

Local Warming follows you: these infrared spotlights act like artificial 'suns' to keep you warm



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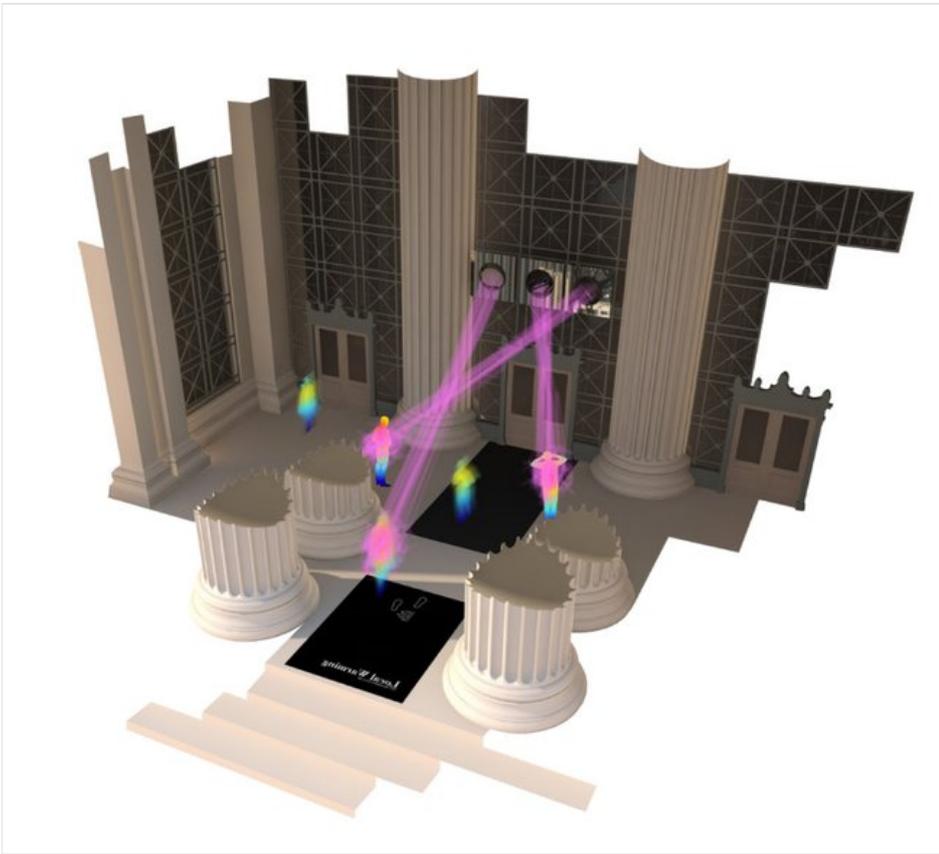


Promo image MIT

10X more energy efficient than traditional heating

What if instead of heating a bunch of empty space, you could keep people warm directly? That's what MIT engineers are working on, trying to find a more [energy-efficient](#) way to keep people comfortable in large interior spaces - often in largely empty buildings - that cost a fortune to heat (and thus use a lot of energy). And I'm not talking about handing out blankets and warm sweaters at the front door.

MIT's Senseable City Lab started from the realization that there's a "dramatic lack of correlation" between how many people are in a building and its heating-system energy consumption. And because commercial buildings represent over 20% of US energy consumption, this is a *huge* deal. So how could you put heat only where people are, rather than just heat up the whole thing all the time even if nobody's there to notice?



MIT/Promo image

Their answer is the Local Warming project, a kind of computer-controlled infrared LED spotlight that tracks people and acts as an artificial sun to them, keeping them warm at a distance without having to heat up empty space. They have a working prototype on display at the Venice Architecture Biennale until November. Above is a drawing that gives you an idea of how it works, and lower down you can see a video of it in action, tracking people and beaming heat to them when they come close enough.

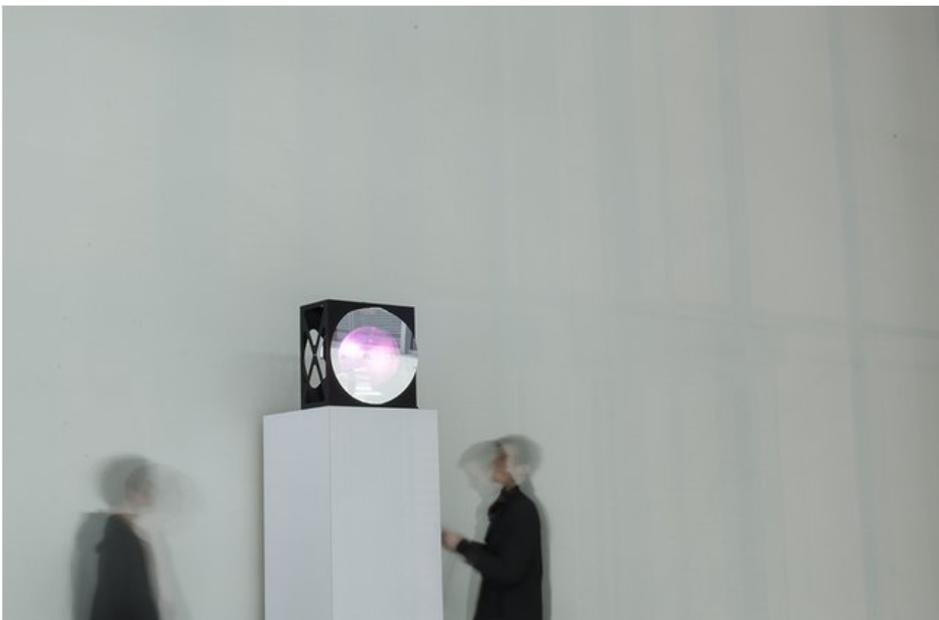


MIT/Promo image

The researchers believe that "a fundamental shift in climate control strategy towards occupant-localized heating will achieve an order of magnitude improvement in heating efficiency." While it might seem like science-fiction, as long as people are kept warm, I doubt most people would mind, especially if this uses 10x less energy.

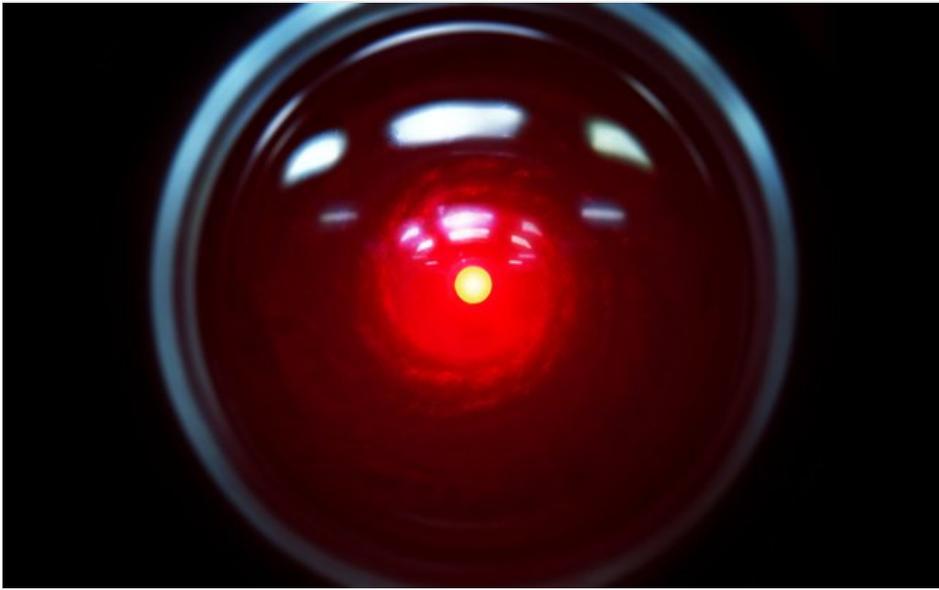
Of course, this type of system would make most sense in areas where there's a huge volume of air and a low density of people. Building lobbies and atriums would be ideal, while densely packed cubicle farms would probably still use traditional heating systems.

We can imagine all kinds of ways that this could be optimized, like for example, maybe optics on the infrared spotlight could send a wider beam to heat up a group of people standing close to each other while narrower beams (thus less wasteful) could be used for single individuals. Maybe a standard communication system could be devised so that people could set up preferences in their smartphones (ie. I like it when it's 72 degrees fahrenheit) and Local Warming systems everywhere would get that signal from your phone and try to keep you at that subjective temperature. The possibilities are many.



MIT/Promo image

But the real question is: [HAL9000](#), is that you?



HAL9000/Screen capture

Via [MIT](#) (pdf), [Wired](#)

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