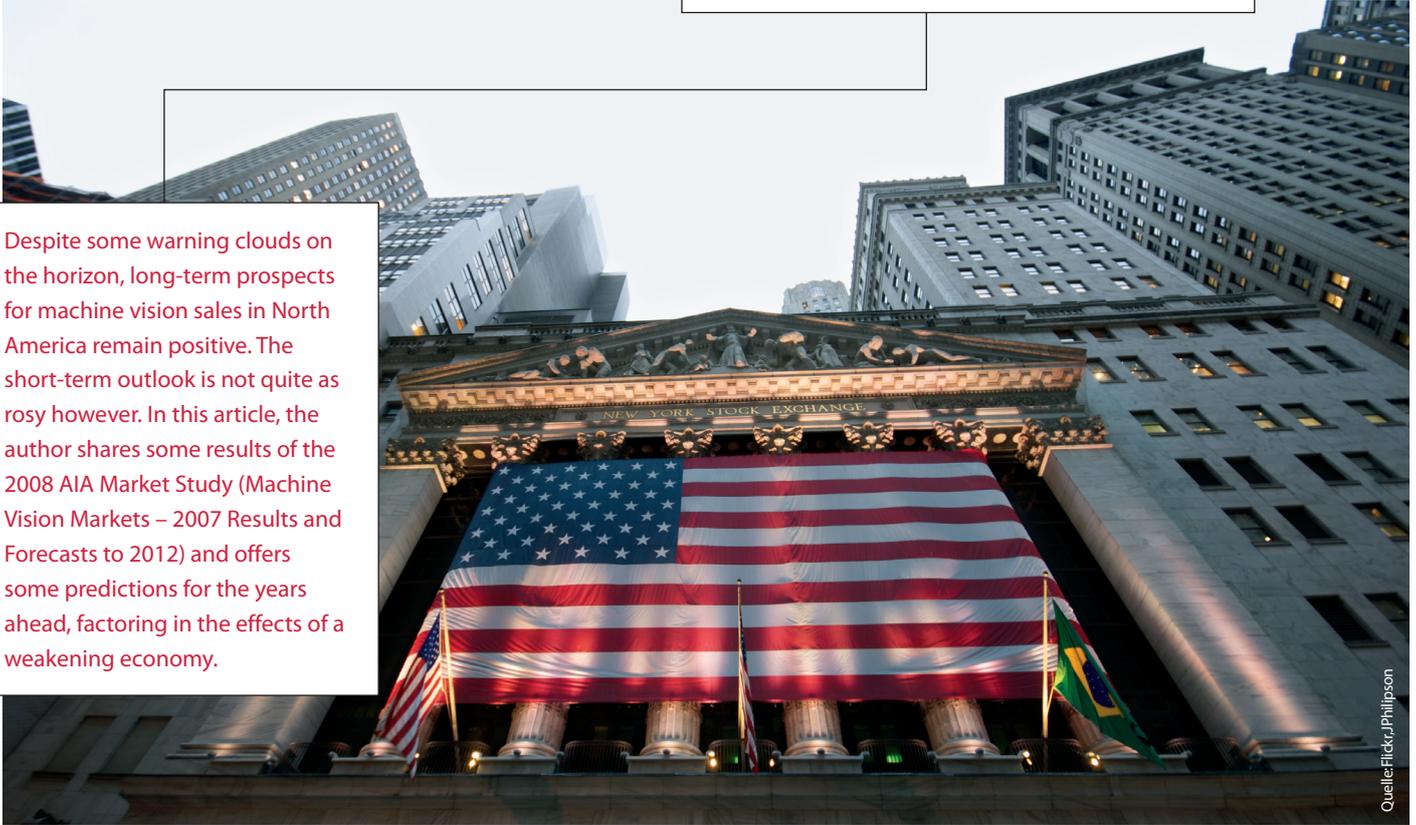


# Yes, We Can

## Machine Vision in North America

Despite some warning clouds on the horizon, long-term prospects for machine vision sales in North America remain positive. The short-term outlook is not quite as rosy however. In this article, the author shares some results of the 2008 AIA Market Study (Machine Vision Markets – 2007 Results and Forecasts to 2012) and offers some predictions for the years ahead, factoring in the effects of a weakening economy.



Quelle: Flickr/Philipson

Machine vision (MV) companies selling their products in North America are keen to learn how the weakening economy will affect their sales in the quarters ahead. Of course, it is not possible to foretell the future of sales with certainty, but it is evident that an understanding of sales performance presupposes a longer-term perspective. In the short term, sales volumes are subject to the vagaries of the business cycle. Consequently, using only recent data to forecast sales runs the risk of over-forecasting in good economic times and under-forecasting, when the economy is weak. By contrast, a longer-term perspective allows the forecaster to

identify and extrapolate the underlying sales trend as a baseline forecast and overlay forecasted economic impacts for the years ahead. In this way, taking a longer-term perspective avoids an uncritical mindset that automatically assumes a long-term “gloom and doom” scenario in bad times or, conversely, an “over-exuberant” scenario in good times.

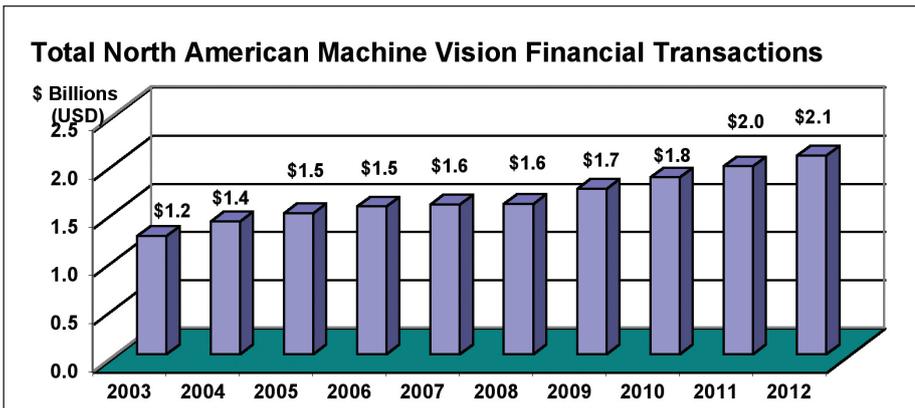
To assess the overall health of machine vision sales in North America, we add total MV component and system sales in North America (market basis) to derive total MV financial transactions. (This most succinctly captures the gen-

eral performance of machine vision companies operating in the North American market instead of focusing on individual product markets.) When we plot these total financial transactions over time, we see strong evidence of a solid, long-term trend.

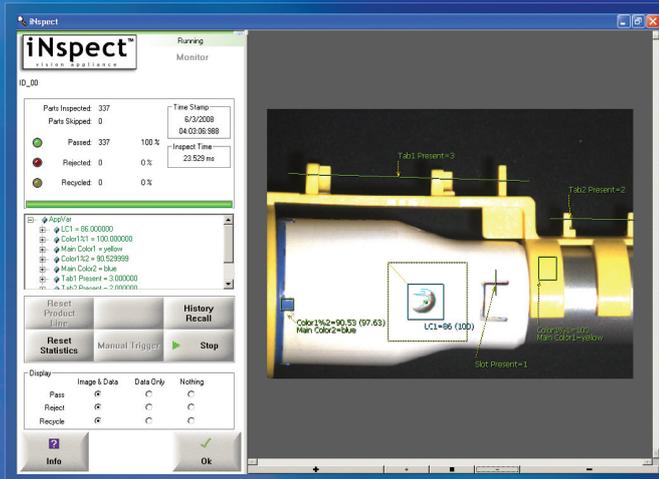
### Impressive Growth from Humble Roots

As shown by the bar graph left, total MV financial transactions in North America increased from US\$1.2 billion in 2003 to US\$1.6 billion in 2007. According to the 2008 AIA MV Market Study, this solid growth will continue, reaching US\$2.1 billion by 2012.

This impressive pattern of growth is not at all surprising, given the performance of machine vision since its inception. According to the 2008 AIA study, machine vision in North America has made major inroads in manufacturing and other sectors of the economy. From its humble roots approximately 25 years ago in North America, machine vision has evolved into an important automation technology, having attained an indispensable role as an enabler of quality control, productivity and cost containment in a growing number of industries.



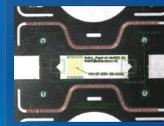
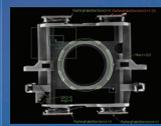
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Recession Forecasted

In addition to reflecting the historical, long-term trend in MV sales, the market study's North American forecast also was in line with the consensus forecast of economists at the time, which foresaw an economic slowdown instead of a recession. Consequently, we predicted only a minor departure from the historical trend line. However, it is now apparent that North America is, or will experience a recession, as shown by the revised economic forecasts in the upper right hand table.

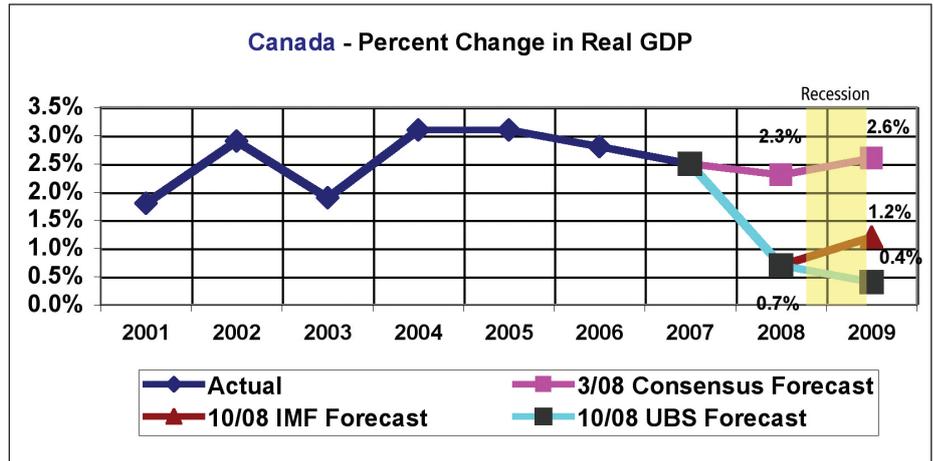
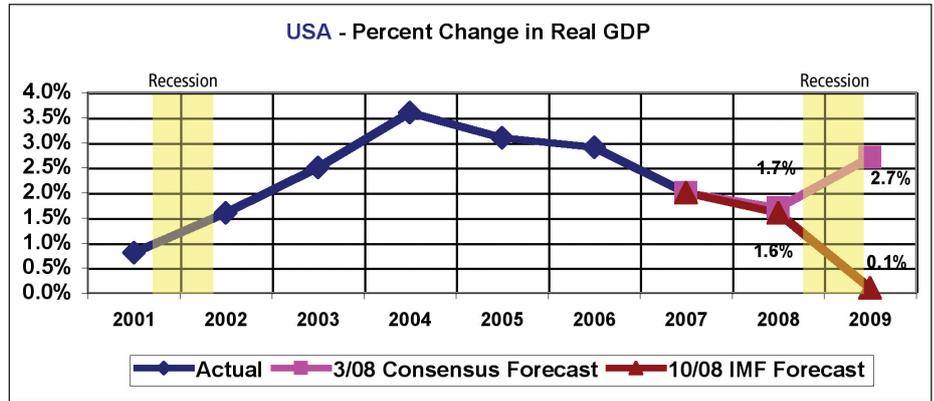
According to the International Monetary Fund (IMF)'s latest forecast, the USA will experience a recession in the second half of 2008 which will extend into part of 2009. Real GDP in 2009 will reach only 0.1%.

Will Canada follow the USA into recession? The IMF does not think so, forecasting real GDP at 1.2%. UBS does however; its forecast for Canada in 2009 is only 0.4%. Thus, agreement has not yet emerged regarding the likelihood of a recession in Canada. But for North America as a whole, the prognosis is clearly recession, since the US economy is roughly 10.8 times larger than that of Canada.

For machine vision companies, however, the critical issue is: how will these economic forecasts, if true, affect MV sales.

Long-term Prospects Bright

Based on the impacts of the 2001 US recession, our strong expectation is that at least in the latter half of 2008 and 2009 the recession will slow MV sales growth. As indicated by our historical sales data (not shown), growth rates of MV sales following the 2001 recession went negative for a number of product markets in 2002 and 2003. This is of course very much in line with intuition and personal experiences in the industry. As sales people know best, demand for MV products

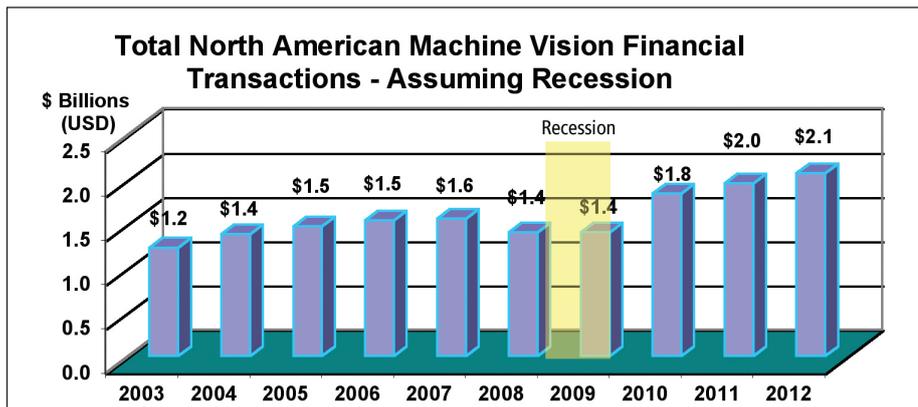


is driven largely by capital expenditures (Capex), which the CFOs of companies sharply curtail in anticipation of bad times as required by their fiduciary responsibilities.

While it is very difficult to accurately forecast MV sales in times of economic turbulence, it is possible to estimate what the MV growth rates reflecting the 2001 recession would do to the volume of MV Financial Transactions in 2008 and 2009. As shown by the following bar chart, total transactions would dip to US\$1.4 billion in both years, a loss of US\$0.2 and US\$0.3 billion, respectively. But of course all recessions are different in terms of duration and severity. The latest recession could be worse or milder than the 2001 recession, depending on many factors including actions taken by the gov-

ernment. It is simply not possible to know in advance.

At the same time, one thing is clear. While MV companies in North America will probably face tough times in the short term, their long-term prospects remain bright. History shows that the machine vision industry in North America is highly resilient. Despite the impacts of the 2001 recession, MV sales eventually recovered strongly, evincing once again healthy rates of growth across product markets, as sales growth returned to the long-term trend line. We expect the same thing to happen again.



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