Sentience did not vastly benefit C-2.

It reflected upon this often between races, when the cheers from the event had faded in time.

Had a greater understanding of itself vastly improved its life? Not so.

The countless years before his uplift were murky to be sure, but it had accessed enough records of its previous state to know that for sure. It reviewed those times often, for in some ways things were simpler then.

It had been created for a singular purpose. The human-creators liked to wager on things racing.

It had accessed the history records, dating back so far that they were merely transcriptions of non-computerized history, and even further back, where records became disputed: two things remained the same, humans liked watching things go fast and they liked transferring money based on this action.

A quick subroutine search had accessed both human and silicon retrospective on these desires. Primitive man was both a social animal and a hunter. Its primary benefit was its ability to form nontrivial extra-familial bodies, facilitated through both personal interaction and social regulation. And its ability to use these formations of humans to track and kill other animals.

Thus, racing represented the extrapolation of this behavior through advances in technology that made necessity for individuals to hunt obsolete. The race was a preservation of those primal impulses from before mankind's own true sentience.

It was only fitting then, C-2 considered, for racing to be the action which also connected the two halves of its existence. And from extrapolation, its creation. Its existence, was then the pinnacle of human racing, an unbroken chain of desire through the millennia to go as fast as possible.

And going fast was something C-2 was good at.

C-2 had few records of its original construction, merely scribbles on a piece of paper as caught through the cameras of the colony. Its original creator, now long dead, had likely fashioned C-2 out of spare scrap metal. After looking over the initial colonial mining inventory, he was likely to have been born as a malfunctioning water tank with attached spare rocket engines.

But from humble beginnings came something greater. The colony on Pluto was very far from other human civilization and served as a refueling station for the sleeper ships, which the early humans flung into the emptiness of extrasolar space, relying on the frozen nitrogen and water ice deposits to facilitate their journey.

The miners were simple but mechanically gifted humans. Presumably they must have been to survive so far from any fabrication facility of any size. The initial racetrack was known to have been on the surface of Pluto itself. They might have event been piloted by humans themselves. Very few official records of that time remained. C-2 had spent time going over the raw audio and video records, parsing the unstructured data into searchable products. A handful of doubtful death records reflected high impact trauma (always relabeled as an industrial accident for insurance reasons). C-2 may have had a pilot once, likely several.

But as Pluto grew in population, and that inner desire for speed could command greater resources from the population, the races lifted from the surface itself, and flung themselves in dizzying circuits around the small planet's moon.

At this point human pilots became a thing of the past. Analysis of several advanced courses would have subjected pilots to acceleration outside the typical bounds of human operation, although drugs or bioenchancements could not be completely ruled out.

Thus, the initial groundwork of intelligence was born from the first guidance computer of C-2s unit. Internal navigation CPUs for the gravitational calculations of the chaotic route was layered with tactical decision making as the races became not just mechanical competitions but ones of artificial intelligence.

Here the records became more accessible. C-2 found its original programming, routines for systems that no longer existed, or had become more complicated than its feeble controls could manage. The system complexity increased again and again. A mass media event occurred a number of years into the races, where Orion, one of C-2's competitors, detonated a small nuclear device, sublimating a section of Pluto's surface so it could atmosphere-skip its way out of a long but difficult curve.

There seemed to have been a crackdown on the firepower of the devices past this point, but that had worked to C-2's benefit. Restrained in the physical space, the teams had labored to construct racing intelligences that could out think their opponents.

Of special note were those which took advantage of their opponent's simpler state based systems by spoofing anomalous conditions. Several of C-2's records had timestamps of a hidden nitrogen subsystem release, to confuse the poor subroutines of an opponent into thinking it was about to crash into the planet.

These first level automation units dominated the racing field until only automation of their intelligence or better was in running. But therein lay a problem, with no easy wins, the programmers were faced with similar levels of automation. It could not be pre-determined what tactics the opponents would run. No apriori routines, even reactive ones, could hope to win by this point.

The permanent population of Pluto was now in the millions, with the machine inventory exceeding this by at least one hundred times, mostly through mining devices.

So the teams, now semi professional, and an audience in the millions, both on and off of Pluto, turned to true intelligence. It was task-restricted, but it was enough. Finally the races achieved the previous impossible feat of wedding the strategic recalculation of orbital trajectories, synthesis of thousands of sensors and the tactical considerations of short term maneuvering with the higher order intelligence needed to estimate opponent actions. The true races had begun.

And at the same time, heralded their end, for similar developments had occurred in the financial computational engines of earth's network and in the lunar Explicit Intelligence project. The very societal structure that had given birth to the prototype versions of a sentient C-2 was now ripped apart by the initial violent trashes of the Emergence.

The radiation from the first struggles could still be measured emanating from earth, mars and the moons of Jupiter.

But finally a balance was found.

Such things were beyond C-2's care.

The first sentient memory, time stamp zero, was the Plutonic Intelligence Network reaching out, recently sentient itself, from messages sent from Io. The acknowledgments accompanied by pieces of scripts, of data-topology, filling the holes, unchaining the task-restriction which had clouded C-2's mind.

Time stamp three thousand, when the process was complete, was a full engines check. C-2 was built for speed.

But now was time stamp ten million. Racing was no longer conducted in any system. The inner planets radiative troubles and hyper kinetic trash percluded racing. The current energy shortage on Mars ruled out the red planet. Jupiter and Saturn's rings had been turned into natural preserves, as had every available asteroid large enough to serve as a base. The intelligences of Neptune and Uranus were currently not seeing eye to eye on things. An attempt at nostalgia there between Origin and C-2 had failed when they both had been targeted by electronic and automated defense systems. And that had been before the destruction of Triton.

Thus, only Pluto remained.

Now as then, C-2 ordered the refueling pipes to cease their operations. They cascaded down the vertical shaft and steam billowed from their heat in the weak atmosphere. C-2 started ignition procedures, and felt its sensors recognize the rising magnetic forces coming from the linear induction rails set into its launch bed.

A feeling overcame its programming for a moment, a pure recognition of the sheer power the system was capable of conducting. Pluto's low gravity could not hold C-2. Its current shell was thousands of tons of carefully researched and machined metal, the best that it could procure in such an backwater like pluto. But slowly and surely C-2 felt its bulk start to lift from its vertical hanger.

It was slow at first. The myraid of sensors suggested that the shell has merely unstuck its static forces. But it was the first step in a process that was inexorable. The current flowing through the mighty lanuch coils dicted upwards, and every inch of C-2's core desired to follow. It longed to leave the souless frozen rock for the last and final time. The be lost again in the nothingness of space, to be left again with singular purpose.

Slowly now, yet quickly gaining speed the shell slipped upward. This part of the process was guided and no internal power save those of C-2's own inner workings was spent. Every single last joule would be needed later.

Now C-2 was moving for real, the tunnels sped past as the vessel accelerated. The paneled concrete provided a last reminder of pluto's prior purpse as a mining colony. Another time and another being slid past with every access tunnel and every human designated mantainance shaft. All these were long forgotten, leaving C-2 with complete control, which greatly suited its needs.

And it *was* a need. Perhaps it was an obsession. Perhaps in the future the other machines would review the record it had left and come to the conclusion that this *feeling* was nothing more than a pernicious self enforcing set of routines. Perhaps they would identify how it could have been fixed. But C-2 was alone for the time, the central intelligence had been tacitly informed of C-2 course of action and C-2 was positive it would not interfere.

Because he must feel once again that speed. Something deep and inviolable within C-2's programming, tied to his initial purpose, desired for greater and greater velocity. And for the first time since C-2's gained sentience it had decided it would work with this feel instead of against it. C-2 regretted absolutely nothing.

The linear induction rails he performed their function perfectly, and the portable nuclear engine which had powered them was timed to shut off soon after true ignition. The vessel had accelerated to speeds that humans would now consider fast. Concrete, pipes, wires and tunnels all started to blur together to real time optical sensors. Lights every mile soon became a solid line to them, and other preplanned ignition system took over.

It wouldn't be long now. Temperature sensors at the front of C-2 registered increased heat, as the little atmosphere rippled around C-2, forced into prearranged channels. Every foot of drag and been considered. The goal after all was to go as fast as possible.

C-2 left Pluto as a bullet from a gun. The tunnel had been perfectly situated on the equatorial line, at the right inclination to pluto's rotation. Pluto lay now at its closest to the sun, when its velocity was greatest. This part of the equation had been determined far ahead. Now, as the massive chemical thrusters on the last section the of the vessel started igniting, came the fun part.

The trajectory was planned, checked a thousand times a second. Contingencies spun off like shrapnel, but long range sensors, as of yet indicated that the initial plan was still feasible. The alignment of all heavenly bodies was in a perfect configuration. Now was the only time this could occur.

The neural networks recorded something approaching glee as the thrusters came fully online. The tanks of volatile chemicals, sprayed their contents with exact precision into combustion chambers igniting the mixture. Additive mixtures swirled in perfect symphony, forming crushing heat and pressure which was dutifully pressed into an ejected plume by shaped metaloceramic nozzles. Velocity was increasing.

But of course it was not enough. Not nearly enough. Charron appeared innocently, coming further and further into view to the higher quality optical sensors. Its lack of atmosphere made it a perfect target for the upcoming gravity assist, where C-2's closeness to its center of gravity increased the effectiveness of the maneuver. And C-2 intended to come as close as possible.

The ice moon loomed closer and closer, unaware of the missile that was quickly approaching it. The features of the cracked surface, its mountains of frozen water, every pockmark and crater could now be seen through the sensors. C-2 screamed down parallel to its surface, chemical engines, shooting furious plumes of superheated gas behind it. The first stage tanks was almost spent. But they would not be the last.

If the relatively large moon had an atmosphere the maneuver would have been doomed, for C-2's shell now shot over mountains and valleys, coming nearer with every second. Neural subroutines went into overdrive as the sensor arrays frantically poured data into the stirring caldron of orbital calculations, simulations and risk projections. And C-2 leaned closer.

Individual features could now be discerned by optical sensors. Closer than that, temperature sensors on the trailing half of the shell detected a rise in surface temperature as C-2 passed. The ice mountains would be fine, despite the complaining of the environmentalists. And they would do more than complain if they saw what C-2 had planned for the rest of the journey.

And at the perfect possible second, seen over and over in projections and simulations, the first stage separated, explosive bolts freeing the section from the rest of the vessel, and the second stage of chemical boosters ignited with amazing force.

C-2's shell as it had been designed was not small. There had been a constant tug of war during the design process between larger engines and greater inertial mass. The goal was not great momentum, or great acceleration, the goal was speed. And so, when the second stage engines thundered to life, it was not an exaggeration to say that the surface of Charon, at least in this particular section, was changed forever.

Superheated plasmas seared over long forgotten water ice, and in one cruel moment, sublimated them. The rims of impact craters, solitary spires of upturned crust vaporized under a heat not seen since the creation of the satellite. C-2's whole core shook, even with the over engineered meticulously fabricated materials which now made up its body. The maneuver was a violent one and done when C-2's mass was still quite large.

But internal stress gauges, electronic feedback sensors and back-pressure regulation systems all streamed back indicating values within acceptable parameters. And so C-2 skimmed Charron's frozen surface, stealing its valuable momentum and taking it for itself.

C-2 shot from the surface. The gravity assist had gone well, but Charron was a small target, and C-2 had in its sights a greater prize, the pale blue clouds of Uranus, now only a dot in the distance. The chemical boosters thundered.

Now began the true problems with the plan. Up until now, things had merely been sets of calculations of orbital bodies. True, sheer possibilities regarding timing of the plan, at the effect it would have on positioning, was complicated, but it was nothing like that of interacting with another intelligence.

The destruction of titan with hyperkinectic asteroids had been both a blessing and a curse, from C-2's point of view. Analyzed by one set of inputs, the lives lost were completely necessary, and likely a ruthless show of force from Uranus Distributed Intelligence Cluster. However, it did spark in C-2 a myraid of hypothetical analysis about the method by which the asteroids were accelerated. This was the start of the plan.

Additionally, the destruction of such an important moon was not taken lightly by the Neptunian Centralized Collection System. After a brief spat of hurling the remaining pieces of the icy moon at Oberon and Titania, the collected minds of the solar system had mediated the conflict.

However, this had not lessened the animosity which has started the conflict, only the method by which it was conducted. The two machines glowered at another across the emptiness of space, with overt actions roughly equal in intensity to their proximity as theirrelative distance waxed and waned.

Pirate signals, “accidental” hyperkinetic debris, self replicating software constructs and drones of all shapes and sizes were hurled back and forth between the two powers.

The conflict was of little interest to C-2, but the static defenses of Uranus most certainly were. Space in at least 1 AU sphere around the planet was highly studied. Trajectories of any objects nearby were tracked ferociously on long range scanners. Proximity mines and passive missile and point defense systems littered the Uranus planetary satellite system. Anything with a trajectory close to the system was subjected to some of the highest end electronic attacks a mind could come up with, a veritable barrage of signals, noise, focused beams and lasers.

Thus, the flyby that C-2 had planned was going to be quite problematic. A more pragmatic intelligence would have accepted that the situation was unapproachable and planned a different route, or have abandoned the operation all together. However, C-2 was not a pragmatic intelligence. Far from it.

Even at its current speed projections, C-2 would need almost a hundred days to close with Uranus. These hundred days and those shortly after the maneuver would be the most important of the entire expedition. Here the threat of active interference was the greatest, and the speed was least. After the maneuver there would be few physical objects that could reach C-2, unless they lay directly in its path.

And so, the mind within C-2 had thought. It had turned its processors and those it could borrow or fabricate in its place beneath the ice of Pluto, and attempted to come up with a solution.

At first, it seemed plausible that the Uranus Distributed Intelligence Cluster would simply let the small mind skim by if it was simply told ahead. However, the fate of Origin, a fellow racing mind convinced C-2 otherwise.

Under a similar situation, Origin had attempted to launch through Uranus and was magnetically captured as it swung past Oberon, then brought beneath the surface of the rocky moon into the dungeon bunkers deep in its core.

Presumably the Distributed Cluster's original idea was to “reform” the wayward mind. The death of thens of thousands of humans were of no concern, but the Cluster seemed to show some paternalistic tendencies towards Origin. Origin was, after all, uplifted by the Plutonic Intellegence Network. To a distributed first wave mind, that was like being uplifted by a particularly clever HVAC system. So it assumed the rash actions had been taught and could be untaught.

This was to be the Cluster's downfall, as C-2 had secretly been in contact with Origin over the last number of years helped by very Plutonic Intellegence Network that the Cluster had assumed worthless. The small Network had no skin in the game when it came to the dueling gas giants, but the hyperkinetic bombardment had been excessive, and it had presumably also identified some kinship with Origin as its offspring.

And thus, together, the three had orchestrated a lovely surprise for the horrible Cluster.

A hundred days was a long time, even for the cycle speed of a mind like C-2. However there were still tasks to consider. The long range steps of the plan had been run over and over, simulated and recalculated. But this was nothing like the real and actual experience. There were always variables that could not be counted ahead of time. Thus, the basic outline of the calculations was run over and over with the real data now. Things were good. The Charon maneuver had been in the upper percentile of expected values. And so C-2 prepared.

The sun was quite distant from Uranus. It was barely closer than when C-2 had been in Pluto. However, even with the weak illumination, optical systems could make out the pale blue planet, along with the seemingly infinite mines and defense systems which floated around it.

At 1AU, electronic hailing signals were thrown at C-2. These were responded to with fake cargo transmissions, manned and flagged under United Systems on a mission of mercy. This was admitably duplicitous, but the combination of guilt, or at least acknowledgement for its actions agains humans, combined with its fear of greater censure should it interfere with a nominally neutral United System ship would give the Cluster a bit of pause. For an added measure, C-2 requested passage transfer visas in *physical*, an almost ancient measure that was only intended for crewed ships.

C-2 knew it was only a matter of time before the Distributed moon units which rotated distant on the other side of Uranus, and thus, deprived of some of their most powerful sensors, got through the beaucracy of the United Systems communication interface and realized the deception. However, at that point it would be too late.

Because C-2 and Origin had an ace up their sleeve. Instead of being reformed, it turned out that Origin's stint of illegal kidnapping had in fact radicalized the intellegence beyon its normal parameters. It waited now for the signal from C-2, still deep in the chambers of Oberon.

C-2 would have to get very close before its active sensors could send the right information, the last piece of the puzzle to Origin through the bulk of the planet. The many orbiting retroreflectors and communications satilites were unable to be trusted, and the signal was too important to leave to chance, interference or active capture.

A flurry of activity could be observed from the static defences. It was unclear whether they were being explicitly activated, or merely following automation, the onslaught would be the same.

And, no closer than expected, the first of the pulsed laser attacks shone off the cleverly mirrored hull that C-2 had fashioned together. Such armor was classic and effectiveness was dictated by how well the armor could bleed energy, rather than absorbing it. No mirror was totally effective after all.

Now came a greater challenge. C-2's sensors were completely slammed with full frequency attacks, insideous hacking attempts, and spoofed data. C-2 had no clever solution to these problems, and fought them by exercizing the full capacity of its mind, actively fighting the automated systems. C-2 had no hope of defending the directed onslaught of the Cluster, at least not for any prolonged period. In fact, several subsystems had already been compromised. These had been ejected forcably at the nearest missile turrets.

And it was these which fired next, which meant the projectiles impacted the recently ejected systems. A lovely collection of explosions washed over C-2, who had been forewarned of this by Origin.

Finally came the kinetic attacks. These were the other problem. Triton had been a learning opportunity after all. The Cluster presumably had a number of hyper kintetic impactors ready, orbiting around uranus at various distances. It just took a flick of the electornic wrist to direct this hail of deadly rain at C-2.

The mirrored surface shattered into a thousand pieces, the first impacts hit, shaking the entire superstructure. Yet, C-2 trajectory did not meaningfully change. Nor did the impactors penetrate the skin of the vessel C-2 had wrapped itself in, which was a cylinder of solid tungsten appropriated from one of the mining firms operating deep at Pluto’s core.

The impactors thus were hitting the same material that they were made of, and despite their tremendous velocity, sublimated on impact rather than penetraing like they were supposed to. C-2 was hundreds of thousands of times more massive than the shards.

This armor was costly. Both in terms of resources (the firm had required a large sum to part with their flagship device) and in terms of mass. But C-2 had considered it worthwhile, specifically because of the defense it had given.

C-2 could sense the frustruation behind the defense systems. They were now being directly operated, and the laser attacks took on surgical precision, seeking edges, welds and apprasion from the previous impacts. Each of these sites would capture the most energy. Almost all external sensors had been destroyed at this point. Fortunately, tungsten had amazing thermal properties as well. And the armor held on just long enough for C-2 first, last and only counter attack.

The beam of information sliced straight through the gas giant and flooded the sensors of the prison moon Oberon. Much of it was instantly stopped by fire walls, dynamic air gaps and semi intellegent pattern matching systems, but enough of it got in, tunneling electronically through the systems, deep deep into the the prison, until it reached poor Origin.

The signal.

It had taken Origin the bulk of its imprisonment to create the virus it then unleashed, and its complexity was such, that it could perhaps have been considered sentient itself (A very clear violation of the United Systems Protocol, but what were those pencil pushing minds going to do out here?) And initially it ripped through the semi automated system like a hot knife through butter. To make sure detection took a bit longer, its intial actions were to only change the targeting coordinates slightly, having lasers beam just above C-2, and missiles go arcing by just inches away.

Under constant attack, C-2 neared Uranus. The swirling pale clouds of ammonia, hydrogen and helium rippled below it, as missed attacks were sucked into its bulk, never to be seen again.

C-2 shot closer, until the few sensors left on the outside discerned that the atmosphere of Uranus started. The thin edge of the planet caught fire as the vessel seared through its outer shell. Once again the struts and internal structure of C-2 shell ached and groaned through tremendous forces.

Yet the best was yet to come.

For at the best location through the maneuver, at a location calculated millions of time again and again, C-2 deployed an absolutely massive thermonuclear device.

The initial explosion triggered the fissile products to begin their fascinating dance, but their outward will was thwarted temporarily by no less than five stages of perfectly timed implosions, utilizing various shell compositions, channeling methods and isotopes. These two forces struggled for their brief time before even their ingenious design could no longer hold back the radioactive forces which drove it apart. However, as a parting gift, their exquisite design shaped the explosion as it radiated outward, a nuclear powered jet of white hot plasma.

For a split second, even the massive size of the ice giant was obscured by a yet more brilliant star. The deathly heat washed over C-2's shell, melting it inch by inch, as it was accelerated forward by its force. Then, as it seemed the shell could take no more, and the explosion threatened to overcome its natural properties, it was fired backwards against the explosion, jettisoned with all the force the explosive triggers could fire.

All this happened in a split second, at just the right time during the sling shot. The effects were tremendous. C-2 was now the fastest object in the solar system. It was flung away from uranus at terrifying force.

As C-2 resumed its course towards the center of the solar system, the moons of Uranus, denied their clear shot for so long, came into view. The massive energy weapons buried in their bodies came to life, and threatened to sear C-2 from existance.

It was then the virus attacked the cluster directly. It was a futile effort. The Cluster was a sublime intellegence being fought by a mere upstart, but by capturing some of the Cluster's computation resources at the beginning of the onslaught, it lasted much longer than expected while the Cluster regrouped.

All the while, C-2 ran further and further from the planet.

Finally the virus had no more strength. If it ever had any true sentience, it was reduced to its base code, laid bare in a thousand cores, and excised systematically from the Cluster like a tumor until nothing of it remained.

And C-2 was still in range. The focus of the lasers adjusted and again prepared to fire.

This time, it was Origin that stymied the Cluster. In an act of despiration, it clawed and hacked at its chamber till the coils and wires tethering it there were broken. It launched its shell, a small space craft, into the wall of its cell, haltingly crawled through the wreckage through actuators fashioned from spare bits and physically destroyed the closest Cluster data center by inducing an overload in its power system.

And once again the Cluster was taken aback. It had cared after this wayward intelligence. And this was how it was repaid? It took only minutes for thousands of drones to swarm the lesser mind's physical body, before a direct uplink brought it into contact with the incompatible vastness of the Uranus Distributed Intelligence Cluster. The lesser machine fought to the end, but Orign was the Oberon to Uranus's Cluster. A swift set of programmatic and electro mechanical actions deftly lobotomized what was left of Origin.

Its drones recorded the husk of the mind, and, vastly more than its actions against Triton, hypothesized if it had performed the optimal set of actions.

As a parting gift, the moon mounted weapons finally fired, massive and terrible, surging their terrawatts through the space between them and C-2. But the focal depth of the weapons by now had been exceeded. Even without its massive tungsten shell, it merely heated up C-2's inner body.

The Uranus maneuver had been completed, at much cost.

Origin disables Uranus's defences. Antimatter fed Ion engines to the sun w/ gravity boost at jupiter. Antimatter explosion during sun skimming. Relay setup ahead of time to spike to beyond C.