



What is Quantum Computing?

[From wikipedia.org (edited to fit)] Quantum computing is a type of computation that harnesses the collective properties of quantum states, such as superposition, interference, and entanglement, to perform calculations. The devices that perform quantum computations are known as quantum computers. Though current quantum computers are too small to outperform usual (classical) computers for practical applications, they are believed to be capable of solving certain computational problems, such as integer factorization (which underlies RSA encryption), substantially faster than classical computers. The study of quantum computing is a subfield of quantum information science.

Quantum computing began in 1980 when physicist Paul Benioff proposed a quantum mechanical model of the Turing machine. Richard Feynman and Yuri Manin later suggested that a quantum computer had the potential to simulate things a classical computer could not feasibly do. In 1994, Peter Shor developed a quantum algorithm for factoring integers with the potential to decrypt RSA-encrypted communications. In 1998 Isaac Chuang, Neil Gershenfeld and Mark Kubinec created the first two-qubit quantum computer that could perform computations. Despite ongoing experimental progress since the late 1990s, most researchers believe that "fault-tolerant quantum computing [is] still a rather distant dream." In recent years, investment in quantum computing research has increased in the public and private sectors.

There are several types of quantum computers (aka quantum computing systems), including the quantum circuit model, quantum Turing machine, adiabatic quantum computer, one-way quantum computer, and various quantum cellular automata. The most widely used model is the quantum circuit, based on the quantum bit, or "qubit", which is somewhat analogous to the bit in classical computation. A qubit can be in a 1 or 0 quantum state, or in a superposition of the 1 and 0 states. When it is measured, however, it is always 0 or 1; the probability of either outcome depends on the qubit's quantum state immediately prior to measurement.

Any computational problem that can be solved by a classical computer can also be solved by a quantum computer. Conversely, any problem that can be solved by a quantum computer can also be solved by a classical computer, at least in principle given enough time. In other words, quantum computers obey the Church–Turing thesis. This means that while quantum computers provide no additional advantages over classical computers in terms of computability, quantum algorithms for certain problems have significantly lower time complexities than corresponding known classical algorithms. Notably, quantum computers are believed to be able to quickly solve certain problems that no classical computer could solve in any feasible amount of time—a feat known as "quantum supremacy." The study of the computational complexity of problems with respect to quantum computers is known as quantum complexity theory.

Read the full article here: https://en.wikipedia.org/wiki/Quantum_computing

Presidents Corner

Dear Members,

Well another month gone and time to start a new month. At this time we believe that we are able to again meet in the party room at Apple Barrel (at Sapp Bros.) in C.B. Do we need to find a *new warmer* placed to meet? Share you ideas with us!!

If you have any ideas for meeting demonstration topics, let us know!
Our March 15, 2022 meeting will be even better if you're all able to attend!
Hope to see you there!

VOTING TIME FOR 2022-2023 COMING SOON!
April is our nomination month. May will be voting month.

Sincerely,
David Ladd

Please check back often at
<https://www.mapcc.com>
For updates as we have them for our next club meeting.

Thank you for your support.

Meetings – January-November (*usually*)
Apple Barrel (at Sapp Bros.)
2608 S. 24th St.
Council Bluffs, Iowa
MEETING BEGINS: 7 PM (NOT in December)

Minutes of the February 15, 2022 Meeting

The meeting was called to order at 7pm with David Ladd presiding; there were 9 members present.

First Drawing

The \$10 drawing was won by: Jeff Worley.

Minutes and Treasury Report

Minutes and treasury reports were read and approved by the members present. Included the costs of the Christmas Party and donations the club made.

Old Business

None.

New Business (and Discussions)

Nominations will be in the month of **April** with voting done on the following month (**May**). CoCoFEST! in Chicago is scheduled for May 14th and 15th of 2022 (for those who remember the Tandy/Radio Shack Color Computer from which this club was founded upon. David explained this and covered some of the other “Retro Computer Fests” that are commonly held annually around the USA. The 64-bit OS version for the Raspberry Pi has been officially released for the version of the Raspberry Pi versions that have 64-bit processors. Jeff Worley tried using an M.2 NVMe solid state drive for an older PC, but sadly, the BIOS/UEFI was not capable of booting from it. The group then talked about other options and devices that one might use to get a speed boost on older computers. Greg has a TV Over-The-Air card that let’s him watch and record from his PC. We asked him to give us a demo at an up coming club meeting if he’d be so kind to. We went around the room asking everybody what they’ve been up to.

Demo

The “demo” was done by Bruce on using Mail-Merge from a spreadsheet table from LibreOffice Writer.

Stick-Around Drawing

The stick around drawing (\$3.50) was won by Don Atkinson.

Adjourned

Meeting was adjourned at 8:40pm.

Minutes recorded by Bruce 02/15/2022

M.A.P.C.C.

Established 1982

The Metro Area Personal Computer Club Newsletter is published monthly and posted on the club website: <http://www.mapcc.com>

Meetings:

3rd Tuesday of the month at 7 p.m. (WHEN ALLOWED TO)

Apple Barrel (party room)

2608 S. 24th St.

Council Bluffs, IA 51501

Elected Officers:

President: David Ladd

Vice President: Kevin Holloway

Secretary: Bruce

Treasurer: Kevin Holloway

Appointed Officers:

Newsletter Editor: Bruce

Annual Membership Dues:

Individual: \$15.00 Family: \$20.00

Club Motto:

“Pass It On”

Contact: (531) 600-8847