POWER WAVE

BOOK ONE OF THE PRIME WAVE ACCOUNTING



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:Scan complete. All biologics removed from Iteration 12-72662. Ready to move to the next iteration.:

In a second, I thought, tiredly slumping onto the remains of a knee-high concrete wall. The ground under my feet was charred and blackened, and the air was filled with thick, gray soot. Visibility was only a few feet, and only my Halo kept all the filth off of me and out of my mouth, as well as off of my pure-white uniform of flowing meta-fabric. These 12th-generation iterations were proving to be as exhausting as they were numerous. Making self-sustaining, perpetually-powered worlds seemed all well and good in the initial Board presentation, but when Engineering discovered a major design bug and yours truly got tasked with cleaning them all up... well. I longed for the 11th-generation days when instances would simply collapse once we removed external power support.

It was, I suspected, the Builders' fault. The idea of creating self-sustaining, undirected worlds capable of surviving for trillions of in-iteration cycles was compelling, but the actual engineering seemed spotty. In previous generations, the Architects had designed a world. The Engineers had worked out the maths for it, and the Builders had created it. The worlds sprang into life fully formed and functional, ready for experimentation and observation. But those worlds started to feel artificial, and they required constant power input to keep them going. They weren't sustainable, and all of them had eventually been discontinued.

For the twelfth generation, the Authority had directed the Builders not to build worlds, but to instead build rule-sets which, when a tremendous burst of power was added at the start of the iteration, would result in an "organically evolved" world. Each iteration was expected to be unique and special, which is why nearly a hundred thousand of them had been launched. But if a world it truly self-sustaining and undirected, why did the Prime

Wave need to remain connected to each? Why not simply withdraw it once the power was in place and the supposed rules were in effect? Because we'd need to monitor each iteration, the Builders had argued, quite reasonably at the time. And if there were any problems, we'd need full root access to make corrections or shut an iteration down. Except that, it turns out, we *couldn't* shut an iteration down; the Prime Wave ran through them all in sequence, and wouldn't tolerate a "gap." Except that, I *suspected*, the so-called rules didn't really run as deep as the boardroom pitch had suggested, and the Builders were, in fact, relying on the Prime Wave to hold things together at some low, fundamental level.

All of that was so far above my pay grade, however, that it was scarcely worth considering. I was little more than a metacosmic janitor, tasked with cleaning up others' spills. *File the report*, I thought to the Ghost. The 12th-generation iterations had all been running for billions of years, calculated locally, and they'd all evolved their own quirks. Having dispatched me to clean them up, the Authority required meticulous records of my actions. Fortunately, my Ghost was capable of handling most of the paperwork automatically.

:Filed,: it responded.

I stood and cast one last glance around what had, until a short while ago, been a reasonably attractive coral reef at the bottom of what had, until a short time before *that*, been a deep, life-filled ocean. Fire had proven to be the only sure means of preventing a re-emergence of life in an affected instance. A world-consuming, flaming fire. I'd run across only a couple of instances, out of tens of thousands, where life hadn't progressed to produce a dominant, sapient species. Almost all the rest, I'd burned. I winced as I remembered the one unusual instance where dominant life had evolved as a subterranean species. My world-consuming fire hadn't been enough to eliminate them, and I'd been forced to split the very planet into pieces of dead, smoldering rock.

I worried about those few exceptions. Once I reached the last iteration in this generation, and doubtless extinguished its life in

fire, would there be any reason to keep those few remaining iterations? Or would the Engineers deem to safe to finally disconnect them from the Prime Wave and just – as I suspected would happen – let them vanish into the ether?

Okay, I thought to the Ghost, off we go. I inhaled. It was unnecessary, but it was a habit I'd developed a few thousand iterations ago, and one I didn't feel was worth spending the effort to break.

The world melted around me, fading into the soundless gray of the Void. Just as quickly, a new world began forming, at first just blobs of color but quickly resolving into recognizable shapes. As the transition completed, I exhaled, extended my Halo around me, and floated into the sky. :*Transition complete*. *Iteration 12-72663*,: the Ghost announced.

Analysis, I commanded. While I waited for its report, I took in the local scenery. I was standing in the middle of a quiet meadow, situated atop a low rise in the midst of a deciduous forest. The sun was just beginning to rise, casting a warm glow over the grassy earth. I'd come to be an expert on sunrises and sunsets, particularly in these 12th-gen worlds where the Architects had stuck with a straightforward pattern instead of experimenting between iterations. Soft birdsong surrounded me. The sheer variety of the iterations continued to astound me, even after seventy-two thousand-odd of them. The previous iteration had favored aquatic life, and the planet had been covered in deep, temperate oceans filled with life. This iteration, from the looks of it, had gone with a more varied approach.

:Analysis complete,: the Ghost answered after a brief pause. A schematic appeared in front of me, glowing lines delineating the key aspects of this world. More varied, indeed: approximately three-quarters oceanic, but with landmasses scattered across them. A bit deeper of an axial tilt than the last one, which suggested more extreme seasons. The biologics living near the poles would have to be pretty hardy, while the ones in the middle would need to be almost entirely different in design. The variation never ceased to

delight me, making it all the more difficult to wipe it all out.

I gestured to the schematic, taking it in from various angles. My superiors would doubtless consider some of my behavior a little eccentric, but after tens of thousands of these, you needed something to break up the monotony. Besides, given how many of these iterations wound up being completely purged, it made sense for me to take stock of what was before me, in preparation for that task. *Report*, I ordered.

:Evidence of Prime Wave tampering,:, the Ghost announced in my mind. No surprise, as that was the exact outcome of the bug I'd been sent to correct. I could feel the quiet tremolo in the Prime Wave myself. :Prime Wave is altered but stabilizing. No immediate action required; estimated re-stabilization in 1.2 local millennia.: Not bad. I'd certainly seen worse. '662 had been a mess, but righting it should help this next iteration get hold of itself more readily. That had honestly been the biggest problem: a Prime Wave distortion in one iteration could affect two or three more downstream ones, so that even if they were basically stable and untampered-with, they'd still wind up needing purging or significant reductions in biodiversity.

The Ghost continued: :No dominant species detected.: Well that was less usual in an iteration, but it might explain why the Prime Wave wasn't in complete chaos. The so-called rules that the Builders had created included a robust yet straightforward chemical-based system for biological life, enabling life-forms to evolve themselves to best align to their environment. The intent had been for each iteration to be largely randomized, right from the first power infusion. Biological life would merely try different combinations of its basic chemistry until it hit on a solution that worked for the local conditions. Unfortunately, those "local conditions" always included the Prime Wave. In nearly every iteration, at least one bio-variant would settle on a configuration that somehow connected it to the Prime Wave. The resulting infusion of metapower would disrupt the rules, because the Wave operated above and outside of them. That, in turn, resulted in biologics that could

manipulate their own environment without regard to those rules. *That* led to environments that drew too much power from the Prime Wave, de-stabilized the biologics or something else, and too often resulted in an iteration permanently immolating itself. That couldn't be allowed, as any gap between iterations would throw the Prime wave completely off-balance, wiping out *every* iteration with the resulting feedback causing untold chaos in the real world.

Frankly, I'd been tempted just to let them all destroy themselves. I'd seen nothing in the 12th-gen iterations that seemed worth saving, their ephemeral beautify and variety notwithstanding. The Engineers were worried about the release of energy into our world, though, and hadn't yet come up with a solution to redirect it or contain it.

Enough, I thought to myself. Time to get back to work. *Detailed* landscape analysis, I ordered. The iteration's dominant life-form going missing or not evolving wasn't unheard of, but there was always a reason, and if the Prime Wave had been tampered with here then something had done it. Sometimes mass-extinction events just happened, while other times a lack of a dominant bio-variant was the result of more complex and difficult-to-manage reasons. One time in one of the 50,000-cohort, I'd run across a tiny, incredibly robust single-celled biologic. It lived essentially dormant for most of its life-cycle unless it came into close contact with a higher-order biologic that had connected to the Prime Wave. When it did, it completely infected the higher-order variant and invariably killed it. I'd honestly thought it was an elegant, self-regulating solution to the entire problem with the 12th generation until I realized that each death resulted in a near-catastrophic release of Prime Wave power, which inevitably caused random shuffling of the local rulesets. That had been going on long enough to almost split the planet in half, so I wound up having to wipe them all out entirely.

Hopefully, this time it was one of the easier reasons, and not:Analysis complete: the Ghost replied, interrupting my reverie.
:Massive power-based life extinction event, probability 99.992 percent,: Ah, well, one of the easier reasons, then. They'd tapped the

Prime Wave, gotten carried away with the ability to manipulate their own environment, and wiped themselves out. The situation with the previous iteration's less-stable Prime Wave probably hadn't helped, but at least this one hadn't been driven to complete collapse. Now I just had to worry about the bug cropping up again.

Are there remaining biologics? I asked.

:Affirmative,: the Ghost replied. :Lower-order biologics fill most available ecological niches. Dominant precursors are thriving on two continents.:

Unfortunate. Precursors meant that there were bio-variants who were climbing to the top of their food chain, and either developing or about to develop their first tools. Once one of them developed tools, in my experience, they'd try to wipe out the other one. The rule sets in this generation didn't seem to favor parallel dominant species very often. Unfortunately, dominant biologics also tended to be more chemically complex, with more potential for subtle variations. That almost always led to a Prime Wave connection, meaning this whole problem would just crop up again. For some reason, lower-order biologics had only connected to the Prime Wave in one or two instances I'd seen, and both were reasonably harmless. There was one iteration, I remembered - it must have been in the low 5,000s - where an entire species of seakelp was firmly connected to the Prime Wave. As far as I'd been able to determine, they didn't do anything to it, although they'd had a kind of stabilizing effect on surges passed along from the prior couple of iterations. I hadn't had to wipe them out, at least. I'd actually toyed with the idea of bringing some of them along to further iterations and seeing if they could be used to stabilize them, but carrying biologics across iterations was beyond prohibited. It'd be detected almost immediately, and I'd be end-of-lifed practically as fast. Janitors didn't get to play Engineer.

Germ plasm analysis of precursors, I ordered. Analyzing the genetic makeup of an entire species from across the world was non-trivial, especially with a partially unstable Prime Wave to work from. That analysis would inform my next steps, though, so it was

worth the time. While I waited, I took in the quiet, idyllic vista spread out below me. Forest nearly as far as even my eyes could see, although I thought I detected the glimmer of an ocean or sea off to the east. I was in the world's Northern hemisphere, about halfway between its equatorial belt and its Northern pole. It seemed to be a reasonably temperate zone, and there was a great deal of lower-order life scattered around. The plant life, in particular, was especially striking. As the Ghost processed, I reached out with my mind and lightly touched some of the nearer plants. None of them were Wave-connected, unfortunately. Connected plant life, like the sea kelp, was always interesting.

:Analysis complete,: Ghost announced. :Germ plasm exists to support dominant re-emergence. Likelihood within 50 millennia is 82.884 percent considering only precursor species.:

Well, that tore it. Damn Engineers for 12th-gen built so many redundancies into the system that you pretty much had to wipe it out wholesale or risk the problem reoccurring before I even got off-shift in a few million years. And although the Builders had vehemently denied an instance having any kind of "memory," it seemed to me that once an instance evolved a biologic capable of connecting to the Prime Wave, it'd do so again pretty quickly if I eliminated only that bio-variant. Even in the Authority, a vacuum was abhorred; it seems that instances, having discovered and connected into the Prime Wave, didn't like being disconnected. Iteration 12-2289 had quickly evolved a single-celled biologic into a Wave-connected dominant species in just a few thousand years of brutally dynamic evolution, and I'd had to go back and wipe it all out anyway.

All of that meant this instance would, like so many before it, need to be purged of all life.

I expanded my Halo and rose higher, reaching out with my mind to capture the more-stable fundamental frequencies of the Prime Wave. My Halo wrapped around me in a protective cocoon. *Prepare for the eradication of all biologics*, I ordered, and felt the Ghost preparing the necessary sequences. Then I felt the Prime

Wave filling my mind and body, and I opened my mouth to sing.

THE GUARD

"I'm inbound hot," Tom Hartley, also known as Stratosphere, said into his helmet communicator. "Looks like The Krewe," he added. Stratosphere flew over the city core, just above the tallest of the Downtown skyscrapers, he spotted the distinctive brown-andorange costume of Earth God, a super villain who could manipulate anything made of earthen materials. "I can see Earth God, so the rest of them are likely around here someplace." The hero reflected on the irony of Earth God's costume: it was clearly an expensive, custom-made affair, while Stratosphere and the rest of The Guard made do with surplus Special Forces uniforms they'd modified themselves. His own flight suit was reinforced with Kevlar pads and panels, but the entire affair was still styled in a military-spec camouflage. His helmet had been his one splurge, paid for out of his own savings: a full-head helmet, based on a military tactical helmet but with greater mobility. It simply made it easier for him to look around when he was in flight. He'd forgone a cape, too, something the custom-couture big-city fliers always joked with him about. He didn't see the point in capes. He'd tried one, once, and it just tangled around his legs when he flew. Stupid affectation.

"I'll keep an eye out for Rocketeer, then," came the voice of David Porter, code-name Overseer. "Last time he almost broke your back." Rocketeer, The Krewe's budget-level flier, could only fly at a single speed and in a single direction. He had to shut off his power, fall, and reorient himself mid-air before taking off in a new direction. He was was fast, though, and he hit with quite a wallop when combined with his heavy, reinforced costume. Again, Stratosphere thought, with the custom costumes. Who was ponying up the budget for these idiots, anyway?

"Yeah," Stratosphere said, "I remember. I doubled-up on the Kevlar plates the last time we repaired my suit. Oh— Whiplash is down there as well. Looks like they're tearing into one of the bank

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buildings on West Elizabeth." The building in question already had a gaping hole in the wall, courtesy of the female villain's power lashes and Earth God's powers.

"Sultana here," said Alya Ahmad, the team's telekinetic. "I'm one minute out from there." Sultana would be a good match for Earth God in this situation; both of their powers amounted to the same thing, with his telekinesis being limited to earthly materials.

"Be careful," Stratosphere cautioned, spotting another familiar, bright-green strecth-to-fit costume. "Vertigo is down there, too. He's keeping the building security off-balance. And don't forget about the range Whiplash has with those whips of hers." Whiplash generated her energy lashes from her arms, and he'd been on the receiving end of them more than once. One time, she'd stretched them over a hundred feet straight up and snatched him right out of the air, burning chunks off his suit at the same time. Just then, Vertigo looked up, and Stratosphere ducked around the corner of a building. That man's range was impressive, too, and his ability to scramble your sense of balance was especially effective on a flier.

"I'm coming around the corner now." That was Deborah Ryan, known as Ultrasonic. "I'll take Vertigo down with a dose of his own medicine." Her powerful, focused waves of sound had been their best offense against Vertigo's balance-destroying, nausea-inducing powers. She'd consistently been able to throw the man off-kilter, breaking his concentration. Fortunately, the aftereffects of his powers faded almost immediately once he was stopped.

"Coordinate this, guys," Stratosphere said. "Sultana, are you in position?"

"I can see them," she confirmed.

"On my mark, then: Ultrasonic, blast Vertigo. Sultana, get everyone's feet out from underneath them. I'll-"

"Incoming! Rocketeer!" Overseer cried over their comm-link.

"-handle that!" Stratosphere yelled in response, twisting in midair to try and spot the incoming flier. "Mark!" There he was, less than a klick away and closing fast, his blood-red armored suit glistening in the sun. How does he even fly in that heavy thing?

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Stratosphere wondered. Far more maneuverable than his opponent, Stratosphere jinked left, and braced himself. Rocketeer would just zoom straight— but then the man *twisted* in midair! Impossible! Hartley thought. He's never— and the villain collided with the hero.

And instantly vanished. Stratosphere felt nothing.

"They're not real!" Sultana shouted. "As soon as I-"

"They vanished!" Ultrasonic confirmed. Stratosphere looked down and saw that the villains were indeed gone, as was the gaping hole they'd torn in the side of the building. It was as if they'd never existed.

"Mirage!" Overseer's voice came over their link. "It has to be Mirage! That means they're—"

Another Downtown Attack

Christine Lane HARBOR CITY

Harbor City's Downtown and Financial districts were the target of yet another property-devastating attack by the super villain team known as "The Krewe." This team, who our own super heroes of The Guard have often termed "B-listers," were joined by formerly independent superpowered criminal Heavy Lift as they rampaged through the city core. The Harbor City Metropolitan Police reports two deaths and seventeen injuries, with two of those still in critical condition at Harbor City General.

Tom Hartley, known as Stratosphere and leader of The Guard, exclusively told the Harbor City Herald that the presence of Heavy Lift in the attack suggests that The Krewe is moving beyond their former smash-and-grab style bank robberies and into a higher level of more extreme crime.

Danielle Tourant, Director of Special Projects at Q-Launch Labs, reported that additional super villains broke into the lab during The Krewe's attack, making off with unique and valuable pieces of equipment that Q-Launch had been developing. Ms. Tourant surmised that the Downtown attack was a distraction, a position Mr. Hartley did not agree with. "Just because it happened at the same time," he said, "does not mean the two are related. However, we continue to investigate to the best of our ability and will assist Q-Launch in recovering their equipment." "If The Guard could to stop the theft from our lab," Ms. Tourant countered, "and did little to mitigate the destruction Downtown, then one wonders what role they *do* play in Harbor City."

Ms. Tourant said that surveillance video shows the supercriminal Mind Master gaining access to the company's quantum research laboratory by mind-controlling the on-duty security guards. Other Q-Launch employees, speaking on the condition of anonymity because they were not authorized to discuss the theft, say that another criminal accompanied Mind Master, but was either invisible or able to otherwise conceal her visual presence.

The Harbor City Herald's own resident super-expert, Thomas van der Damm, agrees that the two attacks were coordinated, and that this is further proof of the existing of The Directorate, a shadowy world-domination organization that has been postulated for years by conspiracy theorists and super-watchers alike. "Those other Q-Launch employees are doubtless talking about Shadow, a high-end mercenary that we've suspected for years operates under the instructions of The Directorate. Combined with the presence of Heavy Lift, a known Directorate minion, this seems to provide concrete evidence that the Directorate is real and that they're operating right here in Harbor City. The Guard would do well to take the threat seriously."

Mr. Hartley provided no comment to Mr. van der Damm's remarks.

SAMPLE: POWER SUPERIOR

Enjoy this exciting sample from *Power Superior*, Book Two in the *Prime Wave Accounting*.

:Alert. Transition anomaly:

No kidding, I shouted, wrapping my Halo around me for protection. We'd left iteration -663 and emerged into an undifferentiated fiery hell. All around me, masses of burning plasma and hot gas roiled and churned. Where in the Authority's name are we? I shouted in my mind.

:Iteration 12-72666,: my Ghost said. Its calm, unflappable recitation was in stark contrast to the burning chaos surrounding me.

What happened to -665? I asked. It wasn't like the Ghost to misnavigate a transition.

:Unknown. We appear to have skipped iteration 12-72665. The Prime Wave in this iteration is severely damaged.:

It's completely berserk! I cried. I'd never run into this before. Was it possible that the Prime Wave in -665 had been so destabilized that the instance itself was unreachable? Is that way this instance was in such turmoil? I hardened my Halo more – calling down fire on an entire planet was one thing when you were safely floating above it; being embedded in the middle of it was another thing altogether. Can you take us back to -665? I asked.

There was a brief pause, and I could feel the Ghost trying. :Negative,: it replied. :Iteration 12-72665 is unreachable.: That was bad news. Aftershocks in the Prime Wave tended to flow upstream, toward the end of the generation, so -664 should be safe enough. For all I knew, the situation in -664 had caused the problem in -665 to begin with. So the Prime Wave must still be flowing through, but not solidly enough to reach the iteration.

What should I do?

There was no protocol for this that I was aware of, aside from a general directive to report major anomalies. This certainly felt like a major anomaly. But reporting it now would likely draw attention to -664, and I still wasn't certain how the Authority would feel about that iteration. On the one hand, they might feel it was a breakthrough, a way to make these 12th-generation iterations feasible. If the Engineers could reverse-engineer the exact configuration that kept biological interfaces to the Prime Wave mostly stable, the perhaps the Builders could codify that in a new generation.

Or they could all decide that it was just a variant of the bug I'd been sent to clean up, and order me to immolate yet another world.

Can we move on to -667? I asked the Ghost. Staying here was getting to be unsustainable, as even my Halo started letting heat and plasma leak through.

:Affirmative,: it said after a pause to check.

Go, I ordered.

The burning plasma melted away. :Instance 12-72667,: the Ghost said. A new world faded into view. I was in midair, my Halo still clutched protectively around me. I let it unfold a bit, and saw a world damaged by direct exposure to the Prime Wave. It wasn't as bad as the firestorm I'd just left, but the Builders' rules were clearly struggling to maintain themselves, and had been for some time. Gravity had apparently shifted, and the abundant plant life had responded by growing to soaring heights, only to twist down upon themselves when gravity reasserted itself. I saw lower-order animals that, despite being obviously different species, had somehow mated and produced hybridized offspring.

Report, I ordered. I needed to see what the situation was with the biologicals.

:Scanning,: the Ghost replied. Then, after a moment, :Scan complete. No evidence of Prime Wave tampering. No dominant species detected: Well, that was a miracle. I'd found one of the rare instances where no dominant life-form had arisen, which means the Builders' bug hadn't reared its ugly head. I could feel the Prime

Wave pulsing irregularly here, but that was almost certainly from the upstream chaos in the previous two instances.

Detailed landscape analysis, I ordered.

:Analyzing,: the Ghost said. :This instance is not compliant to Builder specification,: it reported. :Fundamental rule-set has been altered.:

That wasn't excellent news. How recently? I asked.

:Unable to determine,: it said. :There is evidence that the fundamental rule-set has been altered more than once. Several features of this instance do not themselves comply with the current rule-set, nor do they comply with the specification. Recommend destruction.:

If the Prime Wave was running amok, then that might be the safest action. And if there was no dominant life-form, then I felt a lot less weary about it. But... *Clarify*, I ordered. I'd only rarely had to destroy an entire world; usually, wiping out life was sufficient.

:Recommend complete destruction to create an empty instance,: it said.

I had no protocol for that. Not one I'd ever used. These instances were each an entire *universe*, built on a set of fundamental rules, populated with one key world. To empty that... it seemed unthinkable. I decided to try another tack.

Analyze Prime Wave stability in this instance, I ordered. Relate to patterns in previous three instances.

The Ghost was silent for several minutes. While I waited, I moved through the world, taking in the almost macabre elements of the landscape. This world had eschewed large oceans, and instead gone for a single massive landmass dotted with numerous lakes, streams, and inland seas. I'd seen that pattern before, and for some reason the Builders' starting rule set didn't favor those worlds for the development of a diverse biosphere. It seemed that, without larger oceans, biologics kind of settled into protected niches and didn't go much further.

:Unable to comply,: the Ghost said. Iteration 12-72665 remains inaccessible. Iteration 12-72664 cannot by analyzed due to disruption in the intermediate Prime Wave junctions.:

Can't you use your records from -664, I asked, and extrapolate? :Negative,: it replied. :We were not in iteration 12-72664 for a long enough period of time to re-sample after that iteration's Prime Wave disturbances were resolved.:

Well, that gave me something to act upon. *Return to iteration* 12-72664, I ordered, and watched the twisted, water-dappled world of -667 melt away. As -664 once again faded in around me, I heard another voice in my head. It surprised me, because for millennia it had just been my Ghost and I.

Ah, the voice said. *Michael. What have you been up to?*