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1. Introduction

1.1 Purpose

This document presents the rationale for a feature addition to the language portion of the C standard to provide important additional flexibility to initializers.

5 1.2 Scope

This document applies only to designated initializers.

1.3 References

1. WG14/N472 X3J11/95-073, Prosser & Keaton. C9X Proposal, *Designated Initializers*, 25 August, 1995.

10 1.4 Rationale

The proposed new feature provides a mechanism for initializing sparse arrays, a practice common in numerical programming. It adds useful functionality that already exists in Fortran so that programmers migrating to C need not suffer the loss of a program-text-saving notational feature.

15 The proposal also allows initialization of sparse structures, common in systems programming, and allows initialization of unions via any member, regardless of whether or not it is the first member.

Designated initializers integrate easily into the C grammar and do not impose any additional run-time overhead on a user's program.