

O2S Make: A Make for Dynamic, Distributed Environments

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We present O2S, a system for satisfying high-level user needs in a continually changing pervasive environment. O2S functions like make: the user specifies what she wants and O2S generates an implementation suited to the current environment of the user. In order to do so, we present a formalism for specifying intent in a program, a mechanism for satisfying (the) specified intent, and a component system used to dynamically compose an implementation to satisfy the user intent. Unlike traditional make, O2S assembles its implementations dynamically and attempts to maintain satisfaction of the user's goals despite a changing computing environment. Hence, we believe O2S will enable programmers to easily write applications for pervasive environments.