

I'm beginning a series of posts about my most recent trip to Austin. The trip was quite eventful and there has been a ton of progress in a variety of areas. Rather than try to cover everything in one big post, I thought I'd break it up a bit... Today's post concerns a rather eventful visit to Han Solo's homeworld...

### **Corellian Ménagerie**

I'm standing in a beautiful field on Corellia. Wildflowers and tall golden grass grow at my feet, the sky above is calm and blue, and in the distance I can see the edge of a green forest. I decide to explore the idyllic landscape a bit, heading towards the nearest stand of trees. As I move forward, however, I spot a quick, furtive movement – something small darts out of the grass, and then retreats again. Cautiously, I creep towards the foliage: another movement, followed by a third, and fourth... Finally, I'm close enough to identify dozens of small, furry creatures running through the grass. They look like the Star Wars equivalent of cute bunny rabbits.

When I get closer, the "bunnies" dart away. In a small pack, they head towards a depression in the ground a few meters away. Perhaps it's their den... I decide to leave these bunnies alone and start towards the forest again.

Before I take ten steps, a decidedly more dangerous looking creature emerges from the forest. I backpedal. The beast stands well over two meters tall and looks like a cross between an ostrich and a dragon. It has clawed feet, a pair of large, leathery wings, and a small head atop a long, sinuous neck. It's the hooked beak and razor-sharp talons that really get me worried, though – I'm unarmed and just wearing a flimsy flight suit, so I'd likely become this horror's next meal if it came to combat. Luckily, the monster takes up residence in a field at the edge of the forest. Occasionally, it flaps its wings and starts to run about wildly, but it never comes directly towards me. Breathing a sigh of relief, I turn in the opposite direction...

And see about six or seven animals milling about on a small hill. Some of the animals are easily recognizable as falumpasets – large beasts of burden used by the Gungans to pull their wagons. Knowing that falumpasets are ill-tempered but not particularly dangerous, I decide to get a closer look at the herd.

When I close in, I see that the falumpasets aren't alone. There's another four-legged animal – this one with armored plates along its back – among the herd. This new creature look a bit more dangerous, but I continue on my way regardless. The herd notices my approach and begins to wander down the hill, keeping a comfortable distance between us. That leaves the hill empty, so I climb to the top in the hopes of getting a better view of the surrounding terrain.

I don't have time to enjoy the view. Just beyond the hill is a familiar, bipedal giant... Dripping saliva, a massive rancor stomps its way towards me. The hill that once seemed the perfect observation deck is now a dinner plate...

This is when I realize I don't have much to lose. I might as well charge the rancor and see what happens. As I race towards the creature, it suddenly turns tail to flee! Emboldened by my success, I follow the rancor, harassing it by sticking close to its heels. The rancor puts up with this treatment for about fifteen meters, and then wheels around and takes a swing...

### **Looking Behind the Curtain**

What I've described above is really an AI demo conducted by Senior Designer **Nick Newhard** during my trip to Austin (replace "I" and "me" with "Nick" for a more accurate account). The demo, which showcases work completed by Nick and Programmer Acy Stapp, was designed to show a number of creatures in an environment reacting to a player character according to a predetermined AI script. In this case, *all of the creatures shared the same AI* - a generic script that includes some common behaviors and emotions. This particular AI would probably be used for a relatively "middle of the road" creature, like a kaadu (the Gungan mounts) – something that's not particularly aggressive, but able to defend itself if aggravated or attacked. The AI script allows a creature to transition from a default "calm" setting through a series of emotions before finally reaching "angry" (or "really angry").

The bunnies in the description above started out calm and then became nervous as I approached. When I closed within a certain range, they became fearful, which caused them to flee for a location they identified as "home" (the ditch).

The winged monster was spawned on the fly and was loitering (another AI behavior) near an area that it identified as its home. While loitering, it alternated between some idle animations and actually moving in randomly determined directions, although it never strayed too far from its "loiter range."

The falumpasets and other animals on the hill were calm until I neared, then they became nervous and began moving away from me. Had I closed in on the herd, invading their personal space, the falumpasets would have fled at full-speed (as the bunnies did).

The rancor was just wandering around ("loitering") when I spotted it. As I neared it, the creature became fearful (again, it was using the same AI as all the other creatures – in this example, it behaved just like the bunnies initially). But, as I hounded the poor rancor, it became increasingly annoyed. I pestered the rancor until it became enraged, at which point it turned to attack. If I possessed a weapon, I could have attacked the rancor to get it angry faster.

When we went back to the demo, I tried out the AI for myself, approaching the bunnies in their den. Because I was invading their home turf, they became angry and attacked. This same mechanic would hold true for any of the creatures in the demo because the AI was set to automatically transition the creature to "angry" if its "home" was threatened.

For the benefit of the demo, thought bubbles actually appeared above each creature's head to indicate its emotional state ("I am afraid of Shug Ninx..." or "I am angry at Shug Ninx...").

Obviously, when the game ships, each creature in the scenario described above won't behave in exactly the same way. We modify a creature's AI by tweaking a series of parameters and settings, including how quickly the creature gets mad, nervous, or fearful. We can also adjust its loiter range so that some creatures wander farther than others. Obviously, a little bunny is going to be skittish, will likely stay close to its den, and will flee to safety whenever anything gets too close; it's also not likely to fight to defend its den. A rancor is probably going to be at the other end of the scale – always angry and ready to attack anything that it finds within its large "hunting area" (just a really big loiter range).

### **Creature Feature**

So, what were the creatures I didn't identify and where will they be found?

-The bunnies are actually called "gnorts." This is one of the many creatures the team has designed from scratch. They'll probably be appearing on Naboo, although similar small, peaceful herbivores will likely surface on Corellia and other worlds to create a greater sense of immersion.

-The winged monstrosity is a "condor dragon," from the continuity. They're fairly dangerous and are native to a well-known Star Wars world.

-The four-legged creatures joining the falumpaset herd are "brackasets." Again, this is a beast that the team has designed for the game. It's not native to Corellia (and neither are any of the other creatures in the demo!), but we're not ready to announce its homeworld yet.

### **Strike Team: AI**

The progress with AI, which has been quite extensive, is due in part to the concept of "strike teams." In SWG's development structure, a strike team is composed of one programmer and one designer. This pair tackles a specific system, like AI, discussing the necessary features and determining which tasks can be handled via scripting and which will need to be programmed in the engine. The pairing is also beneficial because it creates clear lines of communication between the design team and the engineering team. The strike team for AI consists of Programmer Acy Stapp and Senior Designer **Nick Newhard**.

Look for the next installment tomorrow or Wednesday, and learn which member of the Max Rebo band has a mean roundhouse kick!

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