Roll20

Design Brief

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Roll20

Overview

About Roll20

Roll20's mission is enabling gamers to unite across any distance via easy-to-use gaming tools. It is owned by The Orr Group and was originally launched in 2012. Roll20's website has over 5 million registered users and contains content for over 200 game systems. Over 50% of Roll20 campaigns use the Dungeons & Dragons 5th Edition system, which is owned by Wizards of the Coast. Roll20 is funded via player subscriptions and sales of licensed content.

The Vision

Improve overall user satisfaction with Roll20 among D&D players, leading to increased user subscriptions and marketplace sales.

Problems

- User satisfaction is low.
- Interface feels clunky and unattractive.
- Users feel Roll20 is stagnant and becoming outdated.
- Users are phasing out Roll20 with alternative products.
- Users are reluctant to invest time and money on Roll20.

Goals

- User satisfaction is high.
- Interface feels intuitive and beautiful.
- Users have reinvigorated excitement about Roll20.
- Users are staying or returning and inviting their friends.
- Users are happy to invest in premium content.

Proposal

To improve user satisfaction, retain existing users, and attract new users, I recommend focusing on three key areas: character creation, dice rolling, and visual appeal.

The Process

I work using a user-centered, goal-oriented, iterative process. This process is focused on satisfying the goals, needs, and desires of our target users. Each iteration of this process includes the following stages:

- **Planning** - Setting deadlines, allocating resources, and evaluating risks.
- **Research** - Identifying user goals, user contexts, organizational goals, and market contexts in order to define requirements.
- **Modeling** - Designing, evaluating, and building solutions to satisfy requirements.
- **Testing** - Verifying and refining solutions to ensure requirements are met.

I applied several user research methodologies to inform recommendations:

- **Competitive Analysis**
  - I compared Roll20 to its biggest competitors in order to understand Roll20's place in the market, identify strengths and weaknesses, and identify market gaps.
- **User Interviews**
  - I conducted five interviews with users of Roll20 to gain an in-depth understanding of their perceptions, contexts of use, and goals.
- **User Surveys**
  - I conducted a user survey with 112 participants in order to establish baseline satisfaction scores and to identify which aspects of Roll20 are most or least satisfactory.
- **Personas**
  - I synthesized information from my research into personas representing different classes of primary users. These abstractions help communicate user goals, motivations, and contexts.
- **User Journey Mapping**
  - I created a visual story of a persona's workflow in order to explore and communicate user tasks, goals, motivations, and emotions.

Competitive Analysis: Research

User perception of Roll20 must be considered within the context of its competitors. I compared Roll20 to its biggest competitors: Fantasy Grounds and D&D Beyond.

Fantasy Grounds

Initially released in 2004 by Smiteworks, Fantasy Grounds has over 300,000 users. It's a standalone application available for Windows, Mac, and Linux. The newest version, Fantasy Grounds Unity, was launched in November 2020 and contains content for over 20 game systems.

- Requires both purchase and installation, creating a significant barrier for new players.
- Includes a complete set of tools needed to run a D&D campaign.
- Features thematic art that fits the D&D setting, including heavy use of medieval textures.
- Tools are powerful, but complex and difficult to learn.
- Character creation tools are limiting, requiring users to pick either a wizard-based or sheet-based workflow and then stick to it.

D&D Beyond

Launched in 2017 by Fandom/Curse, D&D Beyond is a website with an optional mobile app. D&D Beyond is focused exclusively on D&D 5th Edition content.

- Does not require installation or purchase for new players.
- Not an all-in-one solution. Unlike competitors, does not include map or chat tools.
- Offers the most attractive and user-friendly character creation tool on the market.
- Visual style is polished, modern, and inspired by D&D 5th Edition source material.
- Often used by Roll20 users as an alternative to Roll20's own character creation tool.
- Includes an encounter builder that displays challenge ratings based on the party's level.
- Mobile app allows users to easily transition between online and in-person sessions.

Competitive Analysis: Takeaways

In order to improve its standing within the current market, Roll20 should continue to emphasize its key advantages while also pursuing opportunities to overcome gaps.

Key Advantages:

- Roll20 allows new users to join without any purchase or installation.
- Roll20 includes a complete set of essential tools for D&D, making it an all-in-one solution.
- Roll20 supports both wizard-based and sheet-based character creation, making it easy for players to get started.

Key Opportunities:

- Help Dungeon Masters design balanced combat scenarios by adding an Encounter Builder tool with challenge rating calculation.
- Help Dungeon Masters run combat encounters more efficiently by enhancing the utility of the Combat Tracker tool. Consider including monster health totals, status effects, and quick-access buttons for character sheets.
- Support players with homebrew content by making it easy to upload and share custom content.
- Enhance the dice-rolling experience by improving the aesthetic appeal of animated dice and enabling them by default.
- Enhance the roleplaying experience by allowing players to select in-game languages when chatting.
- Enhance the overall experience by improving the look and feel of the UI to feel more polished and connected to the D&D universe.

User Interviews

I conducted five user interviews to understand how users interact with Roll20 tools during a typical session and to identify challenges and opportunities with Roll20's core tools. Participants were asked about the strengths and weaknesses of character sheets, map tools, dice rolling tools, the chat window, and visual appeal.

General observations

- For basic functionality, most users rated the tools as easy to learn.
- For advanced functionality, most users rated the tools as very difficult to learn.
- Some users relied on the expertise of other users in order to learn how to use the tools.

"Being the Dungeon Master is already harder. You shouldn't need a degree in Computer Science to run this game."

Character sheets

- Users liked that the character sheet matches the layout of the paper version.
- When using the character sheet for standard, pre-built content, the feature was easy to use and worked as expected.
- Players with house rules or homebrew content found it very difficult to customize character sheets accordingly. Deviating from the rules even a little bit plunges the user into an advanced interface that is confusing and difficult to use.
- When exploring the character sheet, it's easy to accidentally insert a lot of information into the chat window, which is disruptive.
- The character sheet doesn't provide a way to track temporary effects such as statuses or spells, nor does it account for these effects when performing rolls. Users indicated tracking these effects would be helpful.

Map tools

- Users who only interacted with the map tool as player characters generally had positive feedback about the tool.
- Users with experience using the tool as a Dungeon Master had many more complaints and frustrations about the map tool.
- Users mostly liked the standard drawing tools and found them easy to use.
- Users liked the ability to upload custom content and insert it into the map, although DMs reported difficulties with this process.
- Token statuses received mixed feedback. The icons don't have standard meanings and can be hard to read when zoomed out.
- DMs reported frustrations managing pages and layers within the map tool.

Dice rolling tools

- Users who use the character sheet generally perform most rolls using that tool.
- Users who don't use the character sheet typically perform rolls using custom-built macros or the chat command.
- No users reported using the Dice Roller tool. Most users weren't aware of the tool at all.
- Several users indicated they would likely use the Dice Roller tool if it were reworked to be more discoverable and user-friendly.
- Users who enjoy rolling physical dice would like the Dice Roller tool to mimic the physical experience more closely.
- The Advanced Dice Roller doesn't provide enough flexibility or power to accommodate rolls that are relatively common.

Chat window

- Users reported that the chat window is primarily used for seeing the results of dice rolls, although it is sometimes also used to privately message the DM.

- Some users felt the chat window was "jumbled" because it contains a mix of dice roll results, in-character chat, and out-of-character chat.
- Some users would like the option to separate dice rolls from actual "chat" messages, either using separate windows or quick filters.
- Some users would like to have additional text formatting options for both that chat window and the macro builder.
- Some users would like the ability to see timestamps within the chat window but would also want the ability to hide the timestamps.
- Grouping chat entries by time (e.g., by inserting extra whitespace during pauses) may help separate groups of dice rolls.
- Color-coding chat entries by player may be helpful.

Visual appeal

- Users described the user interface as "simple" and "barebones."
- Users rated the overall attractiveness an average of 3.6 out of 7, with scores ranging from 3 to 4.5 out of 7.
- Users who use "dark mode" features in other software had some interest in having a dark mode option for Roll20.

Additional observations

- Users typically use separate voice chat software when using Roll20.
- Multiple users reported wanting better built-in content for graphics, avatars, and icons. The free options seem very limited, which makes users feel like they are being pressured to pay for content.
- Microphone and video settings seem difficult to configure.
- The settings screen is hard to use. Advanced settings are mixed in with basic settings.
- A significant amount of screen space is taken up by player cameras.

User Surveys

Following up on themes discovered during user interviews, I conducted a survey of 112 users to establish baseline satisfaction scores and to better understand which areas of Roll20 have the most room for improvement.

Key findings

Roll20 Satisfaction Survey Results
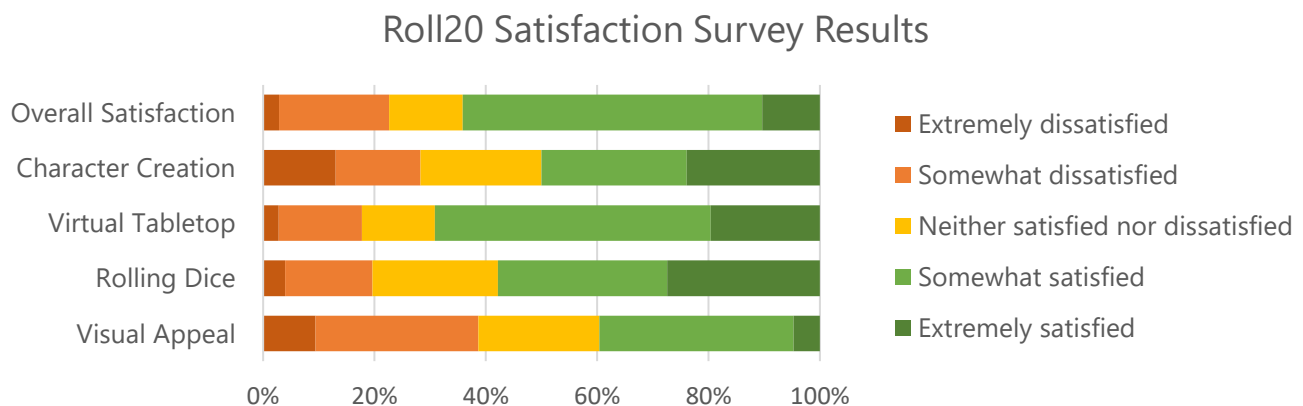
- 64% of users reported being somewhat or extremely satisfied with the overall experience of playing D&D using Roll20. Users with high overall satisfaction also reported being more likely to recommend Roll20 to others.
- The virtual tabletop tool, which includes the map and token features, received the highest score, with 69% of users being satisfied with their experience.
- Character creation, rolling dice, and visual appeal are the three areas where users are the least satisfied.
- Visual appeal has the lowest score; only 40% of users rated Roll20 as visually appealing.
- The survey also revealed that 51% of Roll20 users also use D&D Beyond, which is best known for its attractive and user-friendly character creation tool.

Based on these findings, I recommend focusing on improving character creation, dice rolling, and visual appeal. These areas have the most room for improvement and are critical for moving the needle on overall user satisfaction.

Personas

There are many types of D&D players, ranging from advanced veterans to first time players. I've identified two primary personas that help capture this diversity and inform design requirements.

Skylar the Storyteller

Background

Skylar is a D&D veteran who loves creating original stories and spending time with friends. He plays the role of Dungeon Master.
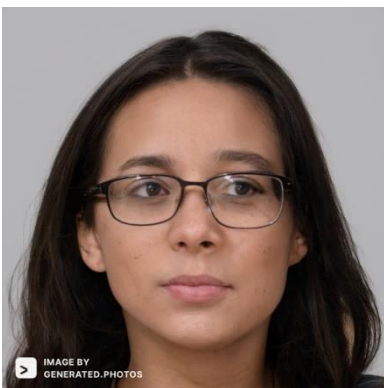
Goals and Objectives

- Becoming totally immersed in the game.
- Creating cherished memories that will last a lifetime.
- Keeping players "in the moment" and actively engaged.
- Saving time and energy while preparing between sessions.

Frustrations

- Tools are confusing or require extra steps to use.
- Interrupting the flow of play to help players troubleshoot tools.

Role Complexity: High
Game Knowledge: High
Time Investment: Very High

Bailey the Beginner

Background

Bailey is a D&D novice who is playing as her first character. She's still learning the ropes and doesn't have much time between sessions.

Goals and Objectives

- Trying new experiences with friends.
- Learning the rules as she goes.
- Keeping things simple and straightforward.
- Making decisions quickly.

Frustrations

- Feeling overwhelmed by too many options.
- Difficulty understanding the current situation.
- Feeling like a burden while trying to learn the rules.

Role Complexity: Low
Game Knowledge: Low
Time Investment: Very Low

User Journey Map

I created a User Journey Map to analyze one of the most common scenarios in D&D: player combat.

User Journey Map: Player Combat

Scenario: Bailey the Beginner needs to take a turn during a combat encounter.

Objectives: Help the party survive, optimize her turn, and make decisions quickly.

Expectations: Clear information about the encounter and her character's options.

Step 1: Analyze the Situation

- Scan the map to locate allies, enemies, and environmental factors.
- Review ongoing status effects.
- Identify threats and opportunities.

🤔 "Which goblin already took damage?"

🤔 "Does anybody need healing?"

69% of users are satisfied with the virtual tabletop experience.

Step 2: Compare Options

- Scan a list of possible actions.
- Look up details about unfamiliar options like new spells.
- Plan a movement path.

😅 "Let me look something up really quick…"

🤯 "So many choices! So little time!"

Players who use Roll20's character sheet find it easy to review and perform standard tasks but have difficulty adding custom options.

Step 3: Declare Actions

- Declare the chosen action(s).
- Look up relevant bonuses and details.
- Roll the action dice and add bonuses.
- Consult with the Dungeon Master to see if the action is successful.

😟 "I sure hope this works!"

58% of users are satisfied with Roll20's dice rolling tools.

Step 4: Resolve Effects

- Dungeon Master narrates the outcome
- Roll the effect dice and add bonuses
- Dungeon Master applies any damage or special effects.

🤩 "Yes! It worked!"

😭 "Uh oh. I think I just made it angry!"

24% of users report having purchased D&D rulebooks in the Roll20 marketplace.

Dice Roller

Dice rolling is a key part of the D&D experience. It's a common task that should be easy and intuitive.

- For some players, rolling dice is one of the highlights of the game. We want players to be able to recreate that experience when using Roll20.
- Dice rolling is currently the tool within Roll20 with the lowest satisfaction rating, meaning there's a lot of room for improvement.

Many users are unaware that Roll20 even has a Dice Roller. It's hidden in the general toolbar and disappears automatically.

Users found the interface confusing and difficult to use. Users often resorted to using chat commands (e.g., "/roll 1d20") or macros instead of using the Dice Roller.

The animated dice in Roll20 (left) are visually jarring and feel unpolished. In contrast, competitor products (right) feature dice that look and move like the real deal.

I recommend a complete redesign of the Dice Roller to make it discoverable, intuitive, convenient, and attractive. The control itself should be visible by default but allow collapsing and/or resizing so it doesn't get in the way. The control should be clearly understandable and feature large click targets so it's quick and easy to use. Finally, the animated dice should be updated to look more realistic and visually impressive, giving users a sense of satisfaction when they make a roll.

Character Creation

Character creation is a central aspect of the D&D experience and is essential to user satisfaction.

- Players who build their characters within Roll20 can take advantage of its many integrated features, leading to a smooth gameplay experience.

- Character creation is also an important revenue stream, as groups must purchase licensed D&D content in order to use it.

- However, only 50% of users reported being satisfied with the character creation experience.

- Meanwhile, 51% of users reported using D&D Beyond, which is best known for its robust character creation tool.

*Character creation wizard*   *Character sheet*

To improve user satisfaction with character tools, I am proposing additional research and design activities to pinpoint and fix the issues that are causing users to choose non-integrated alternatives. In addition, the character sheet should be updated to be more aesthetically pleasing in keeping with other proposed visual style changes.

Visual Style: Current State

Users described the overall visual style of Roll20 as simple and barebones. Only 40% of users rated the user interface as visually appealing. Barebones aesthetics can create a negative impression among new users and can create a sense of stagnation among existing users.

"There's not really anything that makes it look particularly good, but there's also nothing that makes it look particularly bad."
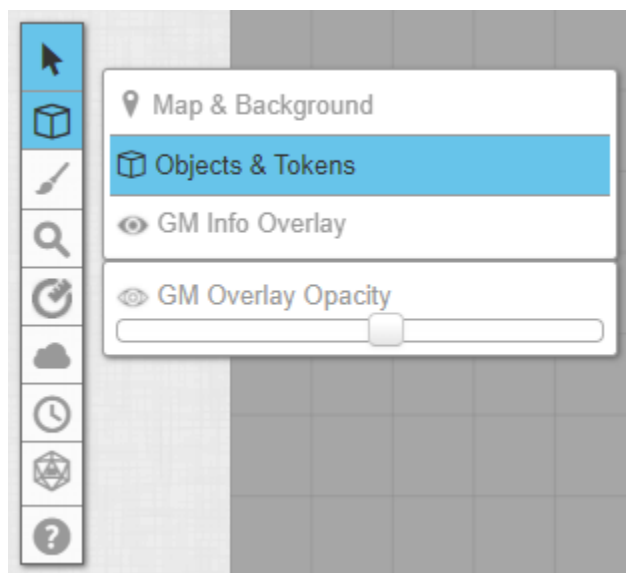
Black, white, and gray colors dominate the user interface, creating an aesthetic that is clean but boring to look at.

User interface elements have no sense of connection to the D&D universe, nor do they connect to the brand identity of Roll20.

Icons are small, difficult to read, and uninspired.

Graphics are unattractive or even unpolished.

Visual Style: Proposed Changes

I recommend a complete redesign of Roll20's visual styles, including support for multiple themes.

New default theme

New users will generally form first impressions based on a product's default theme, and some experienced users simply never change their settings. For these reasons, I recommend a significant redesign for Roll20's default theme to be more modern, vibrant, and polished.

Multiple theme options

When it comes to visual styles, there's no such thing as "one size fits all."

- Users who prefer the classic Roll20 theme may prefer to switch back to it.
- Users who play in a dark environment or have photophobia may prefer a "dark mode" theme.
- Theme support allows the possibility of releasing different themes for different game systems, matching the colors and styles that make sense for each game.
- Premium themes could be sold via the Roll20 Marketplace.

Larger, more readable icons

Increasing the size of the smallest icons will allow icons to be more detailed and easier to read. This will also require certain click targets to be larger, which has the added benefit of making Roll20's interface easier to use and more accessible.

A touch of fantasy

Although Roll20 supports many games with a wide variety of settings, most campaigns are in a fantasy setting. Including themes with fantasy-inspired artwork and details can help create a more immersive gameplay experience.

Accessibility

Currently, some users may be unable to effectively use Roll20 due to accessibility issues. To make Roll20's products as inclusive and usable as possible, and to conform with industry standards (WCAG 2.1 Level AA), I recommend addressing the following areas:

- **Color contrast**
  - To ensure text can be read clearly, text should have at least a 4.5:1 text-to-background contrast ratio. This includes hyperlinks, which are currently below the threshold.
- **Alternative text**
  - Images and icons should be coded with appropriate "alternative text" to ensure screen reader users can perceive and understand them.
- **Keyboard-only access**
  - Users should be able to navigate and operate Roll20 using only a keyboard. This is critical for screen reader users and users with physical impairments. It is also beneficial for some power users.
  - All interactive elements, including buttons, should have clearly visible focus indicators. The standard recommendation is displaying a high contrast outline color around the element when it has keyboard focus.
- **Link language**
  - Roll20's main page contains several links with the text "Read More." While sighted users can quickly understand the purposes of the links based on spatial arrangement, screen reader users need more context.
  - Links should be renamed to be more descriptive. The text itself can be extended to include the name of the article or page being linked to.

Addressing these accessibility issues will make a significant difference for users who have difficulty using Roll20. Going forward, accessibility requirements should be integrated into the standard development process at all stages. By making Roll20's products more accessible, we can ensure that all gamers are included in the vision of bringing gamers together.