

SUMMARY

[Events : Join us at Optatec Frankfurt](#)

[Technology and market : vLens, a Technological Jump – by François Ploye](#)

[Deals : Samsung Electro-Mechanics Co to provide liquid lenses](#)

EVENTS

**Join us at Optatec Frankfurt – 22 to 25 June
Pavilion 3.0 – Booth F70/G70**



This major event for future optical technologies, components, systems and manufacturing presents the entire spectrum of optics, optoelectronics, laser technology and fibre optics, as well as optical transmission and information technologies. It will be the opportunity for Varioptic to demonstrate its first products embedding its electrowetting technology.

Varioptic's solution is a technological breakthrough for the next generation of mobile devices integrating miniature autofocus lenses

Some other markets targeted include medicine, especially endoscopy and ophthalmology, and the automotive industry.

During the show, Joshua Hong, Business Development Manager of Varioptic will also be featured speaking on the topic : "A new Era of AutoFocus and Zoom in optics industry ", Wednesday 23 June from 1:00 to 2:00 pm, Hall 3.

TECHNOLOGY AND MARKET

vLens, a technological jump

François Ploye

Mobile phones will be the main market for vLens, the Varioptic's revolutionary lens with a macro auto focus. Currently, you can rarely find a mobile phone with an auto focus equipped camera. But as the quality and the definition of the pictures are evolving rapidly, the trend is to switch from VGA sensors (640 pixels wide by 480 pixels tall) to Mega Pixels sensors (more than 1200 pixels wide). Auto focus is becoming a necessity.

A few figures can explain the tremendous gap between the current mechanical technology and the new electrowetting lenses from Varioptic. First point, the cost. By industrializing the production process, the vLens' price will drop between two or three times cheaper compared to conventional lens. Furthermore, the Varioptic's lens lifetime goes further than one million cycles, maybe up to one hundred millions cycles. A mechanical lens has only a ten thousand cycles lifetime. It is necessary to understand that an auto focus is always doing cycles, typically to take just one picture involves one hundred cycles for the auto focus, and obviously, for a small video

sequence, even more cycles are needed.

These performances may be explained easily. The engine of a mechanical lens asks for a power that chips can not give. It is necessary to add power transistors, and the mechanical system itself is composed of a dozen mechanical parts. All these facts are making the mechanical lens complex, heavy and fragile. The vLens' principle is easy, composed with only one lens and an electronic ASIC chip. Its diameter is ten millimetres and the length is ten millimetres too, almost half the size of a mechanical lens. And it is two to three times faster, with an electric consumption of 10 to 15 mW. For Dr. Bruno Berge, inventor of the technology and founder of Varioptic, « *it is clear that this technological jump will create new usages, particularly for macro shots, for instance code bars reading, or biometry, or fax function, with a perfectly clear result.* » Furthermore the zoom function doesn't exist at all on mobile phones. But there is a need. The zoom market is expected to start and grow rapidly as soon as 2005.

On another market, the medical endoscopy, the technological jump is similar but the advantages are more uncertain. For more than three years, zoom equipped endoscopes have largely spread. Thierry Ponchon is a known professor at the Herriot Hospital of Lyon, « *there is no auto focus on classical endoscopes, but there is often a zoom function, which allows to analyze in details a specific area. Some technical problems are left. The zoom is slow to control, and there is no auto focus. An auto focus is absolutely necessary with a zoom. But the main problem for us remains that we don't know yet what is the real benefit of a zoom for the patient. We have to continue to work on the methodology to reduce the number of biopsies.* » For Luc Olivier Bauer, one Varioptic's board member, it is necessary to analyze all the changes due to this new technology : « *the question of the cost is also a key point. If the lens with zoom and auto focus becomes much cheaper, you can imagine to work with one use endoscopes, to avoid contamination.* » A new technology favors new ideas.

DEAL...



Samsung Electro-Mechanics (SEMCO) to provide Varioptic's liquid lenses for the mobile phones and PDA market

Samsung Electro-Mechanics Co (SEMCO - www.sem.samsung.com), and Varioptic (www.varioptic.com), recently announced a worldwide licence for SEMCO to manufacture and sale the advanced liquid lenses based on Varioptic's patented technology, now applied to SEMCO's auto focused camera modules.

This worldwide product license agreement will enable Semco to offer auto-focus functions for high resolution camera modules in the mobile industry.

A collaborative agreement was previously signed on March 18th, 2004.

« SEMCO has chosen Varioptic as a technology source of liquid lens, which provide unique strength of auto-focus function for high resolution camera module in the mobile industry. With this technology, we are developing camera modules targeting for mobile phone and PDA for the world-class mobile phone companies » declared Mr. Hong, V.P. de SEMCO.