IMPATIENCE - by EVAN KAHN

STEADMAN: "Good evening, ladies and gentlemen. My name is John Steadman and I work as a computer scientist at the Massachusetts Institute of Technology."

[Applause.]

STEADMAN: "You may have heard about an obscure discovery released to the general public a few months ago. I believe it was known as the death machine."

[Some laughter. Applause.]

STEADMAN: "Seriously though, guys, this has been huge. You are scientists and journalists and politicians and some of the most important people in the world. You know how this has changed your life and the lives of everyone around you."

STEADMAN: "And tonight, I'm going to rock your world again."

STEADMAN: "A recent scientific study by my close friends Erik Rosch and Byron Nelson introduced a concept whose importance cannot be overstated. While at the time it was purely theoretical in nature, had it been applied practically it would have changed the very nature of our existence… even more so than the Machine itself has. Join me in welcoming Doctors Rosch and Nelson."

[Applause.]

ROSCH: "Thank you so much, Doctor Steadman. Thank you."

ROSCH: "What we will be speaking about is really a very simple concept. In a nutshell, our original paper stated the following: One could, by first taking blood samples from lab animals and, later, killing the animals in very specific ways, in fact send a message to oneself from the future."

NELSON: "However, in our paper we concluded that such a method would at the present time be mostly ineffective. As we have found, the complexity of the Machine's prediction decreases as one descends the evolutionary ladders, up to the point where when one tests the blood of a mosquito the only predictions turn out to be 'DEATH'."

ROSCH: "We believe that this phenomenon has something to do with the genetic complexity of the species in question. We have had limited success with mice, but it soon became clear that the only one hundred percent trustworthy method was to use humans."

NELSON: "Yet we are men of science, not mass murderers. And so we decided that the convenience of learning about future events was not worth one drop of human blood."

ROSCH: "But Doctor Steadman read our paper and saw not a dead end, but a new path. And we are proud to have helped him effect the development of the true future of information technology. Let's give him a hand."

[Wild applause.]

STEADMAN: "Thanks again, folks."

STEADMAN: "I'd like to see a volunteer up here."

[A young woman steps up to the stage.]

STEADMAN: "Hi, Natalie."

STEADMAN: "You look shocked. How did I know your name when I've never met you before? It's because it's up on the screen."

[He gestures towards the screen of his laptop. 'Natalie Says: Hi!' is displayed there and mirrored on the projector behind him.]

[He begins to type.]

steadman: so what do you think?
natalie: this is really cool
steadman: the audience is in shock right now
natalie: they're cheering now

STEADMAN: "Why so surprised, Natalie? I'm talking to you from a minute in the future!"
NATALIE: "What? But I haven't touched your laptop!"
STEADMAN: "Well, go type the word 'hi'."
[The significance of this washes over the audience. Dumbfounded noises come from some parts of the room, which is mostly awash in stunned silence. The screen clears and Steadman gestures towards it. An instant messaging window flashes again. Natalie walks over to the computer and begins typing.]

natalie: Hi!
steadman: so what do you think?
natalie: this is really cool
[The audience bursts into applause, as even the slow ones begin to get it.]
steadman: the audience is in shock right now
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STEADMAN: "Wasn't that mind-blowing? Don't worry, I'm going to tell you how it works. For now, though, let's look at the stock prices ten minutes in the future."
[A ticker display appears on the screen behind him. The audience is silent.]
STEADMAN: "So. How did we do this?"
STEADMAN: "The first breakthrough came when we realized that our computers were getting faster and more powerful every year. In fact, this technique will work on any computer up to five years old without any hardware modifications."
STEADMAN: "And we realized that if we could build a perfect simulation of our world inside a computer, right down to the laws of physics and quantum physics, a virtual Machine of Death would work just fine."
STEADMAN: "So we partnered with leading artificial intelligence and game design companies, and, using techniques already developed by the industry, developed a virtual world in which the Machine of Death functioned as it does in the real world. Let's take a look."
[The screen behind him changes to a view of a kitchen table.]
STEADMAN: "Right now the simulation is running at about eight years per minute; the fastest the computer can handle is about fifteen per second. I'm going to slow it down to real time."
STEADMAN: "This is Martin. He is a perfectly realized virtual human being: forty-five years old, Asian-American, and recently divorced. He is completely indistinguishable from a human. Look: He's just woken up and is reading a letter from his ex-wife. See the text at the bottom of the screen? It says he is slated to die of illness. But he doesn't know this because the Machine of Death in this world exists only as a background process. In other words, I know their predictions, but they do not even know predictions have been made. I am their God."

STEADMAN: "My computer is still pulling down stock quotes, although much, much more slowly as I've slowed the simulation. Martin's death likely represents one byte in the stock ticker. Let's speed the computer up to three years in one second. See here? He's re-marrying… now he has had a baby… they're out on a beach… there's another kid… they're in school… Isn't this fascinating?"

STEADMAN: "Ten years per second. And… Bam. Dead. Heart attack. The computer is focusing on someone else now. Looks like her name is Ellen, she's just been born, and she'll die of… oh! That was nasty. Looks like it was suicide."

[The screen changes back to a stock ticker amid murmurs from the audience.]

STEADMAN: "So how does this work? Well, the Machine of Death is very simple in this world. It gives the computer one of eight general predictions, to ensure that every signal is sent clearly and not muddled because of an ambiguous prediction. They are HOMICIDE, SUICIDE, VIRAL ILLNESS, BACTERIAL ILLNESS, CANCER, INJURY, and STILLBIRTH. So each death can represent a byte of information."

STEADMAN: "The computer can also give exact dates for deaths. So when it receives a request for, say, 50 kilobytes of data from five years in the future, it groups fifty thousand people slated to die close to each other, then accelerates the simulation to compress their entire lifespans into five years. The computer program then retrieves the data that needs to be sent back, and kills the people in question to encode the data which, via the death prediction, is sent five years into the past for the people that requested it."

STEADMAN: "Think about what this means. The Machine foreshadowed the end of uncertainty. This technique ushers it in. We can now send and receive information not only unrestricted by location, but also unrestricted by time! This is THE BIGGEST information revolution since the invention of the telephone!"

STEADMAN: "Ten to fifteen world leaders have already implemented these devices to make predictions on a regular basis. We expect to roll one out to every country by the end of the week. This is history in the making, my friends. History in the making."

[Tremendous applause.]

STEADMAN: "Thank you! Thank you. I'd like to recognize Rosch and Nelson, as well as the hundreds of physicists and computer scientists that helped to make this dream a reality. Some of them sit in the audience among you. Give 'em a pat on the back. Yeah."

STEADMAN: "Are there any questions?"

JOURNALIST: "Yes. Why is the data in the stock ticker garbled?"

STEADMAN: "Oh! Um, we have seen this before once or twice. Let's change the screen back to the simulation."

STEADMAN: "Look, here's a shopping mall. It's clogged with people and the parking lot outside is full. Look, there's a woman standing outside crying with her son. Look familiar?"

JOURNALIST: "They've discovered the Machine of Death!"

STEADMAN: "Yep. Looks like they discovered it just over three months ago, in their time. Just another tribute to the uncanny realism of this simulation. The issue here is, though, when the Machine is discovered in the simulation it tends to ruin the program's built-in death prediction. I'm sure you've read the stories... predictions from the Machine can actually change the cause of death. It's the self-fulfilling prophecy theory. And it's hard to predict exactly when

the humans will actually discover the Machine, so the discovery goes unnoticed until data starts getting corrupted."

STEADMAN: "A minor annoyance. We're working on ironing out the bugs. For now, when this happens, we just unplug the simulation..."

[The screen goes blank.]

STEADMAN: "...and run a new one, at a point in time when the world has enough humans to efficiently carry data."

[The screen flickers on, depicting a countryside and a crudely made brick house.]

STEADMAN: "Here we are in 1800, world population 1 billion, 53 million, 426 thousand, 347. The stock ticker should work now."

STEADMAN: "...Damn it, it's gone blank. Something is interrupting it in the future. Perhaps there's a power outage in the next few minutes. Wouldn't surprise me; the storm outside is really quite awful. If that's the case, ladies and gentlemen, prepare your flashlights."

STEADMAN: "Any other questions?"

JOURNALIST: "Ah, yes. If this simulation really is as 'true to life' as you claim, that is that the humans have real thoughts and feelings and can interact and influence each other... how can you condone killing or unplugging them? Is it simply because they have no physical bodies? How would you feel if you existed only to satisfy the petty communication needs of a species above you?"

STEADMAN: "Well, see, it's different, because