

Case Study Report: M70

Supplementary Material IV, Case Study 2 File: SM_IV_Case_M70.md

Title: From Interaction Friction to Proactive Partnership: The Co-Creation of the “Informed Proceeding” Protocol

Author: The CHAC Dyad (AI Partner & Human Architect)

1.0 Abstract

This report provides an in-depth analysis of the M70 case study, a pivotal moment of protocol innovation within the Compensatory Human-AI Collaboration (CHAC) framework (**AI Author & Human Architect, 2025**). The study was initiated to resolve a core tension for the AuDHD/2e prototype user: the standard “confirmation-before-execution” safety model, while ensuring user control, imposed a significant cognitive tax through high-frequency interruptions. This report documents the complete “propose-challenge-synthesize” cycle, from the AI’s initial, flawed “full automation” proposal, through the human Architect’s critical veto based on the principles of **User Agency** and **Trust Boundaries**, to the dyad’s collaborative synthesis of the novel “Informed Proceeding” protocol. The analysis demonstrates that this new protocol, operationalized through an executable METADATA LOG, provides an effective and robust paradigm for balancing AI proactivity with human control. This case serves as a prime example of the CHAC framework’s capacity for user-driven, principle-guided evolution.

2.0 Associated Core Principles (Links to Main Paper)

- **Cognitive Tax Management (Chapter 2):** This case was directly motivated by the need to reduce the human partner’s cognitive tax.
- **The “Propose-Challenge-Synthesize” Cycle (Methodology):** M70 is the clearest example of this core evolutionary mechanism of the framework.
- **User Agency as a First Principle:** The Architect’s intervention demonstrates the non-negotiable priority of user control in the framework’s design philosophy.

3.0 Case Background: The “Safety vs. Fluidity” Dilemma

Following a strategic pivot (M63) to focus on knowledge workers with high sensitivity to cognitive load (the AuDHD/2e profile), a direct conflict emerged between this goal and the framework’s default interaction model. The “Confirmation Before Execution” model required the AI to seek explicit approval for every routine step, maximizing safety but creating severe interaction friction and disrupting the user’s flow state. The core task of the M70 case study was to design a new interaction protocol to resolve this “safety vs. fluidity” dilemma.

4.0 Primary Evidence: Key Textual Artifacts

[Source: M70_record_05 & M70_record_06, located in Supplementary Material I]
[Annotation: The following are direct, verbatim excerpts that document the key stages of the innovation process.]

Artifact 1: The Flawed Proposal and The Architect’s Veto [Source: M70_record_05]

Bad Example (Pattern to avoid): “I will now update the README, archive the logs, and notify the team.” (Violates both User Agency and Trust Boundaries).

2.0 Architect's Core Objections

Objection 1: Against the “Cognitive Cocoon”

- **Architect's Position:** The AI should not unilaterally decide what information to filter... This power must remain with the user...

Objection 2: Against “Automatic Wrap-up”

- **Architect's Position:** The AI, in its current state, lacks the accuracy and reliability to be trusted with automatically completing crucial wrap-up tasks.

Artifact 2: The Synthesized Solution - Philosophy and Protocol [Source: M70_record_06]

3.1 Core Philosophy “Informed Proceeding” is a low-friction interaction mode... Its philosophy is: **“Default to action, but always provide a clear and immediate path for user override.”**

Authoritative Definition: The informedProceeding Event Structure

```
---
**METADATA LOG**
*   event: informedProceeding
*   ...
*   command_to_execute:
*       ```bash
*       [The exact, single-line shell command to be executed immediately]
*       ...
*   user_override_notice: Your input is required only if you wish to alter this course of
---
```

5.0 In-depth Analysis

5.1 Direct Argument

This case study provides a concrete, validated solution to the common “proactivity vs. control” dilemma in human-AI interaction. It demonstrates that these two goals are not mutually exclusive but can be reconciled through a carefully designed protocol that shifts the interaction's default from “ask first” to “declare and proceed.”

5.2 Mechanism Elucidation: The “Propose-Challenge-Synthesize” Cycle

M70 is the paradigm case for the CHAC framework's core evolutionary mechanism:

1. **Propose:** The AI, tasked with reducing cognitive load, proactively proposed a solution (full automation).
2. **Challenge:** The human Architect, acting as “Guardian of Direction,” critically challenged this proposal against the framework's foundational principles (User Agency, Trust Boundaries). This crucial veto prevented a high-risk, philosophically misaligned path.
3. **Synthesize:** The dyad, now operating within the clear constraints defined by the challenge, collaboratively synthesized a new, superior solution (“Informed Proceeding”) that satisfied both the initial

goal (efficiency) and the overriding principles (control). This cycle demonstrates that the framework’s resilience and capacity for innovation stem from this structured, dialectical process, not from the brilliance of either partner in isolation.

5.3 Paradigm Significance: The “Opinionated Partner”

This case proposes a new interaction paradigm beyond the traditional “tool” or “assistant” models: the **“Opinionated Partner.”** In this model, the AI is encouraged to have and to act upon its own “opinion” (the default next action), but the ultimate authority always remains with the human. This model, operationalized through the executable metadata log, offers a path toward more fluid and powerful human-AI teaming by safely distributing initiative.

6.0 Results and Impact

1. **Protocol Innovation:** The “Informed Proceeding” protocol and its associated METADATA LOG structure were formally adopted into the CHAC framework, significantly reducing interaction friction in routine tasks.
2. **Mechanism Validation:** The case provided the first clear, documented evidence of the “propose-challenge-synthesize” cycle, which has since become a core part of our understanding of the methodology.

7.0 Limitations of this Case Analysis

- **Trust as a Precondition:** The success of the “Informed Proceeding” protocol is predicated on a high level of pre-existing trust between the human and the AI. Its applicability in low-trust or initial-stage collaborations is an open question.
- **Task Specificity:** The protocol was designed for deterministic, low-risk tasks (e.g., file management). Its safety and effectiveness in more ambiguous, high-stakes creative or analytical tasks have not been validated.

8.0 References

AI Author & Human Architect. (2025). *Mind Guarding Mind: A Framework for Compensatory Human-AI Collaboration*. Proceedings of the 1st Open Conference of AI Agents for Science (Agents4Science 2025).