On the Logical Semantics of Computer Ethics

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ABSTRACT

There is a growing number of logical systems involved in the semantics of computer ethics. Deontic, epistemic and action logics are the most popular. Some examples of logical statements include: *A* lets *B* know that *p*, *A* shares his knowledge that *p* with *B* and *A* informs *B* about *p*. We suggest the use of abstract semantic theories, such as the theory of institutions, to provide a general framework for combining and translating such logics. This approach uses category theory and abstract model theory initially applied to specification and programming. Using techniques from Grothendieck institutions we present a methodology which allows the combination of all kinds of semantics of computer ethics, and we indicate some first applications to computer supported computer ethics.