A cubical set model of type theory

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We present a possible constructive justification of the axiom of univalence. Roughly speaking, the computations for dependent type theory can be described with lambda terms (extended with constructors and constants for primitive recursive functions), while for dependent type theory with the axiom of univalence, computations are described using a nominal extension of lambda calculus (with some additional "face" operations). Constants corresponding to the elimination rule for equality can then be described by induction on the types. We describe a possible implementation corresponding to this semantics. This also provides a model of types such as the circle, or the operation of propositional truncation. In particular, we get a computational justification of the axiom of description.