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Title: Permeable and Absorbent Materials in Fluid Simulations

We present a solution to fluid simulations that allows for the simulation of porous and absorbent materials. The motivation comes from the limitation of not having computational methods in place to allow for the propagation of fluid through materials during a fluid simulation. Our extension enables fluid simulations to create effects such as water flowing through soil or a towel wiping up spilled liquid on a kitchen counter. Basing the extension on well known physical laws, we can easily integrate our method into any fluid solver by extending boundary conditions, the Navier-Stokes equation for conservation of momentum, and the fluid volume solver. We demonstrate that our changes simplify fluid computations and we show how our method accurately computes fluid propagation through permeable and absorbent materials.