

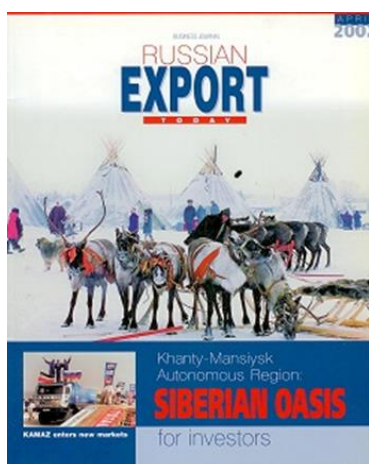
*Export potential of the Russian aerospace industry is estimated to be worth hundreds of billions of US dollars.*

# Astronomical POTENTIAL

**Andrey Tsvetkov**

Academician of the Russian Aerospace Academy

**“Russian Export Today” Journal,  
the Russian Chamber of Commerce, Moscow, №1, April 2002**



**A rapid growth of the global services market associated with aerospace technologies will inevitably lead to a dramatic revenues growth in this economy sector. And, thus, it will transform this sector into a most attractive niche for large investors. According to the estimates of the leading international experts, in the next ten years the revenues of the largest aerospace countries will reach 1.5 trillion US dollars. Along with the U.S.A. Russia with its great scientific-technical potential can hope for a significant part of these multi-billion contracts.**

## **Aerospace technologies for new clients**

For the last ten years large-scale projects in communications, navigation and television broadcasting have been the main drivers for commercialization of the world aerospace industry. It was these projects that stimulated the demand growth for development and manufacture of the new generation satellites as well as the services for operating these satellites. The major part of the orders to the largest players of the aerospace industry came from Asian-pacific region which has recently become a leading center for new technologies development in telecommunications.

In the nearest future the clientele of the aerospace enterprises can be expanded through the inclusion of the representatives from many economy sectors which didn't need such services two or three years ago. It is obvious that there will be a continuous growth of interest in information obtained from the satellites (geology and agriculture and other industries which produce ultra pure materials).

The experience of aerospace industry commercialization (which started only ten years ago on the large-scale level) showed that the success of the projects largely depends on the capabilities of the aerospace technologies and perfectly fits in as an addition to the existing and emerging non-aerospace markets. The main driving force of the industry will still be IT empires which develop digital technologies. It is obvious that in conditions of economy globalization it is necessary to operatively manage the information flows. To make that management efficient only through the use of the surface data transmission channels on the basis of fiber-optical lines is next to impossible. That is why large investments in commercial aerospace will be required.

With the aim of increasing the value of the commercial projects the leading aerospace companies significantly expanded their businesses. For example, «Boeing» not only took over engine manufacturing company «Rocket-dyne», and aerospace segment of «Hughes» - the leading satellite producer in the world

but entered the software and hardware development business for provision of satellite communications services. The similar business strategy is realized by other industry leaders - «Lockheed Martin», EADS, «United Technologies». It is obvious that this is the way that Russian aerospace companies are going to develop.

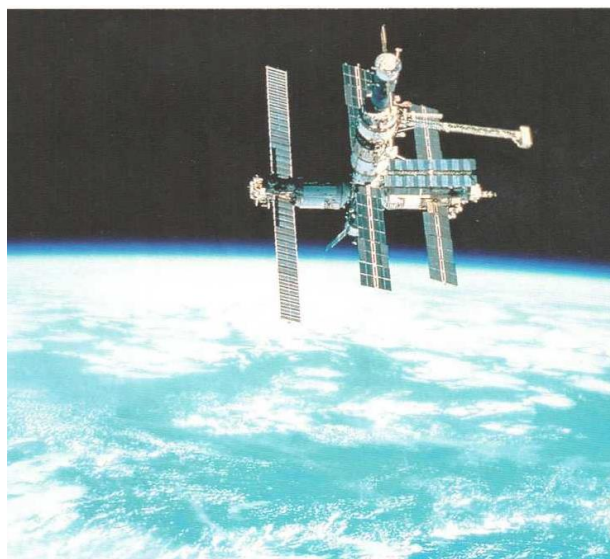
### **First billions of the aerospace businessmen in Russia**

Since 1992 Russian aerospace industry has been actively searching for alternative sources of revenues due to the lack of industry state financing. We can't say that the great potential of the country in this sector has been fully realized. On the contrary, only 3.6 bln. dollars have been received in commercial contracts. The major part of the revenues came from the launching services - around 2 billion. The revenues from communications operators and producers of the aerospace vehicles amounted to more than 700 million dollars. Significant sums were transferred for financing the international programs at "MIR" complex and International Aerospace Station project. International cooperation not only allowed to keep more than 100.000 jobs (almost 40% of all the people employed by the Russian aerospace industry), but to make major technological breakthroughs in different areas.

For example, a series of aerospace vehicles of new generation with world class technical specifications has been created «Sesat», «Express A, AM, 1000», «Ekran-M», «Yamal 100-300», «Yakhta», «Glonass-M, K», «Meteor 3M». Base carrier-rockets, accelerating units and rocket engines of all classes have been upgraded. The flagmen of the Russian aerospace industry gained a lot of valuable experience through business cooperation with the leading western companies like: «Amross», «Eurockot», ILS, ISTS, «Sea Launch», «Starsem», «Lockheed-Martin-Intersputnik» and others.

The developments and innovations made in the U.S.S.R over 50 years of large investments in the aerospace industry are still more advanced than the developments of many other countries (excepting U.S.). It is this very potential that allowed the Russian economy to survive the hard years of Russian economic reforms. The state financing of the aerospace industry was cut by almost 100 times in the first years of market reforms. However, the industry managed to survive. Today the annual gross profit of the Russian aerospace industry on state and commercial programs amounts to around 1 billion dollars.

Being equal with the U.S.A. in terms of aerospace industry potential, at the moment Russia has a very small market share - around 2%. The U.S.A controls half of all the world contracts, E.U. countries -



25%, Canada and Japan - 5% each. By 2005 the supply of the launching services is expected to exceed the demand by more than twice which will make it even more difficult for Russia to keep or increase its export (as of today the launching services are main sources for industry revenues). However, the new opportunities for obtaining generous contracts emerge on a permanent basis.

Production capacities of the Russian enterprises which manufacture satellites allow to produce 5-6 vehicles annually for geo-stationary orbits and 60-70 satellites of middle class for non-geostationary orbits. The use of half of these capacities may bring more than 1 billion US dollars in profits annually (around 8% of the all the world contracts in this segment of the aerospace industry).

### **Future of the Russian aerospace industry**

It is only through taking into account of the international trends that the Russian aerospace enterprises will be able to use their huge export opportunities more efficiently. These enterprises need to be consolidated in large holdings. The next step can be establishing strategic alliances with the international partners.

As the experience of the last few years showed, international alliances and joint ventures helped Russian companies to ensure stable and long-term outlooks at the world aerospace market. The path to the large-scale international integration lies through overcoming obstacles in management compatibility, aerospace economics, legislation and quality control...

However, the astronomical potential of the Russian aerospace industry is for real and the country stands a good chance of becoming one of those highly developed states of the world.