Notes For SLCC Zoom Meeting 1-28-2025

Hosted by Kevin

In Attendance: Kevin, Robbie, Don, Michael, Bob, Scott, and Bill

Quick recap

The team discussed their experiences with various development tools, programming languages, and hardware, including the Mac 65, 6502, 6507, and Atari 800. They also explored the potential of AI in programming, with a focus on Atari Basic and its limitations, as well as the use of AI in generating web pages and summaries of meetings. Additionally, they shared personal anecdotes and experiences related to dental care, health issues, and the evolution of calculators and cars.

Next steps

• Bill to correct the information about Carrie Underwood being Lenore's cousin (not sister) in the SLCC Meeting notes.

• Kevin to continue organizing and testing ST software and hardware.

• Michael to research more about the Deep Seek AI and its impact on the tech industry.

• Kevin to follow up with his son about the progress of his semester-long website project.

Summary

Mac 65 Development Tool and 6502

The participants discussed their experiences with the Mac 65, a development tool for the original trans key. Michael shared his recollection of using Mac 65 in 1990 and his wish for it to use extra RAM. Scott mentioned his use of Mac 65 for assembly and how he

broke it down into different functions saved as separate files. They also discussed the limitations of the 6502 instruction set, with Scott recalling his struggles with the lack of orthogonal instruction set and the absence of an instruction to increment the accumulator. They also touched on the history of the 6502, including its defects and the price drop over time. The conversation ended with a discussion about the 6507 and its differences from the 6502.

2600 Processor Capabilities and Tools

The participants discussed the capabilities of the 2600 processor and the advancements in programming tools. They praised the simplicity of the hardware and the open architecture, which allowed for better coding and more tricks. They also discussed the availability of better tools for programming the VCS, which made it easier to create better content. The conversation also touched on the idea of building a custom system with multiple CPUs and dedicated memory banks. The participants agreed that each CPU would need its own stack and memory, and that clever techniques could be used to manage local work within its own RAM.

Atomic Operations in Shared Memory

The team discussed the challenges of atomic operations in shared memory, particularly in the context of multi-threaded processors. Scott shared his experiences with a multi-threaded processor, where every instruction was atomic and could not be interrupted. He explained how he managed to increment and decrement values atomically, while ensuring that other threads could read and modify the values without interference. The team also discussed the use of

semaphores as a solution to prevent simultaneous access to shared memory. The conversation concluded with the mention of an upcoming add-on board for the 800, which might support the latest AI.

AI Meeting Summary and Podcast Creation

The team discussed a new feature that Bill had been experimenting with, which involves uploading meeting minutes to an AI system for analysis. The AI then generates a summary or podcast based on the meeting content. Bill demonstrated this feature, showing how it could be used to create a podcast from past meetings. The team expressed their admiration for this feature, with Michael suggesting it could even be used to create a podcast for the San Leandro Computer Club. Bill also mentioned that the system allows for querying of meeting notes. The conversation ended with Bill sharing the link to this feature with Kevin.

Clarifying Misinterpretations and AI Limitations

In the meeting, Michael and Bill discussed a potential misinterpretation in a project involving Carrie Underwood. Michael clarified that Carrie Underwood is not the sister of the person involved in the project, but rather her cousin. Bill mentioned that he could edit the information to correct the misinterpretation. They also discussed the limitations of AI systems, particularly in terms of accuracy and the potential for misinterpretation. Bill mentioned that AI systems can now reference web pages for information, which can help verify facts. The team also shared personal anecdotes about similar experiences with incorrect information.

Robbie's Telescope, and Planets

Robbie also shared his ongoing work on an 8-inch reflector telescope and his dissatisfaction with the Telrad finder. The team also reminisced about a past meeting where Garrett didn't win anything,

leading to a light-hearted discussion about rigging the drawing. Additionally, the team discussed the visibility of planets in the night sky, with Michael sharing his ability to see them from Santa Rosa. The conversation ended with a discussion about the wobble of the solar system when planets align on the same side of the sun.

Exploring Atari ST Software Emulators

Kevin discusses his recent activities with Atari ST software, focusing on a unique DOS emulator called ST.ME that he discovered. This previously undocumented software allows the Atari ST to run DOS 6.22, albeit slowly. He compares it to the more well-known PC Ditto emulator, which requires extensive configuration. The group also reminisces about other emulators like Magic Sack and Spectre GCR, which allowed Atari ST computers to run Macintosh software, often faster than original Macs. Kevin mentions testing external floppy drives and finding various games and magazine-distributed software in his collection.

AI, Atari, and Quantum Computing

The team discussed the potential of AI, specifically the Atari 800 basic program for tic-tac-toe and the Chat GPT. Bill demonstrated how to list the Atari 800 program in the Chat GPT window, but encountered some issues. The team also discussed the release of China's open-source AI, Deep Seek, which allegedly caused Nvidia's stock market value to drop by nearly 600 billion dollars. The conversation also touched on the potential of AI married to quantum computing, with some members expressing concerns about the implications. The conversation ended with a light-hearted reference to Skynet from the Terminator.

Vulnerabilities of Modern Cars Discussed

The group discusses the vulnerabilities of modern cars to hacking and remote control, referencing examples from TV shows and movies. They reminisce about older car models, particularly Volkswagen Bugs and buses, sharing personal experiences of learning to drive in these vehicles. The conversation highlights the simplicity and mechanical nature of older cars, including their lack of modern features like seatbelts, air conditioning, and electronic fuel gauges.

Exploring AI in Programming and Calculators

The team discussed a program created by Bill for a game, which they found to have some issues. They decided to save it as a text file and download it for further examination. The team also discussed the use of AI in programming, with Kevin sharing his son's experiences with AI tools in his classes. They agreed that AI is a valuable tool for programming, but it requires some manual adjustments and understanding. The conversation also touched on the evolution of calculators and their acceptance in education. Lastly, Kevin shared that his son is learning C++ and web development languages like Javascript and HTML.

Exploring Atari Basic and Javascript

In the meeting, Bill shared his experience of generating a web page with a basic self-contained program written in Javascript. He demonstrated how to upload it to the internet and play a game of Tic-Tac-Toe. Scott and Kevin discussed the limitations of Atari Basic, including its inability to handle Boolean operations and 2D arrays. They also discussed the potential for errors when reading

data and resetting the pointer. The team agreed to continue exploring Atari Basic and to meet again next week for further discussions.