THE INTERNET may be the greatest technological advancement of our generation. It has opened a vast web of social and economic interactions that span the globe. However, the Internet is not immune to the affects of progress; it has changed the way we use technology for good (or bad). Computers are no longer simply productivity tools—we use them to explore the world, meet friends, shop, read, watch television, and play games as well. As computers begin to mediate our daily activities more and more, it becomes increasingly difficult to separate work from play.

The Minnesota Center for the Responsible Use of Technology aims to solve this dilemma. The center provides the education, support, and facilities to reconnect people with technology—as a tool for production rather than entertainment. The facilities will be used to host classes and seminars promoting responsible computer use in school and at the workplace, as well as providing high-end computer labs to the public—offering access to powerful software and machines such as laser cutters, 3-D printers, and plotters—that normally only large institutions can afford.

The building itself also employs technology responsibly. The center makes use of two existing residential buildings on the site rather than employing all new construction. Additionally, the building is heated, air conditioned, and ventilated using passive solar techniques, minimizing traditional heating, air conditioning, and air handling loads.

Located in the Dinkytown district of Minneapolis, the center is located near the University of Minnesota campus and downtown Minneapolis in a community swimming with young, university-educated professionals. Adjacent to the center is a large tech incubator which will provide opportunities to take the skills and products developed at the center into the real world.

WINTER:
Solar radiation is trapped above pitched-roof louver system (1). Interior ‘chimneys’ pull hot air from the roof into a rock bed below the building (2). This heat is stored in the rock bed and released into the building above through the floors throughout the day (3).

SUMMER:
Air in the building is stratified due to the open atria at the ends of the building. Hot air accumulates at the top of the building, where it is ventilated through mechanically operable windows (4). The release of hot air from the top of the building draws cool air in from the North side of the building (5). The cool air is drawn over the rock bed at night, flushing heat from the building (6). During the day, the rock bed absorbs heat from air passing over it, cooling the air, which is distributed throughout the building.
A speaker prepares for a seminar in the multifunctional gallery on the top floor. Two guests take advantage of a daylit breakout space on the north side of the building. Windows open to vent hot air on a summer day. A compos­ite image shows how the louvers on the top floor move ac­cording to changing solar conditions. A night image shows the quality of light spilling from windows and skylights.

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GOOGLE SKETCHUP, VRAY, PHOTOSHOP.