



## LioniX, a custom MEMS offer from design to production



Created three years ago, the Company has a large know-how in MEMS technologies from integrated optics to microfluidic components. With different cooperations, LioniX's aim is to help OEM in the development and the production of new MEMS solutions with high added-value. LioniX, is a design house with capacity of production.

**SL:** Can you give us the historical background of LioniX?

**HVDV:** LioniX was created in January 2001 by Mr R. Heideman, CTO of LioniX and myself. Today, LioniX's shareholders are the University of Twente, Innofonds, 3T and some private investors.

Our Company provides development and small to high volume production of leveraging and innovative products based on microsystem technology and MEMS. LioniX's core technologies are:

- Integrated optics based on specifically SiON/SiN technologies
- Microfluidics components

LioniX is working on silicon, glass and also SU8 polymer for specific developments.

Our customers are OEM's and multinationals, coming from the Telecom industry, Industrial Process Control, Life Sciences and Space markets.

For example, we developed a flow sensor for a company named Bronkhorst (NL), which is a high added-value MEMS device. This Company is producing instruments for applications in laboratory, industrial and hazardous areas.

LioniX announced a growth of 25% in 2003 in turnover and staff to reach 17 persons at the beginning of 2004.

**SL:** The MEMS industry is characterized by different business models: foundry, fabless, design house ... What is the business model of LioniX?

**HVDV:** LioniX is not a fabless company as Discera (US) or Kyocera (JP). LioniX offers design and production of microsystems. We manage the development of MEMS components from the prototype to the high volume production. With this strategy, LioniX would like to answer to the market's need, regarding high added-value MEMS devices. We think that it represents a real opportunity of development for our Company.

For the development of these high added-value components, we are working with different subcontractors. This organization allows us to propose a global offer. It includes for example, MEMS packaging, assembly, electronics ...

LioniX's strategy is to produce a small production capacity. While, some cooperations are also used for high volume production.

For low production, less than 200 wafers per year and per device, LioniX uses state-of-the-art facilities of the MESA+ institute, as well as private facilities for our core technologies. For higher volume production, we subcontract the production step.

**SL:** LioniX is working in close collaboration with its customers to develop the best solution. At the end of the alliance, who does the IP belong to?

**HVDV:** In any case, MEMS design belongs to the customer. Our added-value is not focused on the IP. LioniX's aim is to propose a global solution to develop and produce a microsystem, with the best technologies and at the lowest cost.

LioniX's added-value is to manage the project from the development to the production. We are responsible for the final product.



Capillary Electrophoresis Chips  
(Courtesy of CapiliX)

**SL:** Could you please give us some examples of co operations?

**HVDV:** LioniX's cooperations are based on subcontracting, licensing of IP or joint ventures. We signed partnerships for production with Micralyne (CA), Sensoror (SE), recently bought by Infineon Technologies (D), NKT Integration (DK), Olivetti I Jet (IT) and MESA+. And we are using Phoenix software for the design of MEMS components and 3T for electronics. In addition Generics (UK) and Indes (NL) can provide the industrial design of the end products.

**SL:** How do you see the evolution of LioniX in the future ?

**HVDV:** We expect to increase the size of LioniX. It does not mean that LioniX will increase its production capacity. Our objective is to increase our capacity to propose new designs. LioniX's strategy will always focus on our know-how in this field and on our ability to gather important competencies around microtechnologies.



Highest resolution MFM tip  
(Courtesy of SmartTip)

**Contact:**

LioniX bv

Hans Van Den Vlekkert, President & CEO

Tel: + 31 53489 3827

Email: [info@lionixbv.nl](mailto:info@lionixbv.nl)

[www.lionixbv.nl](http://www.lionixbv.nl)