

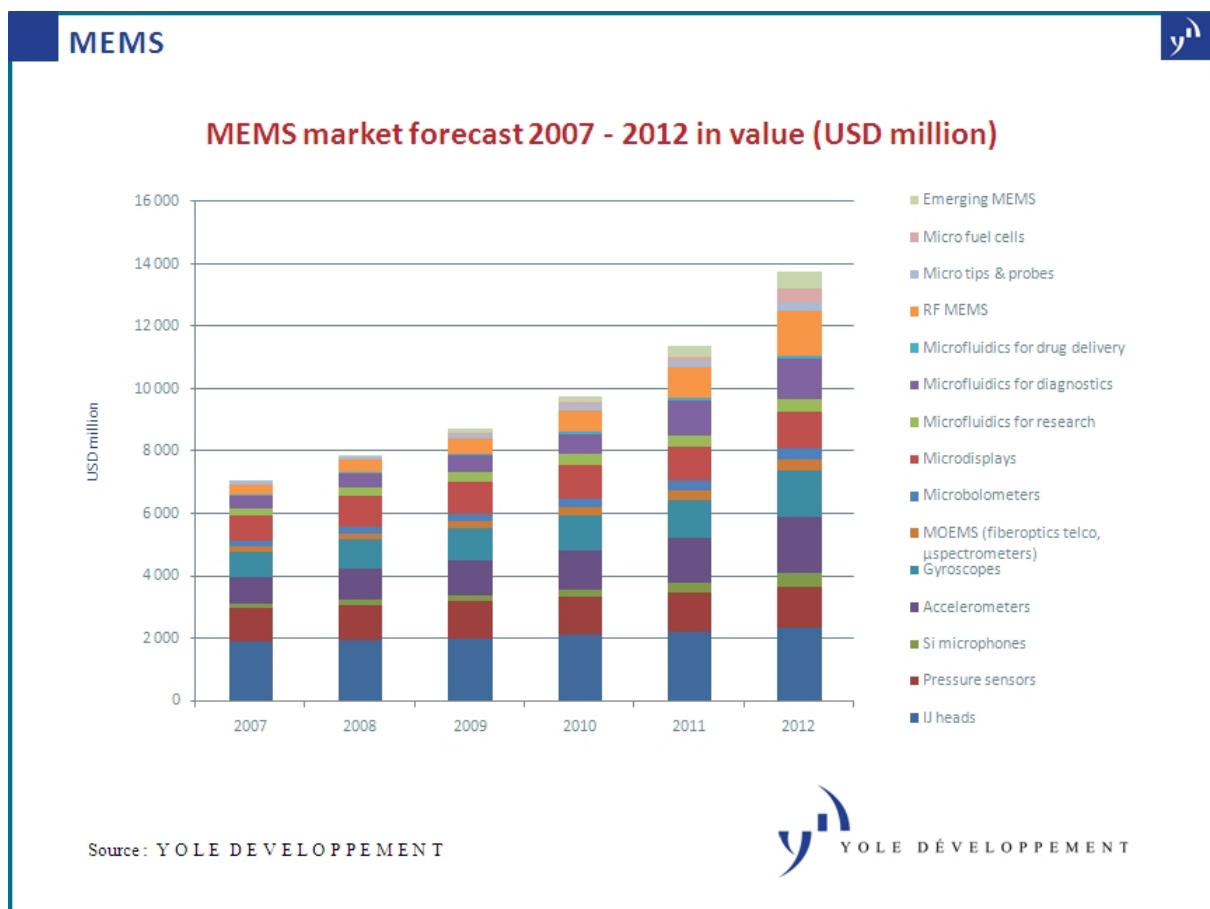
# Press release from Yole Développement

Paris, Tuesday, January 29, 2008

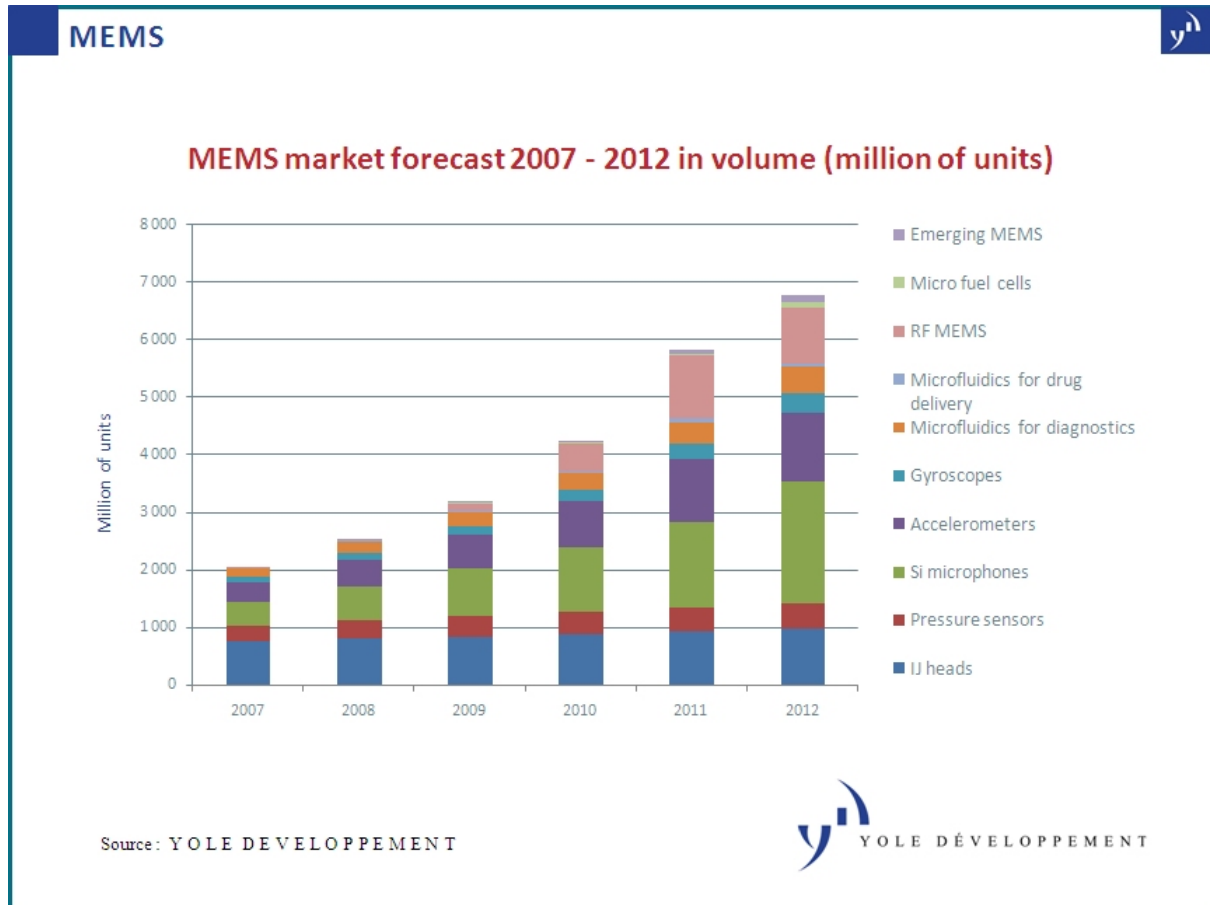
## MEMS for consumer the new Eldorado?

**For Jean Christophe Eloy, CEO of Yole Développement "The new MEMS market forecast of Yole shows a steady growth for the coming years albeit some applications will really boost the market."**

The new Yole MEMS 2007-2012 market forecast expects almost a US\$14B market value (at the chip level) by 2012. This means the MEMS market is expected to double from the 2007 market value of US\$7.1B. For 2008, we expect the market to be US\$7.8B. This represents a CAGR (Compound Annual Growth Rate) of 14% for the 2007-2012 period. The 2007-2010 growth will be however quite modest (11%) but a strong growth is expected after 2010. The year 2007 was indeed the time when new MEMS devices are hitting the market: auto-focus, oscillators and dual-axis gyroscopes to name a few.



For the first time, we also realized a 2007-2012 forecast in number of units. In 2007, 2 billion MEMS units have been produced and 2.5 billion will be produced this year. But by 2012, it is 6.7 billion of MEMS devices which will be shipped worldwide. An interesting fact is that, despite the large 2007/2008 increase in units for MEMS (25%), the market value growth is “only” 9%. This effect is justified by a strong price pressure MEMS devices are currently subject to. After 2009, RF MEMS and Si microphones will both contribute to the largest number of MEMS devices (over 45%).



MEMS applications have been split into seven major application fields: Automotive, Aeronautics, Consumer, Defense, Industrial, Medical & Life Science and Telecom. Historically being a strong market driver for MEMS, the automotive application will undergo a modest growth rate of 3.5% over 2007-2012. On the other hand, medical & life science, consumer and (wireless) telecommunications will largely contribute to the MEMS market after 2010. Their growth rate will be respectively 18%, 11% and 40%. In 2012, consumer applications (this includes IJ heads, inertial MEMS, micro-displays and emerging MEMS devices such as energy harvesting systems, auto focus, micro zoom, micro motors ...) will be more than 40% of the total market (in MUS\$ value). One interesting fact is that a strong growth (21%) for defense is also happening (due to the use of high-value inertial MEMS for munitions guidance for instance). New MEMS applications and fuel cells markets will have an impact not before 2009. Over 2009-2012, their CAGR will be 67% and 158% respectively.

Our analysis is based on a daily follow-up of a total of 150 MEMS applications. We have ranked all of them to highlight what are the sweet points in the MEMS business. Looking at the general CAGR for the main MEMS categories, it turns out that RF MEMS will have the highest growth (50%), followed by microfluidic chips for drug delivery (42%), Si microphones (32%), microfluidic chips for diagnostics (23%), micro tips and probes (22%) and microbolometers (20%). When one is looking at more precise final MEMS applications, we can highlight what are the most promising MEMS devices. Accelerometer for Human-Machine Interface will be the top growing MEMS device with a CAGR exceeding 120% and a market value of US\$500M in 2012. Right after in CAGR value will come RF MEMS for ATE (81%), microbolometers for automotive (54%), inhalers (41%), microfluidics for cell chips R&D (37%) and proteomics analysis (26%). The presence of three microfluidic devices in the top 6 MEMS devices with the highest CAGR was quite unexpected and a good surprise for the medical and life science field.

You are very welcome to contact us for more details on our MEMS market analysis.

### **About Yole Développement.**

Yole Développement is a market research and strategy consulting company, specialised in the MEMS fields.

Yole Développement offers various kinds of services:

- Custom market research and technology/strategy analysis
- Marketing and communication services through MicroNews
- Market reports

Founded in 1998, Yole Développement is the world leader in the analysis of the microtechnologies and compound semiconductors markets. Each day, Yole's team of 20 consultants is in contact with the worldwide key industrial companies, R&D institutes and investors in order to help them to understand the markets and technology trends. analysis, we takes into account the complete value chain including materials and equipment suppliers, device & system manufacturers and devices

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