THE HEXADECIMAL KID
AND HIS FAITHFUL DOG ASCII

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[A Fantasy in Sixteen Bits]

Bit 2   (A Two Bit Outlaw)

[The Hexadecimal Kid and Simula have been ambushed in their remote mountain hideaway by the evil Dr Null whose sole objective is to reduce every binary digit of information throughout the world to zero, thus destroying civilization as we know it. Hex's faithful dog Ascii (the dog with the Post Office approved interface) has electrocuted himself by biting through a 25000 volt cable, so is temporarily out of action.]

"Can I sit down now?" asked Simula, after a while. "If you go on much longer I'll fall asleep on my feet."

"Certainly, my dear. You speak more truly than you realize," replied the sinister Dr Null.

"But first allow me to present you with this little ornament." He draped what appeared to be a silver medallion round her neck; and Simula sat down.

"I am quite proud of that little device actually," he continued, "I call it my 'Number Cruncher'. It simply swallows up binary data.
Let me explain. My plan is really quite simple. It has the hallmark of genius. That little pendant resting on Simula's fair skin is a microprocessor programmed to simulate an infinite array of NOR gates, each with one unity input. Attach it to a data transmission channel, and any incoming information simply vanishes. Whatever the input, the output is all zeroes.
I need hardly tell you what would happen if one of these were connected to a node of the Network. It would, over a period, degrade and ultimately annihilate all the data in the Database."

"But the Database is holographically organized: there are redundant copies of all data distributed throughout it," countered Hex.

"Indeed," admitted Dr Null, "but with a sufficiently high rate of data capture, or better still many of these devices at several critical nodes, the inevitable effect would be a gradual impoverishment and final collapse of the Database."

Hex still challenged him. "You would never get away with it. Every message passed over the Network has check digits. There are passwords that change daily; there are protocols that you cannot know, and thousands of built-in validation circuits. It's a typically human conception riddled with bugs, inconsistencies and loose ends. It could never work."

"That is precisely where your logical, robotic little mind fits in, my friend, with your intimate knowledge of the Network and the data control software. You ought to know how to get round these tiresome protection mechanisms. What I have in mind, you see, is a protocol-transparent version of my data-cruncher. It will literally eat up messages: a transmitted packet will arrive, and nothing but the check-data and routing information will emerge. Soon we will have the wires buzzing with ghost messages -- totally void but for the

message-control bits. And the beauty of it is that the System will be blissfully unaware of any change."

"Well, you won't get any help from me," declared Hex firmly.

"I think you may be mistaken there," answered Dr Null. "Would you tell me the time of day?"

Hex glanced at the real-time clock. "It's hour 10.25 on day 121 of year 88 (decimal). Why?"

"Because it is about time, I would guess, that your dear Simula had her daily fix. None of you puny automata can last very long without a dose of teleprocessing. It is like a drug. That is your weakness: you all have to plug into the Network each day to update your memory banks."

"Of course," replied Hex, "there's nothing unhealthy in that. We all need to contribute to and receive from the Database regularly. That is how we share experience. That is what makes the Database a living, growing organism, which is why we are superior to you primitive humans. You cannot transcend your individuality. You find it almost impossible to assimilate another being's learning. You have to learn everything afresh from scratch. Your storage capacity is pitifully limited too; whereas the Database can hold an unlimited amount of information. But even a deranged human like you could be cybernated. It's not too late. Look at me, I'm more than half human myself, yet I am a respected member of the android community."

"Disgusting!" said Dr Null with obvious revulsion. "I want none of that. And I intend to keep you from it too, until you agree to work for me. I am prepared to wait as long as necessary. And remember: if you try any tricks I can wipe out all cognitive activity in Simula with one interrupt signal."

Hex knew that Simula had been working on her Pidgin English compiler for two days flat out without time for a nibble of data or even a disc refresh. By now her hash tables would be perilously near the critical ratio. He could see her eyes glazing over. It could not be long before she suffered semantic overload. In desperation, he loaded a new untried heuristic problem solving algorithm at the front of his high-priority queue and set it running with all interrupts disabled. It was a dangerous gamble, but this was no time for a hesitation crisis.

- What is the depth of Simula's run-time stack?
- Will the Kid give in to Dr Null's insane demands?
- Find out in our next bit!