

Information Organization System Evaluation

Animal Crossing: New Horizon

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Nintendo's newest entry in the popular Animal Crossing series was always going to be a massive hit, but by being released coincidentally near the start of the COVID-19 pandemic, *Animal Crossing: New Horizons* (ACNH) became a full-fledged cultural phenomenon. The non-violent and slow-paced game provided a way for gamers to occupy their time in a creative way at a time when the outside world was increasingly stressful, and the online play aspects allowed for social interaction without risk of contagion.

The primary action of the game is customizing your character's island home. You can upgrade the resident services office, recruit neighbors, build shops, and - most importantly - decorate your house and the island itself. All manner of decorative items are available, from flowers and trees to lighthouses and giant robot statues. As is the case in many games, an essential aspect of playing ACNH is managing your character's burgeoning inventory of furniture, clothing, decorations and building materials. The inventory system needs to be simple enough for a child, but should be effective enough for expert gamers looking to get that coveted 5-star rating from Isabelle's island evaluation task force.

There are actually two closely-related inventory systems in ACNH. Your **Pockets** are your character's personal inventory, carried with them at all times. Your **Storage** is a

much larger inventory, but is accessible only when your character is within their house.

A third organizational system is the **Crafting** interface for organizing and utilizing crafting recipes. The three systems operate in tandem, but have markedly different organizational systems, so this analysis will consider them all.

Pockets



With a maximum capacity of 20 items (upgradeable to 40), your Pockets are quite limited, especially since most players will want to carry 6-8 tools in their Pockets at all times. The interface for Pockets is simple, and can be accessed at any time. A simple grid pops up over the player's head, containing the grid of currently held items, as well as a button to access the clothing your character is currently wearing and a display showing your character's current supply of Bells (the in-game currency). All inventory items in Pockets are represented with icons. Some items have an individual

icon, like tools (like your shovel and ladder), building materials (like stone, the various varieties of wood, gold nuggets and so on), plants, bugs, and fish. Clothing items have different icons depending on the type of clothing (shirts, hats, shoes, etc), but all furniture and decorations all share a single icon. The name of each item is displayed above it when selected, so there is differentiation of all these similar items, but not at a glance.

There is no automated way to filter, sort, or otherwise manage the items in Pockets; however, the player can manually sort items in a drag-and-drop manner, one at a time. Similarly to the way icons are handled, some items will stack in Pockets, while others will not. There are also different maximum numbers for different items. Weeds will accommodate up to 99 items in a stack, most other items will stack up to 30, but fruit only stack up to 10. Other items do not stack at all, like flowers, bugs, and fish. When items are added to Pockets, they autofill any empty spaces in the grid, starting in the upper left, moving along the first row and then to the second row. Incomplete stacks will fill before items take up additional spaces.

Storage



As soon as the player completes the initial upgrade from tent to house, the player will be able to add items to Storage. Also accessible via a single button, Storage presents quite differently than Pockets. Taking up the entire screen, Storage consists of a similar grid of items, this time extending down beyond the edge of the screen, requiring the player to scroll to see all of their items. This can be a significant scroll, as Storage can be upgraded from 80 spaces to a maximum of 1,600 spaces. A navigational affordance is provided for fast scrolling by using a secondary joystick. In Storage, items are shown as a thumbnail image of the individual item, depicted exactly as the item appears once it is placed in the game.

Prominent in the Storage display is the filtering tool available to the player. Across the top of the screen is a set of icons representing a set of categories, and by cycling through these icons, the player can limit their view to only the items in Storage

within each category. In addition to the Everything category, the available filters are Housewares, Miscellaneous, Wall-mounted, Wallpaper, Floors, Rugs, Fashion items, Creatures, and Other. Given the specificity of the other categories, the Other category may be overly broad, given that all building and crafting materials, as well as tools, fall into this category. Storage also offers a sorting mechanism. The order items are listed in can cycle through Alphabetical (ascending order by item name), Time (from most recent to earliest, when the item was initially acquired), and Type (grouped according to the item's general category). There is no manual sorting or organizing option available in Storage.

In addition to the regular interface, it is also possible to access Storage through two other methods. A streamlined “decorating mode” is available while inside your home, enabling easy placement and arrangement of furniture and decorations, and it is possible to access storage within this mode, to simplify moving items into and out of storage. The same filtering and sorting features are available, in a minimized and simplified interface. It is also possible to access a limited view of storage through the “dressing mode” interface. By interacting with a dresser or other openable device (including, strangely, refrigerators), the player is presented with only the clothing items that the player currently has in Storage and can easily swap them on and off. Clothing is also the only loophole that allows for external access to Storage. When purchasing items at the fashion boutique on the island, the player can choose to have items sent directly to storage. This option is not available in the island’s general store where players can purchase decorative items, tools and more.

Crafting



The other primary information organization system in ACNH is the Crafting interface. When the player interacts with a workbench, they are offered the ability to craft items from various components. Over the course of the game, players learn dozens of “DIY recipes” that they can craft, and the crafting interface presents the full list of recipes as cards that display not only a thumbnail image of the item to be crafted, but also several pieces of “metadata” about that recipe. A checkmark indicates items that the player has crafted in the past, and two icons - a tote bag or a box - indicate if the player currently has that item in Pockets or Storage. A paintbrush denotes items that can be customized with a range of colors or patterns, and a large “Craftable” sticker indicates the items that the player currently is holding all the ingredients for.

Much like Storage, the cards in Crafting can be filtered by category. Slightly different from the options in Storage, the Crafting categories are Tools, Housewares,

Miscellaneous, Wall-mounted, Wallpaper/Floors/Rugs, Accessories, Other, Craftable, Seasonal Recipes, and Favorites. Craftable only includes items that the player has the ingredients for, and Favorites is a selection of any recipes that have previously been tagged as favorites by the player. There is no manual sorting feature available in Crafting, though the favoriting mechanism provides a rudimentary way to isolate a specific set of recipes. A sorting system is also available in Crafting, with a menu of options that is functionally similar to the sorting feature in Storage, though the criteria have slightly different names: Alphabetical, Order Obtained and Series instead of Alphabetical, Time, and Type.

Selecting a recipe card from the list opens up a more detailed view of the recipe. The same metadata is available, now enhanced with the quantity of the selected item in Pockets and Storage, as well as the size of the completed object and the full list of ingredients needed to craft it.

Evaluation

It was a daunting challenge that was presented to designers of the ACNH information organization system. Create a system that is simple enough to be used by both children and adults, yet is robust enough to usefully organize hundreds if not thousands of items in a huge range of categories, as well as the components and ingredients to build them. Unfortunately, some of the decisions and implementations put into place in the individual seem to complicate the overall information organization system in the game.

One way to simplify the overall system would be to make the systems and features available to the user more consistent across all interfaces. An obvious and simple example of this would be the sorting options across the Storage and Crafting interfaces. Giving functionality identical criteria different names seems designed to increase complexity. A more nuanced example would be the vast differences in the way the player interacts with Pockets as opposed to Storage. It is true that these different inventory systems have different conceptual uses - Pockets as short-term working inventory, with Storage a more permanent long-term home - but allowing more similarities across these two systems would make them seem more unified in the player's mind.

From a gameplay (user experience) perspective, one concept that could be brought from Storage/Crafting to the Pockets interface would be the filtering system. Often in the course of the game, it would be useful to limit your view of what is in Pockets, to make selling or trading certain types of items more efficient. It is understandable that given the limited capacity of Pockets, it would be potentially confusing to hide all the filtered-out items from view entirely, but the game already offers certain circumstances where unselectable items in Pockets are greyed-out. This could be a good system to use in filtering Pockets - grey-out other types of items to highlight a certain category without completely obscuring how full Pockets are.

The positive interpretation of the differing systems presented here is that the differences allow the player to keep the multiple systems separate in their mind during

play. Since Pockets and Storage are used in different ways, their interfaces should be different, in the same way that a table of contents and an index should be different.

It's hard to argue that the information organization system that underpins one of the most successful video games of all time is lacking, but it is possible that a better designed system would provide a more efficient and fun experience for gamers.

Image Credits

Pockets & Storage

<https://animalcrossingworld.com/guides/new-horizons/how-to-upgrade-increase-your-inventory-space/>

Crafting

<https://holdtoreset.com/animal-crossing-new-horizons-how-to-craft-log-stakes/>