

Introduction

Obviously, we want Habitat to be both a popular and a financial success. Speaking broadly, this means that the practical objectives for both the Habitat world creation effort and subsequent world operations are to:

- 1) Maximize the entertainment value of the experience for the players.
- 2) Minimize the labor requirements for day-to-day management.
- 3) Consistent with the above two goals, minimize the computer overhead required to support the system.

Alas, these requirements are a bit too abstract for direct application. This document will present some objectives that are somewhat more concrete (i.e., more useful) along with the beginnings of a plan for meeting them.

At the most superficial level, creating the Habitat world consists of designing a bunch of regions and generating the database entries that describe them. However, although our plan must incorporate this activity, it must also take into account the broader context of the system. The Habitat world is not just a collection of database entries. It is also a society made up of real human beings. Our plan must account for the shaping of this society in addition to the shaping of the physical environment in which it resides.

Nevertheless, it is useful to consider for a moment the problem of region design, since regions are the foundation of the Habitat world. Given the present state of our world construction toolkit, region creation is a bottleneck in any effort to expand the size of the existing universe. Region creation is not only a time consuming and somewhat perilous activity, but also requires specialized software and hardware which are only available here at Lucasfilm. In the long run, we must make the tools both safer and more available. However, for the present we need to have a strategy that minimizes region creation, while recognizing that we can never be completely free of the need for it. We should try to develop activities which require small numbers of regions, rather than demanding enormous new tracts of territory.

Another consideration that constrains any design is the amount of ongoing support that will be required. Best are things which can run themselves. Second best are things that can be run by volunteer labor. Worst are things that require our own time and attention. A major element of the strategy that we will follow is to try to build a community. If we succeed, then many of the support issues will be taken care of automatically or semi-automatically by the players themselves. Part of our mission is to establish an environment that encourages much of the support infrastructure to emerge spontaneously.

Habitat Communities

Our foundation for Habitat society is the idea of community. A community is a group of avatars bound together by geography and some degree of commonality of belief about the kind of place they'd like Habitat to be. A community provides order to many otherwise disorderly aspects of the Habitat world.

A community consists of a collection of regions and a collection of avatars. The regions are the territory that define the community's location and extent. These regions will generally be contiguous, though there is no technical reason for this constraint to be built in. The avatars are the inhabitants of the community. Their behavior defines the community's character. In particular, the inhabitants are the ones who decide what the law of the land is to be and how it will be enforced within the community's boundaries.

A community may be started either by the system operators (i.e., The Oracle) or by the players themselves. The first batch of towns will be established by the system, and I expect that these will become the main inhabited areas of the Habitat world. However, I also expect that there will be an ever increasing number of avatar-homesteaded splinter communities as the system matures.

General Principles of Communities

In order to make communities practical, we need to establish a few basic conventions. A "community" is defined as a collection of regions. Anyone whose turf is among these regions is a "citizen". Some communities may choose to confer citizenship on particular non-resident avatars, but that is a civil matter and doesn't effect the mechanism we are describing here. The regions of a community will generally be bounded by a "perimeter". The perimeter is a set of regions around the edges of the community's regular regions. It is not possible to enter or leave the community without passing through one of these perimeter regions (except by long-distance teleport or magic). The perimeter allows us to establish a border and thereby control passage into and out of the community. By this means we can set up protected areas (such as the White Sands object test range). More importantly, it can provide the citizens of a community with the tool of banishment to help them enforce their laws.

A community's perimeter need not be large. For example, even though Populopolis consists of nearly 1000 regions right now (and growing), as the city is currently laid out the perimeter is just two regions: the places where Woods Rd heads out into the countryside to the north and south.

Within the regions of a community, the community itself determines what the laws and rules are to be, subject only to the constraints of the Terms of Service and external (i.e., "real world") laws and rules. Of course, the laws of a community are also limited in a practical sense by what is possible within Habitat. In particular, responsibility for policing the community and enforcing the laws is vested in the citizens themselves. We will not enforce their laws for them. We will provide a set of tools that can be used to aid in enforcement, but it is up to the players to use them or not as they see fit. Also, the mechanism by which the laws (and rulers, if any) are determined is also up to the citizens (this means that all possible forms of government are possible, from democracy to totalitarian dictatorship to anarchy). The only intervention in this process which we will make is to insist that each community place a notice in its perimeter regions stating the basic rules and laws that apply inside.

We will also require that no community have the power to hold an avatar inside its perimeter against his will (i.e., anyone who wishes to leave a particular community may do so). Within this rule, communities are free to run their systems of justice as they wish. They may, for example, make entry into the community contingent on participation in the community's system of justice. A community *may* forcibly limit an avatar's movements so long as the avatar chooses to remain inside the community. In other words, you can throw somebody in jail, thereby removing him from the local society. For example, he might be presented with the choice between staying in jail (and thus in town), serving out his sentence and returning to normal life in the community, or leaving the community entirely, never allowed to return.

Default Communities

The initial communities established by the system will be vaguely democratic, with codes of law of the sort that Americans are used to. They will then be

free to evolve from there (though communities that drift too far from the mainstream may have to be taken off the list of places where new avatars are hatched). What follows will describe the sort of "default" communities that we will establish.

Politics

Offices such as Sheriff will be elected, at least in the beginning. The default Habitat community has little need for elected officials outside of the law enforcement sphere. However, people being what they are, it is likely that the inhabitants will want to be able to elect a mayor, town council, and the like. We therefor need a means of conducting elections. Our experience with the recent Sheriff's election in Populopolis gives us a good model, however.

Democracy requires more than just balloting. There also needs to be a process for determining who is eligible to vote and who has already voted, for determining what the candidates and the issues are going to be, and for determining when and where the election is to be held. There needs to be an information mechanism so that everyone knows that there is to be an election, when and where to go to vote, what the rules are, and so on. Furthermore, the "unofficial" informational elements of a proper campaign are probably desirable: press coverage, debates, advertising, public speeches, and so on.

For our Sheriff's election, most of the decisions regarding when, where, how and so on were made by us. Everyone currently in the world was eligible to vote, and the candidates chose themselves. In the future, the decisions will have to be made by officials of whatever passes for a community's government. They can decide among themselves using whatever procedure they care to agree upon.

We set up a polling place (for Populopolis only one was required) that was a region containing 3 magic push-buttons on the wall, one for each candidate, which were labeled with the candidates' names. It also contained a sign announcing the election and a plaque with detailed instructions. Pressing one of the buttons incremented a counter associated with that button and set a bit in the avatar record that prevented further voting. Secret ballots were automatic, as one's voting action was not broadcast to others in the region. At the end of the election, the counter on each button indicated the vote count for the associated candidate. We simply noted these counts and published them.

To make this mechanism available to the players directly, we need to provide them with some special capabilities: a way of setting the labels on the buttons (and of determining the number of buttons that will be placed on the ballot for a given election), a way of setting the sign and instructions in the polling region, a way of clearing the counters on the voting buttons, and a way of clearing the "has voted" bit associated with all eligible voter avatars. Also required is a way to turn the voting buttons on and off (so that the election can be conducted at controlled times) and a way of reading out the final results. All of these can be implemented with a few special magic items.

I would propose that for future elections we require voters to register. Registering simply requires going to a public registration place where there will be a magic button or lever that will clear the "has voted" bit (registration will be disabled while an election is in progress, of course). This mechanism allows us to avoid having to run any kind of global filter on the avatar database to mess with the voting control bit.

The conventional mechanisms of the Habitat press can be used for publicity and advertising. Candidates can hold their own campaign rallies, while the community can form a "League Of Avatar Voters" to conduct debates. Election officials will be responsible for distributing information about dates and procedures by informing the press and by placing notices on official public bulletin boards and the like.

Community Institutions

In addition to the legal and governmental institutions touched on above, other organizations are desirable for a community to really work as the sort of place that we want it to be in order to hold peoples' interest. In particular, we need communications and information distribution channels, economic entities, and recreational facilities.

The Press

One of the most important institutions of the community, as we have discovered, is the press. This is because much of the support that a player needs in order to cope successfully with the Habitat universe comes in the form of information. A regular news service is an invaluable way to keep people informed as to the goings on in a community. In the default communities the press will be a semi-official house organ. It carries not only the news and views provided by its editorial department, but also material provided by us, the system operators, for distribution to the avatar public. Default communities will always require at least one such officially connected publication, although additional competitive publications are certainly allowed (even encouraged).

One of the ways a community can drift away from the mainstream is to place controls on the press within it. Such communities might deliberate choose, for example, to isolate themselves from the system's official news sources. That is their choice. Such communities will probably have to be taken off the list of new avatar hatching sites, however.

To operate a publishing business is currently rather awkward, due to the limitations of the text interface that Habitat provides. Unfortunately, we do not have the memory space or the programmer time to implement any more sophisticated text editing capabilities in the C64 Habitat software. However, there are a few items which our experience publishing the Rant have taught us will be useful and which we intend to add at our first opportunity. The first of these is a copying machine. This is a device that makes duplicates of the text on a piece of paper. This is to reduce the amount of hand-transfer of written material that will be required in an editorial office.

An item that will be almost mandatory is a binding machine. This is a device which takes a collection of pieces of paper (and possibly books) and creates a new book/newspaper object with the combined text of the inputs. We currently do this by hand. We have the Rant editor place a series of pieces of paper into a predesignated container, and then we use our Stratus database manipulation utilities manually to extract the contents of these sheets of paper and incorporate them into a new document. It is a tedious and time consuming process ripe for automation. A useful companion to the binding machine would be a bursting machine, which performs the opposite function: takes a book or magazine and generates a bunch of sheets of paper with the individual pages. The burster is less important to have than the binding machine, however.

community activities
news and information
law and order
commerce
the oracle
puzzles and games
adventures, travel and exploration

Since we are trying to form a community, it may be useful to take the idea of community as our starting point for design, instead of trying to just create regions willy-nilly. A community consists of citizens and institutions, together with the physical plant that allows the institutions to have places to operate and the citizens places to live.

The institutions of a community serve to fill the needs of the members of the community. In order to design institutions for Habitat, we need to consider what the "needs" of Avatars are. As simulated creatures, Avatars have few if any true needs per se. However, the players behind the Avatars do have psychological needs and wants which they are trying to fill by playing Habitat -- it's the reason they're here in the first place. Thus, our design problem comes down to considering what we think the players' needs and wants are and then building the environment to satisfy them.

As I see it, these are the things that people are seeking:

- Social contact: companionship, friendship, group acceptance, and romance
- Identity: establishing a personal identity in terms of Avatar appearance, personality, and place
- Entertainment: adventure, puzzles, shows, games, literature
- Communications: both point-to-point and broadcast; both real-time and time-delayed
- Information: news about the people and events of Habitat, past, present and future
- Support: items, services and information that help people cope with the situations and problems they are confronted with in both Habitat and the real world as they try to fill the above needs

The above categories are not exclusive; the boundary lines between them are admittedly fuzzy. No item stands by itself, but is interpreted in the context of the whole system. For example, a newspaper provides both entertainment and news, while a club-house supports both social contact and the sense of personal identity.

Here is a list of real-world institutions that might be applicable to Habitat. This list is not intended to be exhaustive, nor do we necessarily intend to include ALL of these things. It is simply a starting point from which to figure out our plan.

Advertising agencies Credit card companies Matchmaking services

Amusement parks	Customs Bureaus	Military services
Appliance stores	Dancehalls	Movers
Arcades	Employment agencies	Night clubs
Architects	Equipment rental agencies	Parks
Art galleries and museums	Farms	Pawnshops
Banks	Fraternal organizations	Pharmacies
Bars	Furniture stores	Police
Beaches	Governments	Political parties
Better Business Bureau	Grocery stores	Printing companies
Bookstores	Hardware stores	Publishers
Building contractors and repair services	Highway Departments	Real estate brokers
Business and trade associations	Historical societies	Resorts
	History museums	Restaurants
	Hospitals and Clinics	Schools
Campgrounds	Hotels	Security services
Carnivals and fairs	Information booths	Stock, Mercantile and Commodities Exchanges
Chambers of Commerce	Insurance companies	
Churches and religious organizations	Intelligence agencies	Tax collectors
	Interior decorators	Theaters
Cleaning services	Jails	Tour guides
Clubs	Labor unions	Transportation services
Co-ops	Lawyers	Travel agencies
Consumer organizations	Legislatures	Urban planners
Convention centers	Libraries	Warehouses
Copying services	Magazines and newspapers	
Couriers	Manufacturers	

Of course, in addition to the above list there will likely be a number of institutions that are unique to Habitat, with few analogs in the real world.

While each of these institutions raises some unique issues of its own, there are some common questions that are applicable to all of them:

Is it needed? What purpose does it serve in Habitat? How does it fit in with the other institutions, existing or planned? How many people are needed to run it? Can it be automated or do actual people have to manage it? Who (if people are needed) will run it? How are those running it to be chosen? Do the people running it need to be system insiders or can anyone do it? How will it work in the Habitat universe? Can we make it fun or is it unavoidable drudgery? Are any special regions needed? Any new classes of objects? New types of magic? Special database filters or other support tools? How many institutions of this type are required or allowed? Who makes global decisions about this class of institutions? Who is subject to this institution? What are its powers, privileges and responsibilities? Are there any special rules we must impose to regulate it?