

RTOS Market Overview – A follow up

In the previous issue, some preliminary results of our market survey have been published. At that time, 1300 samples were available for the survey. Today we count 2360 samples. This means that all these people registered to have access to the visitor's centre in our website. (www.realtime-info.com) If you did not register yet, don't hesitate to do so and take profit of the FREE Windows-NT workstation evaluation and "What makes a good RTOS" reports. With the additional 1000 samples, we can now go in some details about the differences in tendencies between North America, Europe and the rest of the world.

SAMPLE DISTRIBUTION

We started the 1st of November 1998 with the on-line questionnaire as registration to the "Visitors Centre". Today we got to exactly 2360. The figures you see in this report are based on this figure.

I remind you that our figures give project market share and not sales market shares!

Figure 1 shows the worldwide distribution of answers. If you compare with the same graph of 3 months ago, you will see there is only a very slight shift between Europe (+1%) and NA (-1%).

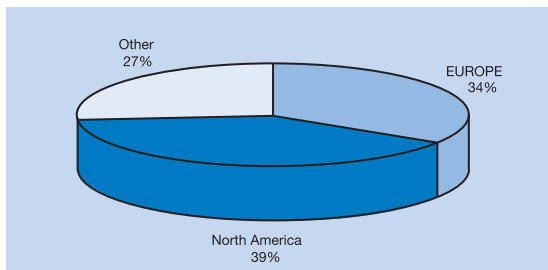


Figure 1. Geographical sample distribution

RTOS MARKET EVOLUTION – WORLDWIDE

We asked to the subscriber what RTOS he is using today, what he things to use in the future and what he wants us to evaluate. This last question may be interpreted as what he is thinking of using in the far future.

Figure 2 is sorted by what people think to use in the future. We see almost no difference with the graph based on 1300 samples.

- Tornado has a very stable market share, but will loose some in the far future
- WindowsNT, QNX, RTX will achieve their market share maximum very soon
- WindowsCE, RT-Linux, INtime, LynxOS, ChorusOS, Hyperkernel and OSE are rising stars (in that order)
- PSOS, Proprietary RTOS, VRTX and OS9 will significantly loose market share.

The following minor changes are observed compared to the graph in the previous article:

- Hyperkernel disappeared from the graph
- LynxOS shifts left from INtime

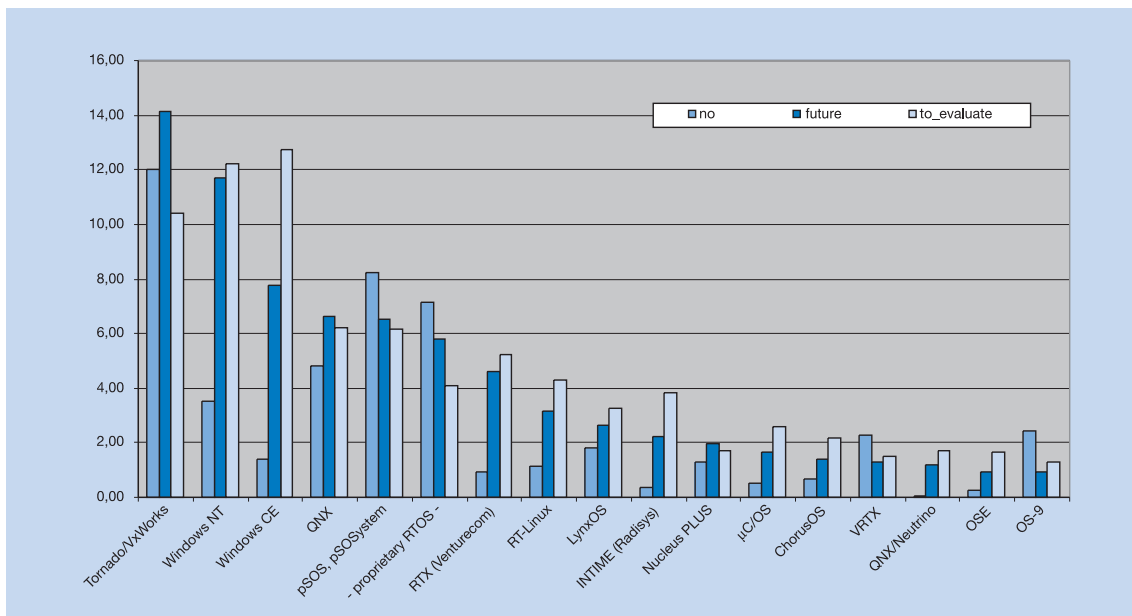


Figure 2. RTOS expected market evolution – worldwide

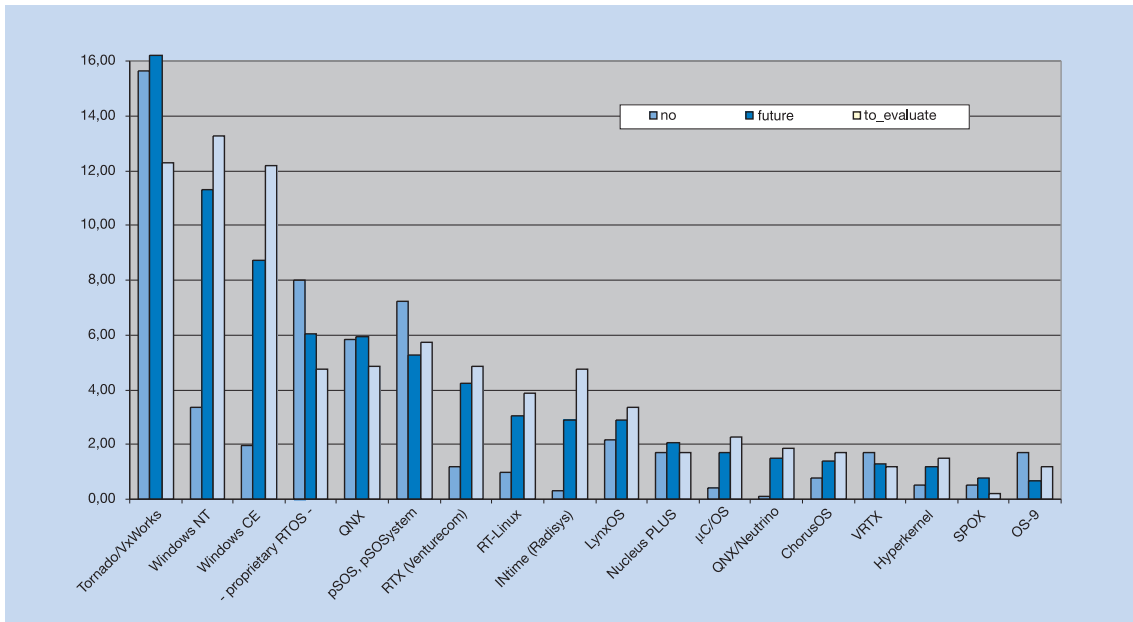


Figure 3. RTOS expected market evolution in North America

- Nucleus PLUS goes 2 places to the right
- OS9 is losing one place

As we used more samples for the figures now compared to the previous issue, the level of confidence of the products represented to the right in the bar-chart is greater than before. (No representations less than 1%)

MARKET EVOLUTION IN NORTH AMERICA

With more samples, it makes sense to split the previous graph into one dedicated to North America, Europe and the rest of the world.

Comparing to the “worldwide” graph, one can make the following observations (Figure 3):

- Wind River Tomado has a much larger market share in NA
- Windows NT and CE (in that order) are still 2nd and 3rd, both are moderately enhancing their market share
- RT-Linux, INTIME and LynxOS are almost equally classified
- Hyperkernel and SPOX are more significant here than in other parts of the world
- OSE is not in the list here (less than 1% future use)
- QNX/Neutrino, a new product is only listed for this part of the globe
- Proprietary RTOS is in the 4th place and dying slowly
- RT-Linux is a moderately rising star

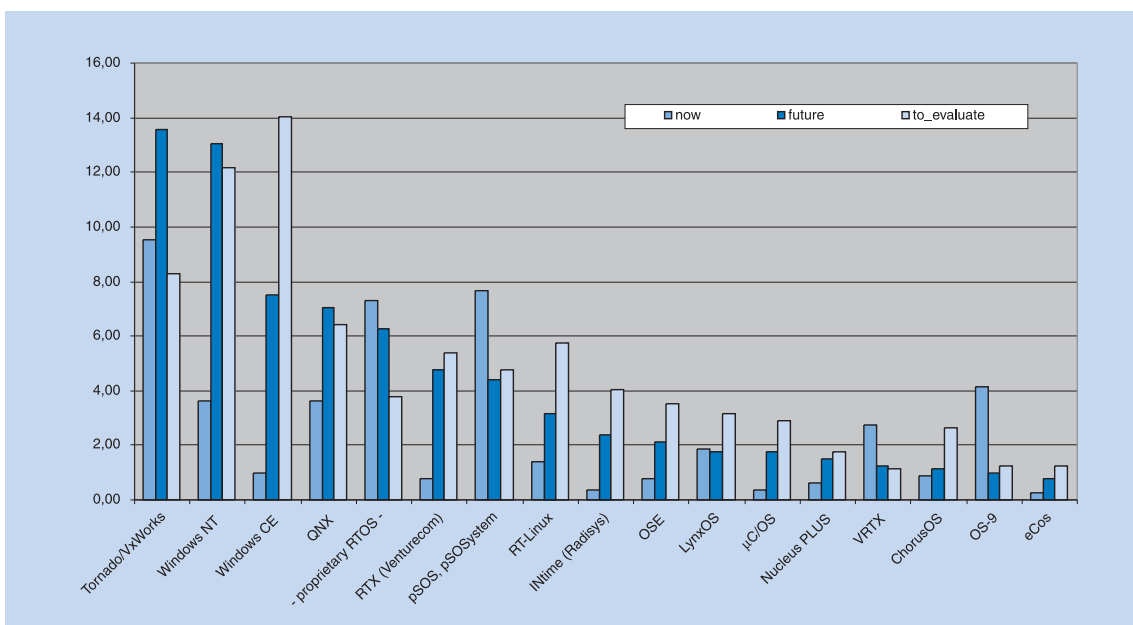


Figure 4. RTOS expected market evolution in EUROPE

RTOS EVALUATIONS

MARKET EVOLUTION IN EUROPE

In EUROPE, the situation is already slightly different (Figure 4):

- Market share of Tornado is considerably lower than in NA
- RTX from VentureCom is now left from pSOS
- OSE is much better known in EUROPE and comes before LynxOS
- ECOS shows up in this graph
- Windows-NT shows as a more known product than in NA, CE is a much more booming product
- Proprietary RTOS in the 5th place and dying slowly
- RT-Linux is a rapid rising star

MARKET EVOLUTION IN THE REST OF THE WORLD

In the rest of the world, the situation is different again (Figure 5):

- Windows NT & CE are NOT as important, instead pSOS has the second place
- Other products like μ ITRON and RTX-51, 251, 166 are better known here
- Tornado and pSOS have an almost equal market share
- RTX from Venturecom is also doing well in this part of the globe
- Proprietary RTOS is only in the 7th place and dying slowly.
- RT-Linux is rising, but people seem not to expect too much in the far future

CONCLUSIONS

There are a lot of differences in market shares and perception of how products will evolve in the future in these 3 regions of the globe. This is nothing new. A lot depends on how the majority of NA-based products

are marketed and supported by the manufacturers companies outside NA.

Although Windows-NT and RT-Linux are not real RTOS's today, a large amount of people are using or are trying to use these products. As the customer is king, the net result will be that, in a couple of years, the RT characteristics of these products might be considerably enhanced.

REMARK

This is only an update of the executive summary of our market survey. We have also information about the use of RTOS per application field and how happy people are with a specific product. Manufacturers who are interested in a personalised detailed study may formulate their request by Email (m.timmerman@realtime-info.be) ■

Dr. Martin Timmerman has a degree in Telecommunications Engineering from the Royal Military Academy (RMA) Brussels and received a Doctorate in Applied Science from the Gent State University (1982) in Belgium. In 1983 he transferred to Computer Engineering and set up the System Development Centre (SDC) at RMA. He gives general courses on Computer Platforms and more specific courses on System Development Methodologies. He is a consultant to the Joint Staff of the Belgian Armed Forces in areas concerning Information System Methodologies and CASE tools and he is the Belgian representative in some NATO technical commissions. Outside the RMA, Martin is known for his audits, reviews and seminars, and for his two companies Real-Time Consult and R.T.U.S.I., where he makes use of his considerable knowledge of the Real-Time world. Real-Time Consult is the publishing house responsible for Real-Time Magazine, an International magazine about Real-Time system development. Real-Time User's Support International (R.T.U.S.I.) provides hardware and software support services and is involved in project engineering for real-time systems.

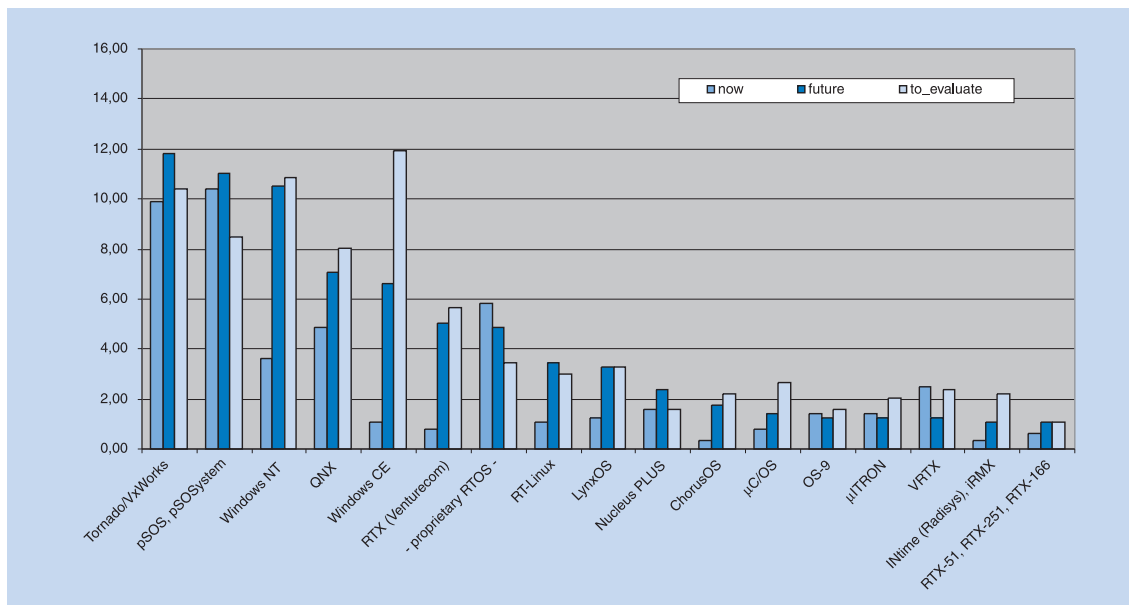


Figure 5. RTOS expected market evolution in the rest of the world