Visualizing Progression in EVE Online

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1. Introduction

EVE Online is a massive multiplayer online game celebrating its 10th anniversary this year. CCP wanted to rethink how players plan and execute the progression path of their characters, as well as define more clearly the attributes and roles of the hundreds of ships that exist in the game. CCP developed a visualization tree to show players their mark on the EVE Universe in terms of piloting and mastering of ships using their UI framework, Carbon to move the Player Experience of EVE into the next decade while making sure the Art Direction and technical aspects were being considered along the way.

2. Exposition

When CCP set out to fulfill their goal of making ship progression paths and skill planning clearer in EVE Online, it was quickly realized that simply improving the UI would only solve a portion of that problem, the actual progression system had to be iterated on as well. The skill requirements for ships were changed considerably as well as the skill grouping itself. Required skills for ships got categorized into two main groups, one for skills that affected piloting abilities and the other for how well a pilot could use the ship by fitting it with modules. Research and focus group testing had given clear indications that new players were having a hard time learning how to utilize each ship as well as the core roles for ship groups. EVE Online currently has more than 300 different ship classes for players to pilot.

2.1 Elaboration

With the goal of explaining the main differences between races, ship groups and the ships themselves, CCP is currently designing a new system which will guide the user to the high level information needed to find the right ship for any given task a user wants to take on. The new feature which, codenamed ISIS (Interbus Ship Identification System)will not compete with or replace any other feature in the game but rather introduce a new and more streamlined way to choose and compare ships to use or progress towards. Early on in the design phase it was decided to come up with new iconography for ship groups and ship progression to give players a quick way to navigate a visualization tree. All ship groups in the game got new icons as well as the two main skill groups for ships progression, Piloting and Mastery.

3. Results

A fully functional, albeit not fully polished, ship browsing user interface, using in-house developed Carbon UI Framework and Trinity rendering technology has been implemented successfully, allowing us to evaluate in a much more meaningful way than before what we do and do not want the final feature to look and feel like. The prototype was designed as a full 3D scene entailing that most of the entities used were objects positioned in 3D space. The various primitives used include sprite billboards, ship models (both fully textured and with a hologram shader), projected fixed width lines as well as both 2D and 3D UI components. The implementation was architecture in such a way that the data layer is completely independent of the user interface layer, so even though the front end of the final product would go through massive redesign, the data layer is still usable. During prototyping we identified additional features which could be introduced in steps post release like a comparison tool, social sharing and statistic visualization tools. The project is currently set to move into full production in the coming months.

4. Conclusions

One of the major things we wanted to evaluate were the pros and cons of adding the third dimension to your typical game progression tree. Doing so made the endeavor considerably more technically challenging, but proved to be well technically feasibly by using Carbon UI framework and the Trinity rendering engine. A progress tree implemented as a 3D scene made it trivial to utilize the large amount of ship model assets we have generated through the years. Another benefit realized was that a sense of scale between ships was almost automatically achieved. On the con side, a three dimensional ship tree can be considerably more complicated for a user to browse than a flat one. Camera transitions required switching between ships and sub-trees can end up leaving a user feeling lost. Constraining camera movement was found necessary in many places as too much freedom would make it way too easy for users to get lost. One of the biggest usability concern encountered was the fact that smooth camera transitions, by nature, take up too much time when compared to common two dimensional approaches such as tab switching. By implementing a prototype within the same environment as the final product will eventually be implemented in, a lot of the same code can be used, as is, in the final product. The most essential step in the development process and also the most challenging was the collaboration between Art and Design where a certain visual direction had to be catered to while making sure user-centered design aspects where being considered. The process was an important learning phase for both disciplines. The development process was longer than initially anticipated due to the additional time spent on iterating on the visual style and iterating on the feature after getting valuable feedback from user testing sessions.