

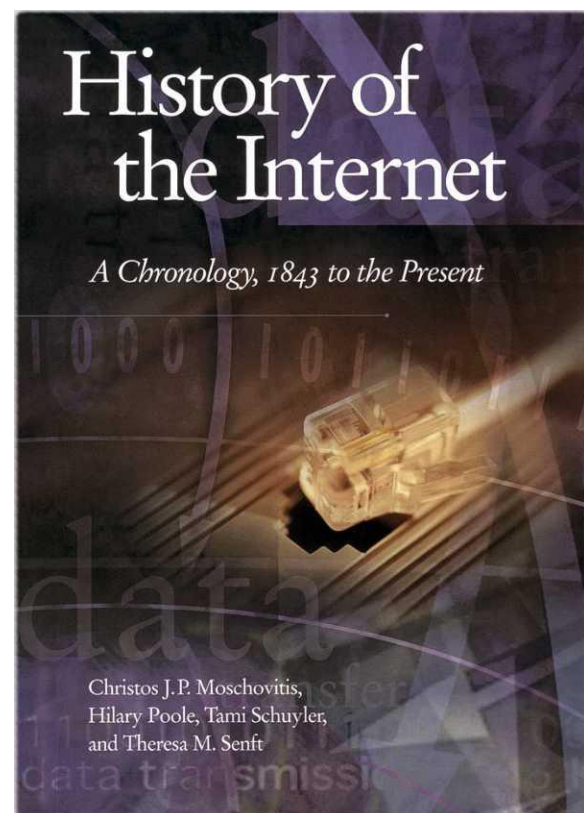


# My Quest for an Internet

## That Computes – Part 21

In this, the 21st installment of our weekly series at [emeagwali.com](http://emeagwali.com), we present Part 3/6 of Philip Emeagwali's lecture on his contribution to the body of knowledge that defines an internet that computes. The lecture [video](http://video.google.com/videoplay?docid=-1219655872942772550#) is posted at [emeagwali.com](http://emeagwali.com) and <http://video.google.com/videoplay?docid=-1219655872942772550#>

“The book “History of the Internet” described my ... proposed 65,000-computer “hyperball,” which would be the size of the Earth. Some have called this a “theorized Internet.””



A page in this book was devoted to my invention: a hyperball Internet.

# in Emeagwāli's Hands

Part 3

A Father of the Internet

University of Alberta

Edmonton, Alberta, Canada.

September 23, 2006

PHILIP EMEAGWALI

I was asked:

"Why are you called 'A Father of the Internet'?"

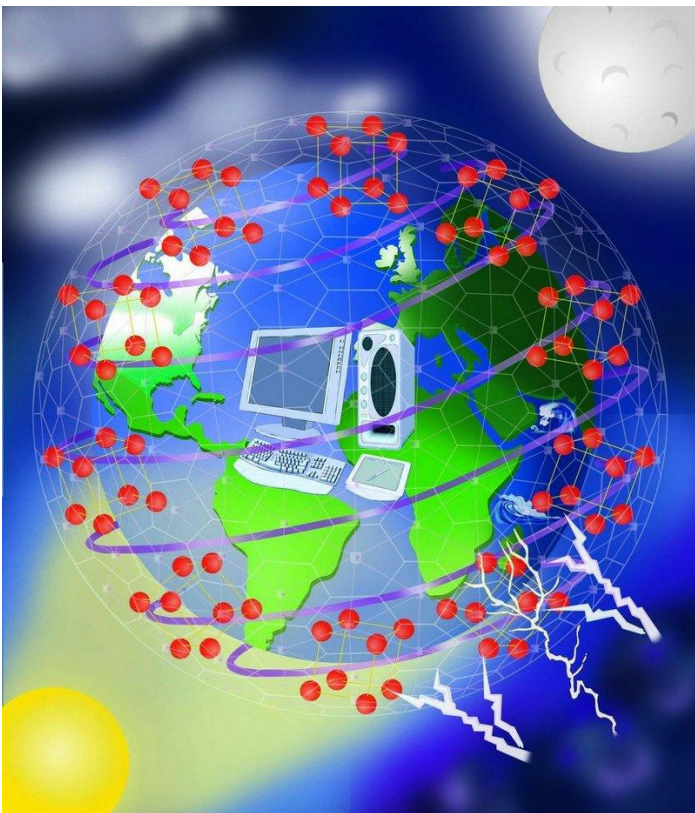
Any book on the history of the Internet will explain that the technology came from hundreds of fathers, as well as mothers, aunts, and uncles.

It was not born in a single place or time; ~~it~~ grew organically

incrementally, following trails that intersected with little rhyme or reason<sup>and</sup>.

In my trail, I theorized that 65,000 computers enshrouding the Earth as an electronic clothe could forecast the weather.

That theorized supercomputer, is an internet, defined and outlined by 65,000



My quest for an internet that computes began in the 1970s as a hyperball. I theorized it as an electronic cloth that enshrouds the Earth. I programmed it as 65,536 (that is, two-to-power 16) sub-computers each at one of the 65,536 vertices of a cube in a sixteen-dimensional universe. This is one artist's rendition of my theorized Internet described in the book "History of the Internet."

Computers.

The book "History of the Internet" described my computations and communications using 65,000 sub-computers connected as a hypercubic internet. It also described my theorized "hyperballs," as an internet defined and outlined by 65,000 computers, which would be the size of the Earth.

I began by theorizing how to connect 65,000 computers around the Earth, as an internet that is a supercomputer, and vice-versa.

I lifted my supercomputer to an internet that used 65,000 sub-computers to compute and communicate any number in sight and turn my story into history.

The big idea was that I could use my knowledge of deeply nested networks as a metaphor for plants, animals, and other living entities who, through their interactions, were continuously creating their own hyperball around the Earth.

I was also trying to look into the distant future—an exercise that is like ~~trying~~ setting our brains on fire. New knowledge is often counterintuitive and likely to be rejected, at least at first.

It is a mystical, poetic experience to stand on the outer limits of knowledge, on a place that has no beginning and no end.

We know that in four-dimensional time and space, our collective lives form an unbroken chain that began three and a half billion years ago as an embodied consciousness that continuously converted matter and energy into organic material.

As such, our existence is greater than the sum of the parts. Such an idea adds a whole new dimension to sustainable development.

Hopefully, this conversion and growth will extend to the death of our sun, or perhaps even beyond.

Philip Emeagwali  
emeagwali.com

Part 3/5

## On the Fathers of the Internet

The lecture [video](http://emeagwali.com) is posted at [emeagwali.com](http://emeagwali.com) and <http://video.google.com/videoplay?docid=-1219655872942772550#>

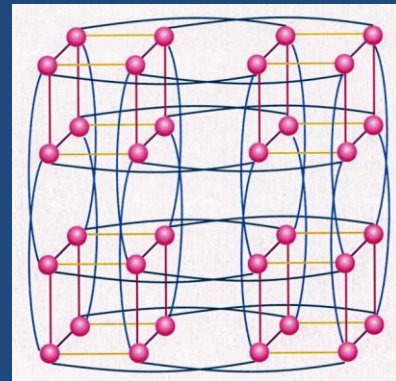
I was asked:

“Why are you called ‘A Father of the Internet’?”

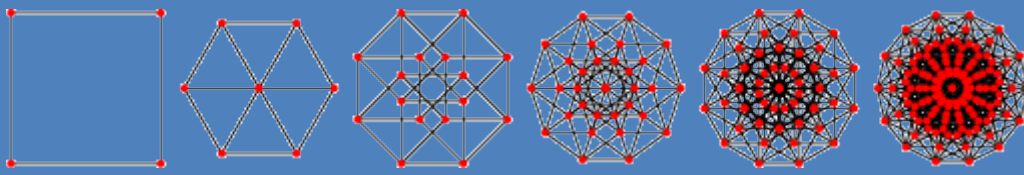
Any book on the history of the Internet will explain that the technology came from hundreds of fathers, as well as mothers, aunts, and uncles. It was not born in a single place or time; it grew organically and incrementally, following trails that intersected with little rhyme or reason. In my trail, I theorized that 65,000 computers around the Earth could forecast the weather. That theoretical supercomputer, with 65,000 nodes, is known today as a theoretical Internet.



My quest for an internet began in the 1970s as a hyperball. I theorized it as an electronic cloth that enshrouds the Earth. I programmed it as 65,536 (that is, two-to-power 16) sub-computers each at one of the 65,536 vertices of a hypercube in my theorized sixteen-dimensional universe.



The configuration of my five-dimensional hypercube (that is, two-to-power 5) with 32 sub-computers each at one of the 32 vertices of a cube in a five-dimensional world.



The book "History of the Internet" described my calculations using 65,000 processors connected as a hypercube. It also described my proposed 65,000-computer "hyperball," which would be the size of the Earth. Some have called this a "theorized Internet."



around the Earth.

Although I began by investigating the possibility of interconnecting 65,000 computers around the Earth, the bigger idea was that I could use that knowledge as a metaphor for living entities who, through their interactions, were creating their own "hyperball"

I was also trying to look into the distant future - an exercise that is like setting our brains on fire. New knowledge is often counterintuitive and likely to be rejected, at least at first. It is a mystical, poetic experience to stand on the precipice of unknown knowledge, in a place that has no beginning and no end.

We know that in four-dimensional time and space, our collective lives form an unbroken chain that began three and a half billion years ago as an embodied consciousness that continuously converted matter and energy into organic material.

As such, our existence is greater than the sum of the parts. Such an idea adds a whole new dimension to sustainable development. Hopefully, this conversion and growth will extend to the death of our sun, or perhaps even beyond.

