

Addendum 2: 21st Century Communications (1950 - 2019)

Second - Modern Languages

Note: “Sapien” = “Homo Sapien” = “Human Being”

Computer Languages

Computers have their own unique language unlike any Sapien Natural Language.

Essentially, computers communicate with a very simple binary language, 0's and 1's.

These are called Computer Languages.

Sapiens communicate with Computers via the Computer Languages.

These communications are called Programs, which consist of a sequence of Computer Language “commands”.

First came simple binary number words.

Then, Hexadecimal numbers and 8 Bit Bytes.

Then Assembly Language words or commands.

Then “higher language” program languages like ForTran and Cobol

Then Basic and Pascal

Easier and easier to write programs.

Then Python and Java and JavaScript, etc.

These higher and higher level computer languages were easier and easier to write programs to communicate with the computer.

Then, in 1988 a completely new much higher level language was created by a brilliant young theoretical physicist (Ph.D. at age 20 from Cal Tech), Stephen Wolfram, named **Mathematica**.

Wolfram has said that Steve Jobs suggested this name. Jobs did bundle Mathematica with his new NEXT computer and this was used to create the World Wide Web by Tim Berners-Lee.

Mathematica became a widely used programming language used by

scientists worldwide.

Still a Mathematica Program was not useful for communicating with other Sapiens, only with a computer.

Computer program were NOT a practical way for two Sapiens to communicate.

No computer could understand a Natural Language Message.

No Human could understand a Computer Language Message.

In 2009, that all changed and the Sapien species once again entered a new level of Civilization.

Wolfram Alpha

Natural Language to Computer and MORE!

STEM Math is Revolutionized Too!

The Best is Yet to Come!

As Mathematica grew more and more powerful and tapped into more and more databases Wolfram wondered if it would be possible to create a Mathematica Program that could recognize simple Natural Language commands and translate them into a Mathematica program to answer the questions or respond to the command.

It turns out he could.

In 2009 a very large Mathematica Program (50 million line program) was introduced to the world which could answer Natural Language questions or commands.

<https://www.wolframalpha.com/>

Simply go there and type in questions or commands. Unbelievable!

It's now a Brave New World, for better or worse.
Essentially all the factual information in the world is at your finger tips and can be displayed in a wide variety of modes. Furthermore . . .

Wolfram Alpha Revolutionizes STEM Math.

Wolfram Alpha will solve virtually any Math Problem very quickly and in ways impossible manually.

A STEM student can now master Calculus and Differential Equations in a

very small fraction of the time required for the old now obsolete approach.

The manual algorithms which are very difficult to learn and master and which are limited in their capability are now obsolete.

Recall what the Scientific Calculator did for arithmetic operations. It was revolutionary in 1972 when the HP-35 made all manual techniques obsolete. No more Slide Rules and Log and Trig Tables.

Wolfram Alpha is MUCH MORE revolutionary.

Calculus and Differential Equations are no longer a Great Barrier to STEM subjects.

Wolfram Alpha is a great Tunnel through this Great Math Barrier opening the STEM fields to many more students. Truly, a New World!

In Tiers 4, 5, and 6 we present all of the STEM Math subjects in a revolutionary new way which is Vastly Superior to the Classical Standard Math Curriculum.

You don't even have to go to Wolfram Alpha to experience this.

Wolfram Alpha is the basis for SIRI on the i-phone.

Modern A. I. technologies have also made the understanding of Natural Language verbal commands possible, so we can even communicate with tools like SIRI via voice.

There is one "problem".

You can only ask one question or pose one problem at a time.

You can't write a more complex program with Wolfram Alpha to make your computer perform a more complex activity.

And, now that has changed too!

In 2016 a revolutionary new programming language was introduced to the world.

Wolfram Language will Revolutionize STEM.

Wolfram Language will Revolutionize how Sapiens deal with the world in myriad ways.

What if you could write a Mathematica Program using Natural Language commands?

And, what if it was easy to understand the Mathematica Program just by looking at it?

For the first time in history, one would be able to communicate with BOTH Computers and Sapiens with this new language.

Stephen Wolfram combined the natural language of Wolfram Alpha with the Mathematica Programming Language to create Wolfram Language.

Now, a Sapien can write a Wolfram Language Program that is quite complex and sophisticated that the Computer can execute AND that another Sapien can understand too.

Stephen believes that modern properly educated Sapiens will now have a new language to communicate with that is vastly superior to any Natural Language in many situations.

Just from a very brief study of the Wolfram Language I believe he is right.

A student today can learn Wolfram Language much easier than any of the classical computer languages like Python or Java, etc.

Better yet, a Sapien can look at a Wolfram Language Program some other Sapien has written and understand it too!

Indeed, Stephen says that he can express many things in Wolfram Language that is difficult or impossible to express in any Natural Language.

Today, one can obtain access to all the Wolfram Tools, Mathematica, Wolfram Alpha, and Wolfram Language in one small inexpensive Computer that has many other advantages and features too!

The SupraComputer. 2018

Wolfram bundles all three of the Wolfram Tools with the Raspberry Pi, RPi, a wonderful single board computer that costs \$35 USA\$ from the UK.

The RPi uses the Linux Operating System which has many advantages, and requires a variety of peripheral components, and is pretty difficult for a non-technical person to use.

The SupraComputer is based on the RPi with a lot of peripheral components, and many other educational components that is very easy to use.

Simply go to: <https://supracomputer.org/> to learn all about it.

You will note the SupraComputer comes with many things that are of great value to students of all ages.

The SupraComputer is a great way to surf the Internet without fear of viruses thanks to Linux.

Along with the Six Tier Program the SupraComputer revolutionizes modern math education.

Modern 21st Century Math Education is Vastly Superior to the obsolete classical 20th Century Math Education called the Standard Math Curriculum.

It is just as difficult today to foresee the next 50 years and future generations' lives as it was to foresee our futures was in the 1950's.

I know, I lived through all of this, and I can tell you NO ONE foresaw the future we are living in today with such technologies as:

Smart Phones – Blockchain - Convolution Neural Networks - Alpha Go - 3D Printing - 5G (Internet of everything - Autonomous vehicles - Space revolutions – CRISPR- Cas9, Thorium Nuclear Reactors, and on and on.

Prepare your children for the future.

One good way is to teach them modern 21st Century Math and now, introduce them to Wolfram Language via the SupraComputer.

Is this a Sales Message?

YES.

First, educate yourself, and then . . .

Give your children a wonderful future with the latest 21st Century Math Education and Technologies.

Two choices available today are:

<https://homeschoolertoday.com/> for Math Education both Free and No Risk Products.

<https://supracomputer.org/> for Wolfram Tools including Wolfram Language and MORE!