sequential verification for concurrency

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concurrency is hard
concurrency is hard

- design
- implement
- test
- debug
- measure
- ...
- verify
concurrency is hard!

sequence $\subseteq$ low conc. $\subseteq$ medium conc. $\subseteq$ high conc.
concurrency is hard! (?)

seq. $\subseteq$ low conc. $\subseteq$ medium conc. $\subseteq$ high conc.
concurrency is hard! (?)

seq. \(\subseteq\) low conc. \(\subseteq\) medium conc. \(\subseteq\) high conc.
concurrency is hard! (?)
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seq. ⊆ low conc. ⊆ medium conc. ⊆ high conc.
concurrency is hard! (?)
concurrency is hard! (?)

"H"

conc. "can" be ignored

seq. \( \subseteq \) low conc. \( \subseteq \) medium conc. \( \subseteq \) high conc.
concurrency is hard!?"

seq. $\subseteq$ low conc. $\subseteq$ medium conc. $\subseteq$ high conc.

"H"

conc. "can" be ignored

conc. "is" ignored
concurrency is hard! (?)

"H"  

conc. "can" be ignored  

conc. "is" ignored  

seq. \( \subseteq \) low conc. \( \subseteq \) medium conc. \( \subseteq \) high conc.
concurrency is hard! (?)

seq. $\subseteq$ low conc. $\subseteq$ medium conc. $\subseteq$ high conc.

conc. “can” be ignored

conc. “should not” be ignored (?)

conc. “must” be ignored
concurrency is hard!(?)

seq. ⊆ low conc. ⊆ medium conc. ⊆ high conc.

conc. “can” be ignored

conc. “should not” be ignored(?)

conc. “must” be ignored
concurrency is hard! (?)

"H"

conc. "should not" be ignored (?)

conc. "can" be ignored

conc. "must" be ignored

seq. \subseteq\text{low conc.} \subseteq\text{medium conc.} \subseteq\text{high conc.}
thank you(!)

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