**Name:** mcp-399-cswg-workshop-agent-control-of-git-repositories-via-cbor-messaging
**Title:** Agent Control of Git Repositories via CBOR Messaging
**Status**: Draft -- anyone can edit.

*See the [MCP index](#) to create or find documents, or [mcp-0-readme](#) for an overview.*
*The headers above are machine-readable; please preserve format.*

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Text checkins (10 mins)

- Steve
  - epiphany: AIDDA should be using commit message as the prompt
    - working out the details, but expect to have this change implemented this week
  - started work on a decision support system tool (AIDSS?) that helps manage LLM chat trees in a git repository
    - each prompt and its LLM response are in a commit
    - chains of commits on a branch correspond to a git branch
    - going back to earlier in the chat and branching off in a different direction starts a new git branch
    - LLM assistance for rolling up a branch into a new summary branch
- Donaldo
  - After chat w/ Steve last week, I think makes sense to set aside applying to MAS this round & focus on PG, launching & publishing stuff at a rate / freedom outside of academic calendar / restrictions
  - I used ChatGPT to do the 'trees' strategy that Steve is mention, I was creating a plug-in for the MakerEd site
    - A bit confusing managing multiple branches in the web interface, 'which branch had that working piece i need?'
  - Trying out 3d print service, printing a replacement part for friend - PETG is annoying to use, stringy and forgot i needed glue stick to protect bed
- JJ
  - Large check in
  - SANS Halloween Hackfest Summit
  - Lots of family stuff. Including Kiki's Delivery Service.   :) Scheduling trips back home.
  - Using Claude.ai a bit. :)   I like it and it has a dyslexic friendly font
  - Thinking about attending Git Hub Universe: https://githubuniverse.com/
- Rebecca
  - Participated as a coach at city "fix-it" event, held at community college makerspace where I took my class. A nice event but was fewer people attending because it was a friday instead of the weekend

- Planning to sign up to make phone calls for "get out the vote" stuff. Somewhat tempted to join a carpool going to Arizona for doorknocking but I'm going to try the phone calls first and see how that feels. Really not sure if that's something I'd actually do but if so I would probably miss next week.
  - Feeling a little overwhelmed with the general zeitgeist of the world this week but I will probably be less stressed in a week or so
  - Also need to spend some time tidying up my area at the makerspace… sometime.
  - TI job new build is coming together, probably going to get to teach someone to solder soon which I have not done since pre-2020 mini makerfaire
  - Listened to a few sessions from a Particle.io conference event
    - Came across this https://www.tinyml.org/

Agent Control of Git Repositories via CBOR Messaging (70 mins)

- Git repo:
  - https://github.com/promisegrid/grid-poc
  - The goal is to be able to use 'x/git-cbor git2cbor' to convert a git object to a CBOR representation, and then use 'x/git-cbor cbor2git' to convert the CBOR representation back to a git object in another repository such that the commit hash is the same.  There should also be a few utility subcommands to help visualize the CBOR representation.
- Feedback (30 mins):
  - presentation outline here (everyone interleaves Q&A in the outline)
  - Donaldo shares example of managing 'branches' of conversations in chatGPT
    - Annoying to manage in the web interface
    - Steve shares tip, once a branch reaches result, going back up to question and giving back solution
      - How can we create a tool that does this better?
  - Steve share the code he's been hacking on
  - Code is under x/git-cbor/main.go
  - Looking at the commit history
    - The first prompt was a goal statement similar to above
    - Added an error message
    - Started adding requirements as bullet points
      - Deleting them as they are completed
  - Sub command cbor2diag - provides diagnostic output, shows how the commit messages get converted into CBOR hashes
  - Cbor2json - similar to cbor2diag, but now nicely formatted as JSON
    - 'jq' command makes it colored coded in terminal
  - Cbor2dot - creates a graph viz file to visualize the inputs of a hash
    - Tree blocks represent the folder structure, blob the files within that folder

- - - Bug: some orphaned blob files - they might be old versions of files that got updated
    - All of this representing a hyperedge
  - Graphviz hypergraph
    - The left to right axis is states of a system thru time
      - A and B : J and K are on separate timelines, relatively interacting
    - Event taking inputs B and K states and outputting back into separate timelines
    - Defining what happens at Event 11, where E split to Q and R
      - Maybe event 11 generates two products used by two different timelines, or rather different locations
        - Rebecca: Reminds me of 'guns and butter' model, where do you distribute your fixed resources at what %
      - A single git commit is a single edge, but what is a github issue? So maybe its a hyper edge like Event 11 that splits repo into competing commits
      - competing git commits e.g. Event 11 are handled by git at the branch layer, not the commit layer
    - What's missing in the cbor2dot is the transition function, identity of language model agent

Plan next workshop (10 mins)

- Possible line up for next few weeks (Steve set up gcal/discord hooks):
  - Grid-cli or grid-poc (Today)
    - Maybe POC that just takes data on input and spits out CBOR or vice versa
    - Maybe POC that takes CBOR in, runs a function, spits out CBOR
    - Maybe POC that takes an event, generates CBOR hyperedge, emits an event
  - ISM Paper review
  - Solidarity economy stuff, lack of tech talent, open source philosophy, missing the language around open source concepts, tools, terminology
    - Open source mindset
    - https://www.inmachines.net/ as an example of open source machines
    - Barriers
      - Technology gap
      - Scars of previous Theft, especially latest ai issues in art community
      - Ideas are valuable must be protected (this becomes a cost, opportunity cost, maintenance cost, operating cost)
  - Hypergraph stuff later, informed by code

- - - ■ See Rebecca's WB doc for the linkage between hypergraph and devops history stuff
  - ○ Richard re LMS demo