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Subject: New Library for Review: A General-Purpose Asynchronous State Machine  
Posted by [dodobar](#) on Sun, 15 Jun 2025 08:08:26 GMT

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Hello all you fine people,

I have developed a new, general-purpose asynchronous state machine library and would like to propose it for inclusion in the U++ framework.

This library is designed to help manage complex application logic in a clean and maintainable way. It's especially useful for orchestrating UI flow or handling any long-running process without blocking, but it only depends on Core, so it can be used anywhere.

Key Features:

- \*Asynchronous by design to work well with the U++ event loop.
- \*Built-in state history with a simple GoBack() function.
- \*Powerful transition guards and before/after callbacks.
- \*Uses an idiomatic U++ design with One<> pointers for memory management.
- \*Comes with a comprehensive GUI test harness that validates all features.

I have started a discussion on GitHub with a full, detailed proposal and a link to the source code for review. I would greatly appreciate your feedback, thoughts, and suggestions there.

You can find the main discussion and all the details here:  
<https://github.com/ultimatepp/ultimatepp/discussions/281>

Cheers  
Curt

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