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LSD makes images look a lot brighter

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WHETHER the source is a table lamp, a torch or the backlight on a portable computer, light tends to scatter randomly, causing strange shadows and flickering.

A new type of light-diffusing technology, developed by Physical Optics, promises to improve lighting in a wide range of applications, from flat-panel computer screens and projection systems to specialised flashlights used for aircraft inspection.

Called a light-shaping diffuser, or LSD, it provides a way to shape those normally unruly light waves by bending off-target rays in the right direction while smoothing out differences in intensity.

Diffusers are already used with the fluorescent backlight on liquid crystal displays to produce a uniform light source.

But the combination dramatically reduces the light's intensity. Physical Optics' LSD, which is based on a patterned holographic impression moulded on one surface of a thin, transparent material, retains close to 90 per cent of the light, compared with as little as 30 per cent for conventional diffusers.

A notebook computer screen fitted with an LSD would thus be up to 15 times brighter, allowing both better viewing and longer battery life.

Physical Optics' LSDs have also found their way into a depth finder for fishermen.