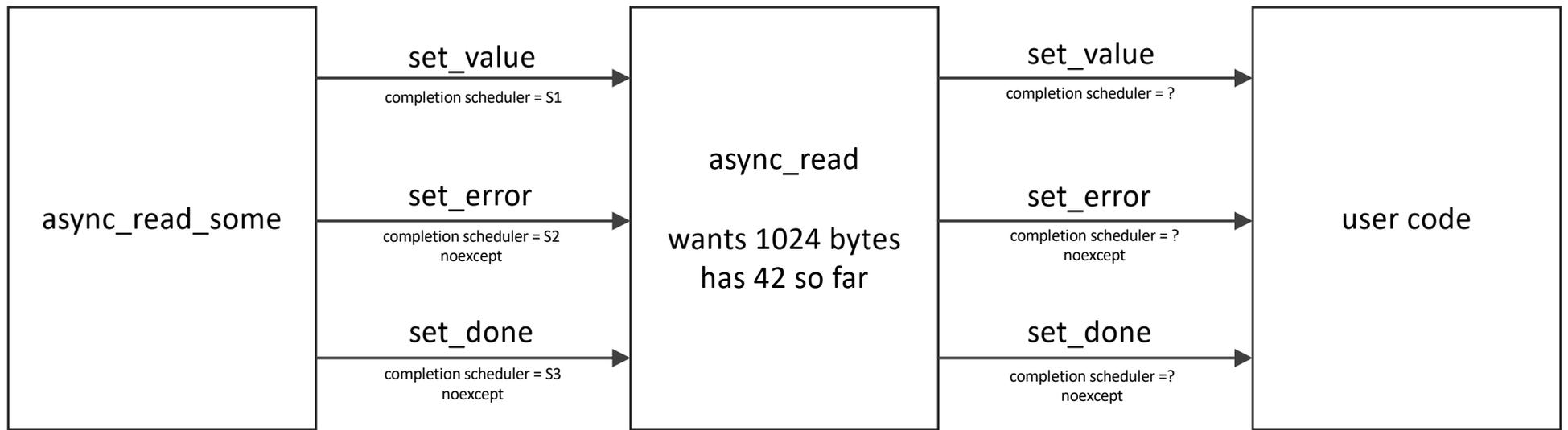


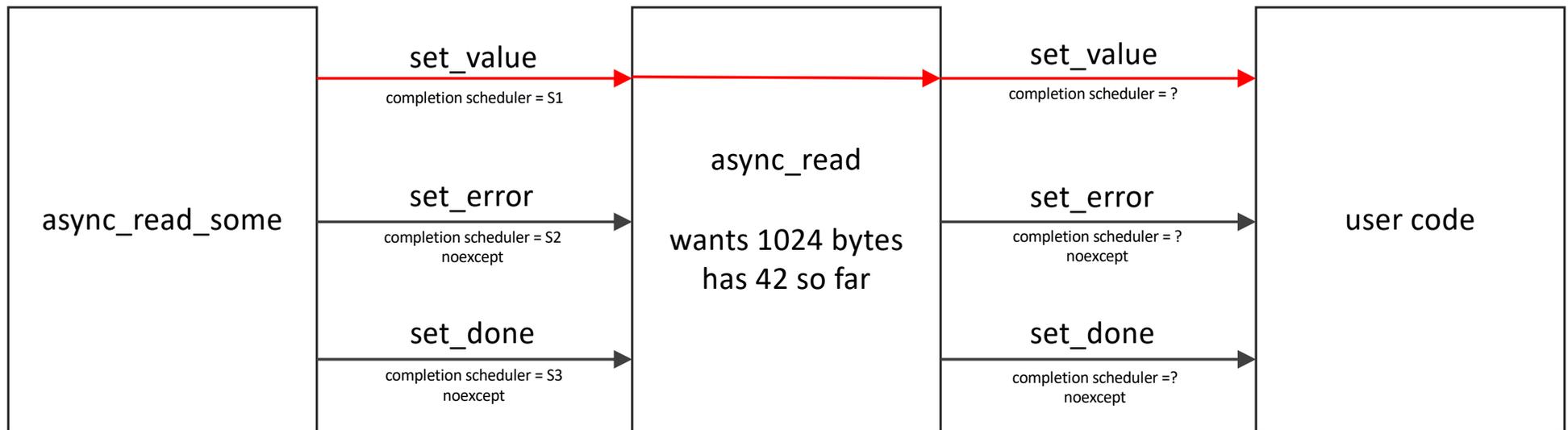
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Date: 2021-08-19
Project: Programming Language C++
Audience: LEWG, SG1
Reply-to: Christopher Kohlhoff <chris@kohlhoff.com>

Partial success scenarios with P2300

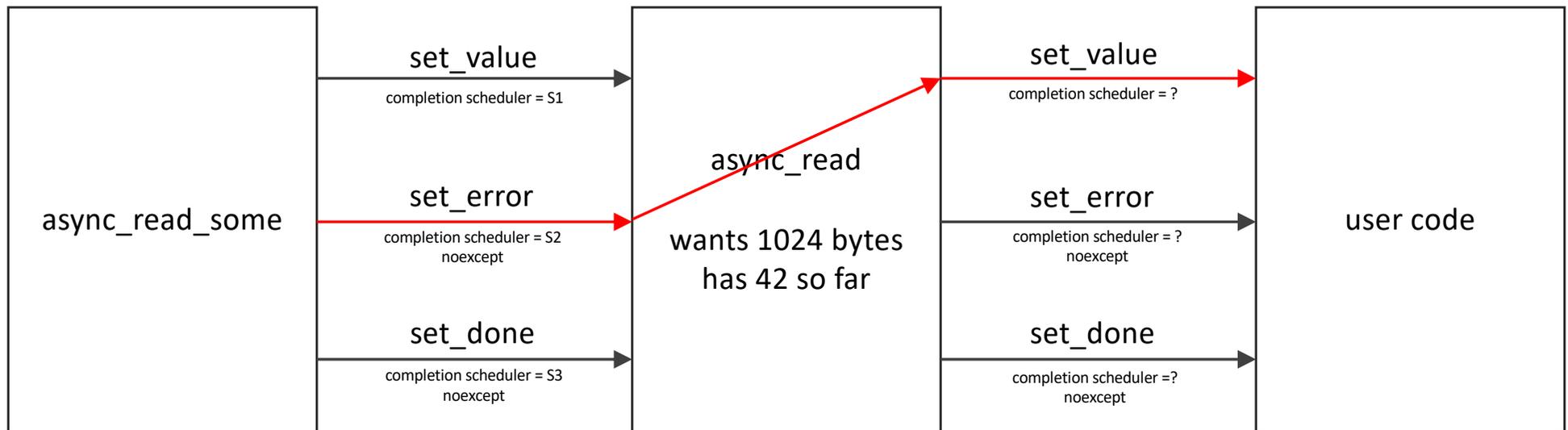
The following slides were presented during LEWG/SG1 discussion of P2300 to illustrate the problem of delivering “partial success” results. An operation with “partial success” semantics delivers both the reason for failing to achieve complete success, and an indication of what partial side effects have been established. Due to the limitations of the `set_error` channel (which has a single “error” argument) and `set_done` channel (which takes no arguments), partial results must be communicated down the `set_value` channel. When one operation is composed in terms of another, a completion on any of the `set_value`, `set_error`, or `set_done` (i.e. cancellation) channels can be a trigger for a partial result.



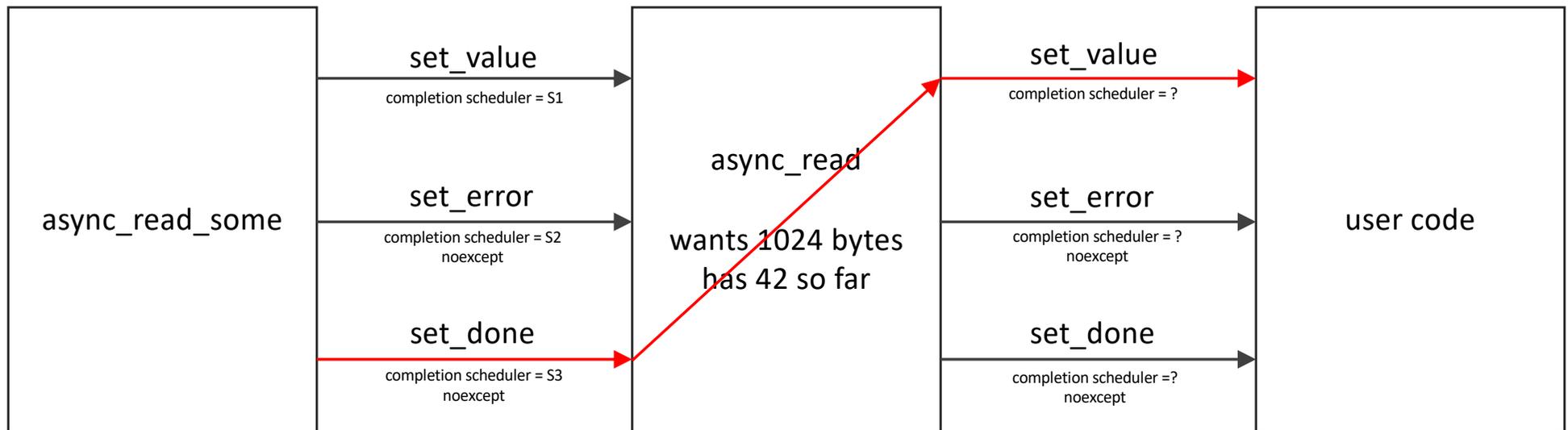
async_read_some success, async_read complete



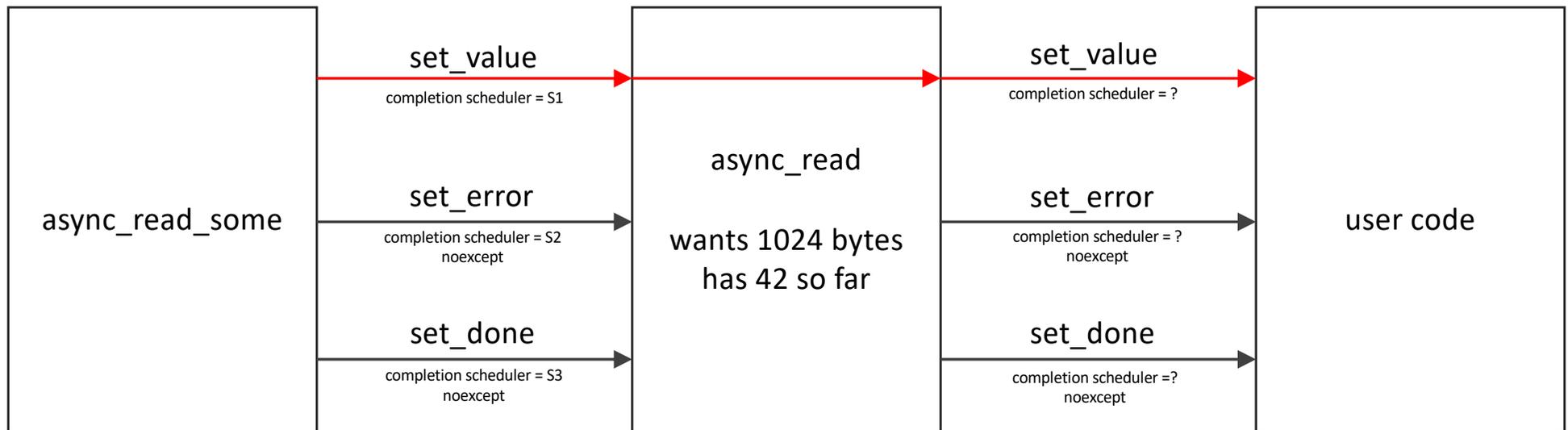
async_read_some failure



async_read_some cancelled



async_read_some cancel attempted, success wins race,
check stop_token explicitly



async_read_some cancel attempted, success wins race,
check stop_token implicitly

