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Note to Self

Meet the Teenage Codebreaker Who Helped Solve the Cicada 3301 Internet Puzzle

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(Listen to the full, podcast audio version of this story with additional detail here)

In November *The Telegraph* ran a **wildly popular article** about "the internet mystery that has the world baffled." We bring you the story of a young hacker who solved the most elaborate puzzle quest we've ever heard about: Cicada 3301. And about the equally mysterious invitation at the end of the adventure.

Almost exactly two years ago, in January 2012, people reading an internet bulletin board called 4chan stumbled on an **enigmatic message** written in white sans serif on a square black background.

"Hello. We are looking for highly intelligent individuals," it read. “To find them, we have devised a test."

The text went on to say there was a message hidden inside the black-and-white image: "Find it, and it will lead you on the road to finding us."

The sign-off was just as cryptic: "Good luck. 3301."

And that was it.

One person who puzzled over that message was a self-taught programmer from the San Francisco Bay area, a teenager who goes by his internet handle Tekk.nolagi.

Tekk, as we'll call him (as he didn't want his real named used), was sitting in his high school robotics lab when a classmate showed him the post. Curious what the crytpic message might be about, he solved it in short order. That was the point. The message was bait for a specific kind of talented mind, someone who breaks codes for fun, someone who can latch onto a challenge and follow it through. Corporations and governments have both been known to use puzzles to recruit, but this one was by far more elaborate, intimidating, and at times, fearsome.

This puzzle has come to be known as Cicada 3301. New Tech City learned about Cicada 3301 from journalist Chris Bell in his November **article** in the *Telegraph. (Chris appears in this week's* ***New Tech City podcast*** *in which we tell the full story of Cicada 3301, along with what happens after the last puzzle was solved.)*

As Bell described it, thousands of tech-minded people attacked the clues and challenges presented by the mysterious group with the cicada motif calling itself 3301. Solving each successive mystery became increasingly complicated. An early puzzle used double entendres as clues and a Caesar Cipher, an encryption technique from the Roman Empire where you shift letters of the alphabet over by a few places. One challenge forced the hunters to find an ancient manuscript about King Arthur, which was the key to something known as a book cipher, where the puzzlers give a pag

and column number for different letters. That led to a phone number to call where a robotic voice threw out clues about prime numbers.

Most mysterious of all was a clue that pointed to GPS coordinates in about 10 cities, demanding that players physically go and scan a barcode taped to a lamppost in a public place. This was no small feat to execute.

The cicada hunt impressed the players because it went beyond the bounds of normal internet brainteasers or corporate recruiting drives. It required technical understanding of computer skills like PGP encryption and programming as well as expertise in arcane and niche subject areas from Mayan numerology and pre-Christian Welsh literature.

To win, many formed teams with others who might have compatible areas of expertise. Tekk invited a skilled 10-person team who were each contributing more substantially to the message board and chat rooms that had sprung up devoted to solving 3301. The collective was international with codebreakers using monikers like: manbearpig, snogbarth and joaquin. The team name was more straightforward: #decipher.

This team was good. With members spread around the world, there was always someone from #decipher awake, monitoring for new clues, ready to get to work. They pooled their resources and tricked their adversaries.

"People in our group decided to keep ourselves ahead, and we did that in a kind of messed-up way. We deceived the other group on to some crazy goose chase that we concocted," Tekk told me in a Skype interview.

THE END

At the end of it though, there was a cliffhanger — a website that asked code breakers to enter contact information to keep playing. But after a few did so, the website shut down, blocking out the rest of the pack.

"The chosen few received personal emails — detailing what, none have said," Bell wrote. "We are no closer to knowing the source, or fundamental purpose, of Cicada 3301."

But Tekk and his teammates, they were among the chosen few who solved the puzzle. And they spoke to us about what came next.

At first there were more ciphers, more puzzles to solve, and they got harder, tapping new skills. There was a 112-digit prime number to factor, a computing task so laborious it required renting a special server to run for seven hours.

At one point, Tekk and his compatriots were sent another email (**leaked here**) with something like a personality quiz.

"You had to answer questions about what interest you had in encryption, why you wanted to be a part of this. It was sort of a weird personality thing," Tekk said.

Eventually, each person in Tekk's group was sent an individualized username and password for logging in to a site on the so-called "**darknet**."

"On this web portal, there was a chat system, a forum system and a bunch of things set up so we could all communicate," Tekk said. "I guess their goal for us was to have this elite programmer society where we would make encrypted or anonymous services that would serve everybody."

Throughout the quest, solvers speculated on who was behind the Cicada 3301 cryptograms. Some imagined it was the NSA or the British spy agency, MI6. Others said Google or Microsoft. Still others thought it might be a hacker collective or some group with nefarious aims.

According to Tekk, it was a group of anonymous developers looking to recruit "highly intelligent individuals" to build open-source software for the good of the world.

Which, it turned out, was kind of a letdown for the members of #decipher, including Tekk.

"Once we succeeded, once we were part of this thing, once we were working with them, we kind of lost interest," he said.

WHAT COMES NEXT

Perhaps that explains why Cicada 3301 was not a one-time phenomenon. A similar set of elaborate puzzles sprang up in January 2013, almost exactly a year after the first quest. That begs the question: Will there be a third round in January 2014?

No one knows.

*To hear more about Cicada 3301, including more of Tekk's story, listen to this week's New Tech City podcast, available Wednesday at **New Tech City** and on **iTunes**.*

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