

March 2016

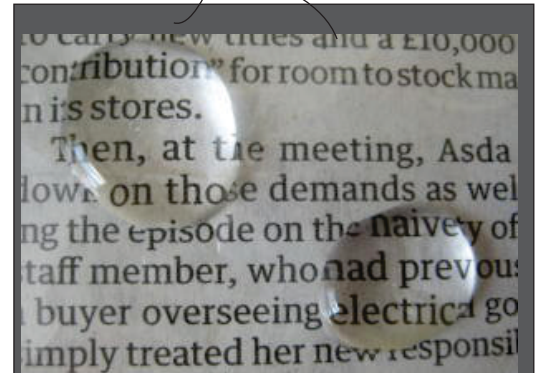
# NEWS' elite

*Art of innovation*

## Water Drop Lens

Physicist and inventor, Bruno Berge, has created a liquid optical lens.

Using a process known as electro-wetting, a water drop is deposited on a metal substrate and covered by a thin insulating layer. When a voltage is applied to the metal, it modifies the angle of the liquid drop.



The liquid lens is comprised of two liquids, water and oil, one is a conductor while the other is an insulator. A variation in the voltage causes a change to the curvature of the liquid to liquid interface, which changes the focal length of the lens.

The use of liquids allows for low cost construction.

There are no moving parts and electrical consumption is extremely low.

The lens has a large inverse focal length range, quick response, high optical quality and can operate in a wide temperature range.



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# **VLSI APPLICATION IN COMMUNICATION**

The VLSI technology is widely used technology but hardly anyone knows about it in depth. VLSI is mainly about the technology of combining the number of transistors based circuits into a single chip. Currently VLSI is combined with SDR technology to make the ease of use.

This technology is used in mobiles phones. SDR is a software defined radio. It is widely used in CDMA and CSMA technology. SDR is a technology which helps the device to tune to any bandwidth by using less hardware. The VLSI and SDR have been very helpful for the mobile companies to provide better service with combination of both as VLSI reduces the size and price of the mobile and SDR increase the flexibility of the module. The technology used in day to day can be classified in two main types GSM (Global System for Mobile Communication) and CDMA (Code Division Multiple Access).


Hence ,uses of this technology gives us advantages like lowering the package count, low board space, less board level connections, high performance and more reliability and lower the cost.

But this also has some disadvantages like this project can led to high risks, ,long fabrication time, lengthy designs, spiking problem, and leakage of power

Thus VLSI can be used for communication as this would provide is use of two technologies on one handset.






# Coming Up :



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