Diffused light control can project in fully lit room

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(PhysOrg.com) -- Researchers at the Uchida Research Laboratory at Tohoku University, have created a high visibility projector screen that works on the principle of Diffused Light Control (DLC). The long and the short of this, means that screens will be able to show off their presentations at the office without having to turn out the lights, by

diffusing light from the area around the screen to create an artificial, localized dim area around the screen.

Basically, the screen is able to diffuses light sent by the projector, towards it target, while at the same time reflecting or absorbing the excess external light in the room. This creates a display that experiences no influence from the external light in the room. This means that the screen can project clear images into a brightly lit room. The screen can also be used to create custom digital signage, since it has the ability to be used in daylight, or a brightly lit indoor space.

The explanation from the researchers at the university show that the screen is made of a reflective panel and diffusion film. The projector is then mounted under the screen from a low angle, which not only reduces the amount of light needed to reach the screen, but allows for the reflective screen to change the direction of the light towards the observers and then the diffusion film diffuses that light. This allows the screen to show images to the viewer.

The screen was demonstrated with multiple panels, with seams, though

screens with no panels can be made in the near future. No word yet on when this projection screen will be available commercially, or what the system will cost.

More information: via DigInfo TV