email addresses, possibly mobile numbers) and the PlayJam user database, and suggests friend invites to the player. At the same time, permissions to post as the user are being taken, for future use.

From that point onwards, the player is able to chat using the chat icon visible in the game’s UI. The chat follows typical rules similar to Kik or WhatsApp. The player is able to privately chat with another PlayJam user, even if the player or the user is offline. He is also be able to chat to a group (i.e. all players in the current game session, user defined groups, etc.) – the chats are lobby-based, and the player is able to invite/remove players from the lobby he has created.

Apart from text messages, the user is able to send stickers and emoji, as well as badges, which are a special type of stickers, which the player earns for performing game-specific actions. Typically finishing a game, obtaining a specific achievement, or simply running the game and finishing a level will unlock a badge for the player. He can then, during chat with any other user, go to the stickers/badges menu and select a sticker/badge he wants to paste into the input field. The sticker/badge acts like any other character the player would put from his keyboard.

The text can be typed on a standard system keyboard, or dictated where available. A profanity filter automatically removes bad words.

In addition to typical chat messaging, the player is able to call another user via VOIP or organize a Video Conference.

The player can also send photo and video attachments (in-game screenshots and video sharing - TBC) to other PlayJam users, which works similarly to a chat message.

The Settings panel lets the see all the information he provided to PlayJam, as well as check his notification and feed settings. It will also let him check his chat settings (including the profanity filter).

The More Games section is dedicated to cross-advertising other games from the PlayJam Network. It contains a list (icons) of games, ordered by what the PlayJam Server currently dictates, which the player’s friends are playing, and other propositions based on what the player has been playing recently. This screen also allows the user to rate, review and share the games he likes.

Finally, the Sharing section lets the user capture screenshots or short gameplay videos in order to share it with the community (TBC if technically possible).

The player is able to manage his friends (find new friends by username/email address, remove his existing friends, create and manage friend groups) from his friendlist. He is able to initiate 1-1 chat from this screen by selecting any of his friends. In the recent chats section he is able to see all his latest conversations (1-1 and group chats, as well as the current session chat).

A player is also able to invite new friends to the PlayJam service. He can do so by sending a generic invitation to a group of friends (i.e. his Facebook friends) or by creating a generic link that he can post anywhere. Another option is to create a personalized link for a specific friend. When a friend clicks the personalized invitation, he joins the game he is invited in under a username based on the data provided by the player inviting him. The data will be taken either from the friend’s Facebook (if the player chose his Facebook friend to invite) or from a form presented to the player, in which PlayJam asks for the invited friend’s name. The friend can play the game normally and after finishing the current level he will be asked to register, but the fields will be pre-filled with the information PlayJam already has.

The PlayJam API will allow game developers to create games in which a player can invite another friend to seamlessly join in and start playing and chatting immediately without any hurdles or barriers. APIs for passing session parameters (the number of players in game, their nicknames, and other information) will be provided to the game developer.

Additionally, all actions the players take are recorded and stored for further use in PlayJam’s Analytics Dashboards (TBC – for now – storing is required).

# Functional requirements

This chapter will define the functional requirements of the project by describing all features in detail, and by providing typical use cases and functional diagrams.

## 3.1. System features

The core feature common to all the subsystems is the ribbon, always visible at the bottom of the screen. The ribbon always shows the same buttons – from left to right: Conversations, Friends, Share, More Games, Menu.

<screenshot-ribbon>

The Conversations button opens the list of all open chats with friends or groups. The top of the list is reserved for the game lobby of the currently played game. Clicking any of the conversations takes the user to the Chat screen, where he can talk with the selected friend or group.

The Friends list is where the user can see all his contacts available for chatting. From here, the user can initiate chats with a person or a group of people, as well as look for new friends by searching the PlayJam Network or other social media.

The Share button is contextual – if a user is chatting with another person or group, it allows him to share a multimedia file (photo, video or screenshot) or a link to the game he is currently playing with that person or group. If the button is pressed outside of the chat screen, he will additionally have to select a person or a group with which to share whatever he is sharing, but it will also allow the user to create a generic link to the game he is currently playing that he can share via his clipboard or via selected social media channels. It also allows the user to share media to social channels.

The More Games button goes directly to the More Games section, described in detail in section 3.1.9.

The Menu icon opens a menu with other, non-critical sections, like Settings, About, etc.

In the sections below, all screens and functionalities of the system will be described in detail.

### 3.1.1. Chat

The user is able to open the chat at all times during normal gameplay. Chatting is initiated by clicking a dedicated on-screen button. It is up to the game developer to decide where the button is placed, but the default location is the lower-right hand corner of the screen.

<screenshot-game\_with\_button>

Clicking the button on the game screen opens the PlayJam overlay. If the user is not logged in, it will show the login/registration screen. The login and registration processes are described in section 3.1.2. User Accounts below.

<screenshot-login\_page>

A logged in user is taken to the Conversations page.

<screenshot-conversations\_list>

The list consists of all recent conversations, sorted by the last message sent/received. The user can select any of the conversations to start talking with the people involved in that particular conversation, or start a new conversation by clicking the friends list icon on the ribbon at the bottom of the screen. A new conversation can be started with a single user, or a group of users.

<screenshot-contact\_list>

The user simply taps the friends he wants to start the conversation with, and accepts the choice to open the conversation window with the selected friends.

<screenshot-chat>

The chat itself is simple – the main window shows a scrollable history of the conversation, and the bottom half of the screen shows the input field and the system keyboard. To the right of the input field the user will be able to click emoji and stickers buttons in order to paste emoji and stickers/badges into the input field.

Bad words are filtered out in incoming chats, and in chat history, if the profanity filter was enabled in the Settings section (ON by default).

### 3.1.2. User Accounts

A User Account is created first when a user registers. In order to keep the process as simple and quick as possible, the user is able to log in using Facebook from the login screen without registering – in which case an account is created in our system, using the credentials from Facebook.

<screenshot-login>

If a user decides to register without using Facebook, PlayJam only requires the user to provide his email address. The password, and the rest of the account data, is generated automatically – the password is randomized, and the default username is the localpart of the email address (the part before the @ symbol).

<screenshot-register>

During the first log-in using the credentials provided to the user’s email address the user is prompted to provide a mobile telephone number, and whether or not he would like to change his screen name from the default one to something more recognizable, and his password from the randomly generated one to something that he can remember.

At the next step the user will be asked to use the Find My Friends feature, which is described in the next chapter.

Once this stage is complete, the user has a full PlayJam account.

**!-Important-!**

There is another type of user accounts – ‘temporary’ or ‘guest’ accounts, which is assigned to people using the Real-Time Invites (please see section 3.1.5. Seamless Multiplayer) – these accounts are upgradable into full accounts, and are to be deleted 24 hours after creation, if not upgraded.

### 3.1.3. Find My Friends

The Find My Friends option allows the user to quickly search for his acquaintances in the PlayJam user database using his social media accounts.

There are various ways the user can search for his friends. The most basic option is to search the PlayJam database. The options are to search by the email address, the potential nickname, or the mobile phone number. Once the search results are shown, the user can send a contact request to his friend. The friend will first need to accept the request to become friends. The request will be shown as a chat the next time the friend logs in.

Other ways to search for friends require integration with various social media sites. The user is able to search for friends via Facebook, Twitter, Whatsapp (TBD) and other (TBD) social media services.

Clicking any of these options takes the user to a dedicated site where he puts in his credentials for the social media he’s searching. Once he does that, the PlayJam application gains access to the user’s friend list, and PlayJam can run a cross-search between his friends and PlayJam’s database. All of the user’s social media friends who also have an account on PlayJam’s service, and which are not yet friends with the user, are shown as search results. The user can then select which friends he wants to send requests to.

### 3.1.4. Developer Portal

At this time, for the current stage of the project development, the Developer Portal will be kept very simple. It allows game developers to generate unique keys for each application submission.

The feature roadmap is TBD, but one of the first features that will be added is an analytics panel, which will allow the developer to track user activities in his games.

### 3.1.5. Seamless Multiplayer

One of the core features of the system is the ability to send a link to another person, which takes that person directly to the instance of the game the player is currently playing, in order to join him.

A proof of concept of this feature can be seen in the game “Tanx” by PlayCanvas. (<http://playcanv.as/p/aP0oxhUr>)

The feature can be used both in order for people to join and cooperate with the player, or to compete against each other. How this feature is used is up to the developer.

The PlayJam SDK helps the developer implement this feature in various ways.

### 3.1.6. Screen-space Sharing

### 3.1.7. User Reviews

### 3.1.8. Analytics

### 3.1.9. More Games

### 3.1.10. Settings Screen

### 3.1.11. Voip, Video Chat

## 3.2 Use Cases

### 3.2.1 Use Case Diagrams

### 3.2.2 Use Case Scenario 1

### 3.2.3. Use Case Scenario 2

# External requirements

# Technical requirements (non-functional)

## 5.1. Performance

## 5.2. Platforms

## 5.3. Usability

# Open Issues