Section IIX: Sovereignty and Warring

Introduction:

The concepts of Sovereignty and Warring go hand in hand: the existence of the former implies the latter, as with the security of sovereignty comes richness in resources ripe for the taking. This is no different in Minecraft: especially in many typical RPG worlds which are *not* infinite to preserve both resources as well as map quality, space and resource exploitation become valuable commodities that are worth fighting over. To that end, the goal of this section is to outline the mechanics behind sovereignty, as well as outline several proposals in regards to how to allow players to contest between themselves for control of space and resources.

As with all other aspects of the plugin, three core concepts drive the design process behind this proposal: flexibility, responsiveness to player strategies, and player engagement.

Important Terms:

Sovereignty: control over a specific region, control of which is maintained by power

Power: A measure of sovereignty and building function that is comprised of two types

- Political Power: The ability to exert government/sovereignty over a region of land.
- Structural Integrity: The "power" of a specific building: in the default/recommended configuration, this will only apply to military buildings. This is covered in more detail in the warring subsection

Zone of Control: Grows relative to political power as well as population of a sovereign entity: a region that extends beyond just the borders of a specific building that determines how far a specific building can exert political power.

Sovereignty: How does it Work?

Note: All references to Power in this section refer to political power and not structural integrity

What is Sovereignty?

The concept of sovereignty holds two main parts to a player: holding sovereignty implies protection within those regions that one holds sovereignty over (hereafter referred to as "protection", and holding sovereignty ought to provide some sort of tangible benefit (hereafter referred to as "services") to holding said sovereignty. This section will primarily deal with the protection aspect (for more details on services, see Section VI: Region Effects, Services, and You), although the concepts are not necessarily mutually exclusive.

At its core, protection implies that services that the entity holding sovereignty (hereafter referred to as a town for our specific examples, although this extends far beyond that to any sovereignty holding entities) provides must be protected from destruction, and that they must be protected such that they can continue running/providing their benefits (after all, having a mine running doesn't mean much if the stuff getting mined keeps getting stolen away!). Beyond that, sovereignty ought to offer some measure of protection to its players as well in most typical use cases, but that is left as an implementation detail and left out of this specifications document (said protection can be provided as a service for instance).

Dynamic Borders

A core feature of Townships is the concept of dynamic borders: as a sovereign entity grows, it will naturally expand, and its borders should also grow to reflect that. To that end, borders in Townships will grow/ebb based on a sovereign entity's ability to control a region.

Consider a typical Minecraft town: with buildings of all different sizes strewn about roughly grouped together (Fig 31). The center of any town is some government building that provides a service: in this case that service being it radiates political power within its zone of control (Fig 32). In determining what is/is not within the political reach of a town, we then compare each building's zone of control and find what other buildings intersect with it. Thusly, to grow a town, one would simply add buildings along the border such that they are touching the existing zone of control, and the town would naturally expand to include that building.

In Figure 33, we can see an example of this, with successive iterations from the source of political power indicated in different colors to illustrate power propagation. Most importantly, note that there are three buildings which are colored red instead of the typical yellow: these three buildings are out of reach of any existing zone of control that *is* linked (by some chain of buildings) to the political power source, and as such *sovereignty does not extend to these colored regions*.

It is important to note, however, that the power projection of a power source does not extend infinitely: a power source starts at 100% power, but each successive iteration (color in Fig 33) decreases its projective capacity by 10% by default. By the time we reach the outer pink iteration, we would be at 40% power projection.

Extending Sovereignty and Power Projection

Obviously, we do not wish to permanently limit a town to only growing 10 iterations (at which point power projection hits 0% assuming a 10% drop per iteration): this is addressed by the concept of power extensors (typically military buildings in the default configuration). Power extensors cannot by themselves be a source of political power, but rather they serve as repeaters in a sense: while political power is applied to them they will propagate it and reset its strength to 100% (Fig 34).

Note: This renders it possible for one entity to extend their borders indefinitely: for this reason it is recommended that power extensors have some sort of upkeep attributed with them to limit their use (the default configuration uses high upkeep to address this, although some people may wish to mess with both the power repeat level (such that it doesn't repeat/propagate at 100%) or by increasing the upkeep costs as a factor of how many military buildings are already present)

Warring and Contesting Sovereignty

The opportunity to capture and wrest control over different sovereign regions is thus tied in to the power projection capability. To do this we introduce the concept of contestation power sources (used by camps and outposts in the default configuration): sources of political power that can be used to contest power projection. Unlike normal power sources, contestation power sources do not start out at 100% projection power, but rather at 30% (configurable). In addition, power projection does not decay per iteration (stays at 30%), and the distance covered is increased substantially. Finally, for every day a contesting power source stays active, its power increases by a configurable amount (5% by default) up

to a maximum amount (50% by default), so as to encourage players to place a priority on contesting new outposts rather than simply letting them be.

Decreasing Local Power Projection

It is important to note that the above power projection values are maximums: the individual power projection of a specific region may be less/decrease by other factors.

Decreasing the power projection can be accomplished through several actions:

- Player Deaths: by default this value is set to 1% per death for all regions that a player is a part of within a 48 block radius
- Explosive Detonations: By default 0.5%/detonation to all regions within the blast radius. This will also affect structural integrity
- Occupation: Persistent presence of a hostile force within a territory without eviction can gradually wear at power. By default, this is set to 1%/hour/person, but is reset when a person dies.

Power also regenerates: while the rate is variable depending on specific factors (such as what effects are currently affecting a certain building), the baseline is set to 5% per hour by default, up to the theoretical maximum power projection value.

Region Capture via Exceeding Local Power Projection

One method by which one can capture regions is then by simply having the power from a contestation power source exceed that of the region being captured by 20% (so regions at 10% power projection will always be vulnerable to capture using the default configuration). The reverse is true as well: the defending party can recapture a captured region by exceeding the currently existing power projection of the contesting power source by 20%.

Region Capture via Loss of Local Control

Another method by which one can capture regions is by causing a loss of local control: this may involve cutting off upkeep supplies to the nearest power extensor such that it is unable to continue functioning, or by simply destroying them outright (see next section). In either case, the loss of the power extensor's functionality would cause a significant drop in power projection in the region, or outright loss of power projection should they be spread out far enough.

Structural Integrity and Power Extensors

It is important to note that the above two methods create occupation regional permissions upon capture: that is to say doors/chests/other interactable blocks are unlocked but block editing/destruction is still not possible until such a time that the war is won via destruction of the opposing power source. Such is not the case in buildings with structural integrity.

Unlike regular regions, regions that possess the power extensor effect are not protected by political power but rather by structural integrity: an independent measure of power. This power shares the same power mechanics as political power but has a significantly higher base value (1500 in the default configuration), takes significantly more damage (10/player death and 30/explosion by default) and must be completely lowered to 0/cannot be captured. Upon hitting 100 structural integrity, the entire region is put into reinforcement mode for 24 hours, at which point afterwards if the defending party is unable to defend it is destroyed/cannot be restored (in that blocks will actually start blowing up). Additionally,

block protection rules might be slightly different depending on individual configuration even while the protection is active (one might, for instance, want to make walls accessible to TNT).

It is important to note that while all power extensors rely on structural integrity rather than political power, it is not the case that all regions that rely on structural integrity are power extensors. One use case that comes to mind would be walls: they should still be destructible independent of political power (otherwise we get people turtling), whereby a wall cannot be captured but it can eventually be worn down without removing a regions influence and destroyed.

Finally, it should be noted that it must be made possible for players to contest establishment of a new power extensor (after all, what's to stop people from flooding the area with new ones after one goes down?). To that end, power extensors do not become active for a period of 12 hours after it is first created in the default configuration and are still subject to immediate destruction without a reinforcement period during that time (ideally, one should also make buildings that have these effects extremely expensive to create to make the decision on where/when to place one extremely important. By default configuration, the default structure that performs this role is the barracks.).

Winning a War: The Lifecycle of a War Declaration

A war declaration triggers a warring declaration period of exactly 24 hours. During said 24 hours, players would ideally begin making preparations (finding fellow members, telling them when to come online, setting up defenses for the defending party, setting up an outpost/camp for the offensive party, as well as logistics for both sides). After said 24 hours elapse, unrestricted warring may commence between two parties, with land contesting working as described above.

A war declaration has two states: mutual and one-sided. In mutual war, there is no upkeep costs involved with the war declaration. In one-sided war (whereby one of the two parties has not consented to a war), such is not the case, and the aggressor party must pay an upkeep amount every week to continue the war (this amount is dependent upon the relative number of members/strength of the two parties).

A war can end in one of three ways: a peace agreement, the lack of one side paying the upkeep costs, or the destruction of the opponent's power source. Upon war ending, a 24 hour pending period is put in effect beyond which fighting will no longer be allowed outside of that conforming with the rules of peacetime (See: Section VII: Advanced Diplomacy). It is important to note that should one side still possess territory of the other, this land will not be returned in the default configuration (although this setting can be changed!), but rather contesting power sources will be left as is. This can still lead to the loss of territory/exchange of territory after the war ends, provided one side's power projection is enough to overrun that of the other. A complete destruction of the opposing power source poses no such problems, the conqueror can elect to set up their own new power source and continue on their merry way: this will result in full control of all relevant regions as per the normal rules of sovereignty expansion as covered earlier in this section.

Referenced Figures

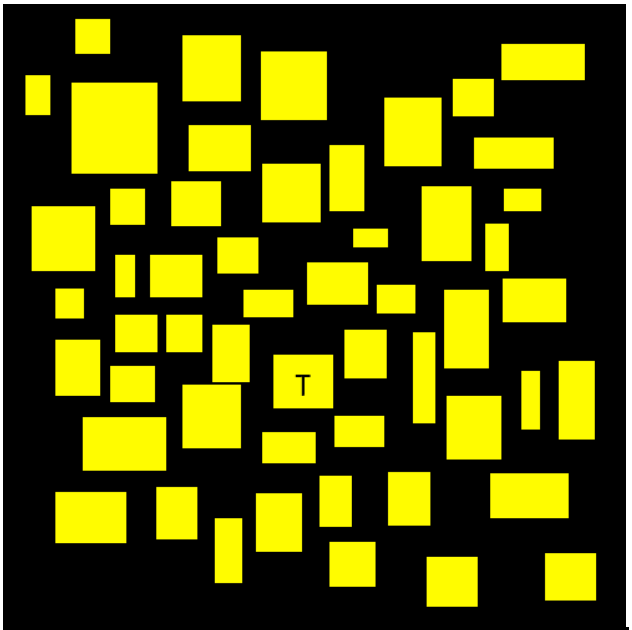

Figure 31: A typical Minecraft town.

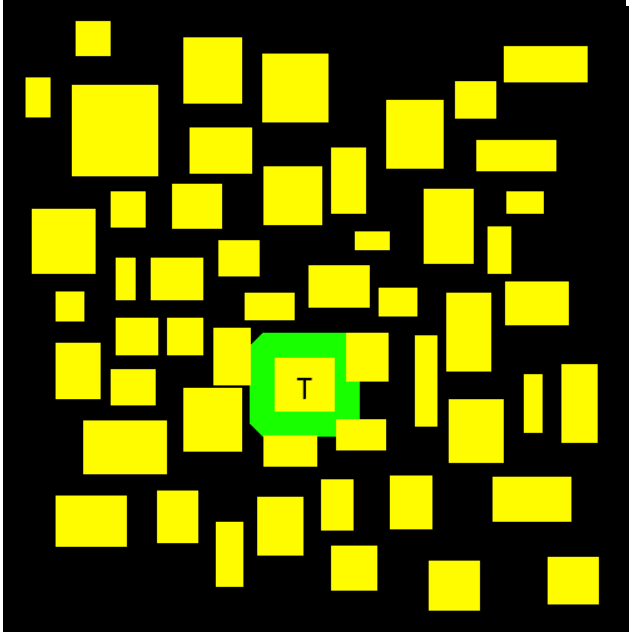

Figure 32: Zone of Control of a single building

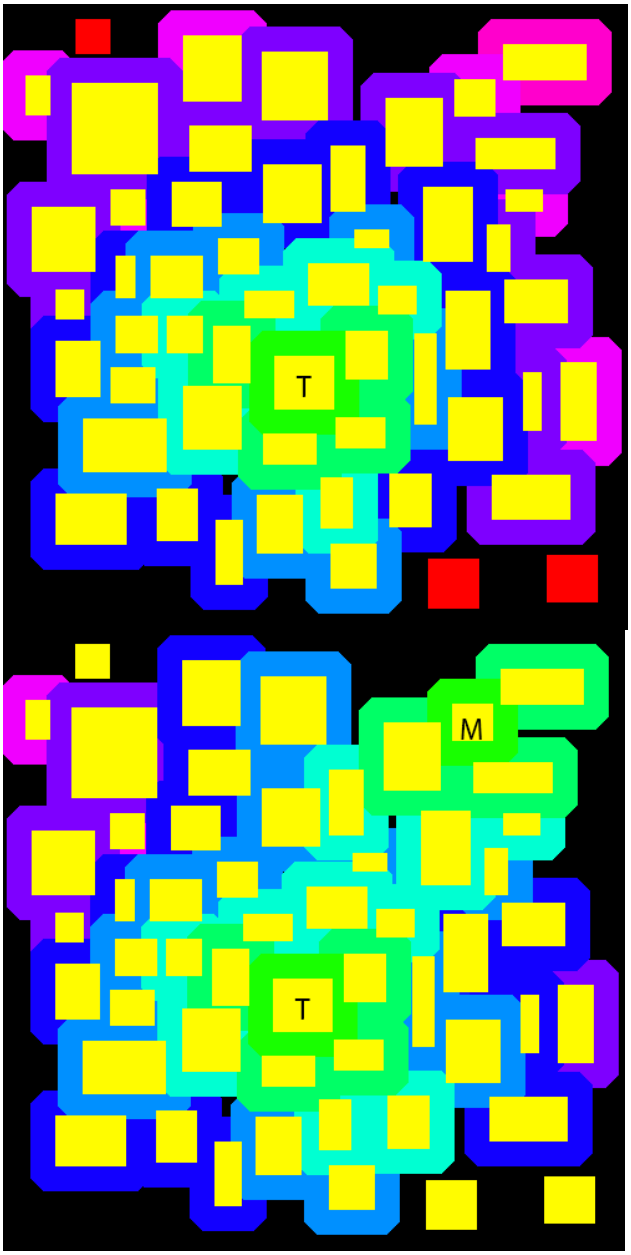

Figure 33: Successive Iterations of Zone of Control Growth that illustrates power projection loss (10% per color change by default)

Figure 34: Effect of adding a power extensor on power projection