

Space technology promote the life's quality

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Preface

The involvement of a growing number of countries means that space exploration and the use of outer space are now truly global undertakings.

The period between 1957 and 1991 saw the dawn of the space age with flights to the planets, footprints on the Moon, and global communications; however, this history of space was anchored in the global cold war with its massive budgets for military space exploitation. In fact, Space exploration fires people's imaginations. Since the first human space flight in 1961, over 500 explorers from different nations have ventured into space, motivated by curiosity, the drive for knowledge and the belief that space exploration could benefit people on Earth.

The last ten years, however, have brought about a new era of space exploration, images of distant stars and galaxies, international cooperation and a focus on our own planet. The involvement of a growing number of countries means that space exploration and the use of outer space are now truly global undertakings.

In the not-too-distant future we may have unlimited, clean, solar energy from space powering our industries as well as heating and lighting our homes. Our nuclear waste may be safely and inexpensively disposed of by being carried up a Space Elevator and released towards the Sun. We may become a tourist in Earth orbit or on the Moon. We may carry out extra-terrestrial mining and even introduce the development of a multi-planet economy. In addition to the enormous knowledge that space exploration has already delivered, space technologies have become integrated into everyday life so deeply that modern society could not function without them. Weather, telecommunications, environmental analyses and national security are only the most obvious space technologies that humanity relies on, though spinoffs and transfers from space to non-space sectors provide many additional indirect benefits.

Introduction

Experts say space technology is one of the best tools to overcome many challenges in all countries. According to some pioneer specification of space, improving space technology can change all aspects of human's life basically and properly. Nowadays in all developed and some developing countries, cutting edge and high technologies, which cause a great expense, are leading to solve and eliminate their national challenges and improve their life's quality. As an example they are using all of space technology applications to solve the problems which can suffer them, and also to make their life easier.

Some specifications of space which make it different from others (some pioneer specification)

Space is a joint and common arena between all countries and political geography is not able to limit it, then it has an important and strategic condition.

In space you can widely and comprehensively observe the earth. In addition not limited range from space to whole the earth's geography can give us this opportunity to have many kinds of information about everywhere whenever for any user. Also it cannot be affected by some earthly disasters and space equipment are able to work when ground stations have some problems or were destroyed.

So such specifications cause an appropriate condition to search about universe and gathering different information from the earth.

Most important problems and challenges

In not far future countries will face some seriously economic, security, social and cultural challenges and also some of them already made some problems. In addition natural and man-made disasters and events are becoming more important.

Experts believe that telecommunication, media and dependence of countries with international networks, cause significant link between national and international revenues and problems and we will not able to consider our problems just nationally, such as water resources, weather changing, security and population increase. If we have a look to some zones which had crisis which are suffering from lack of water and food, you will find a close relationship between them and

local and national wars. Then it caused countries to make some treaties and international organizations which are increasing every day and perhaps it will make big changes in country's sovereignty.

Some applications

When we are watching our favorite game on TV, in fact we are using one of the benefits of space explorations. We have been able to correct our theories about the world with the help of satellites and space crafts. Accurate weather forecasting is possible by using satellite, also they help us in harvesting, monitoring of pest infestation, under cultivation lands, forest cover, soil erosion, floods control and so on.

Also we can use for communication specially local and international telecommunication. Navigation is also one of the old space applications which significantly improved depending on satellite improvement.

In fact, in each corner of our houses, we can also see things that one day have been used in the most advanced space crafts to their ages such as smoke sensor (1970-Skylab spacecraft), quartz crystals (Apollo spacecraft), lightweight tools with battery sources (Black & Decker - mobile vacuum cleaner), sport shoes, barcodes and so on.

Materials, insulations, coating, water filtration and medical science are other arenas than could improve by space technology significantly.

An example for medical application of space technology

Are You Asthmatic? Your New Helper Comes From Space

Kallie, a 10-year-old boy, is already in favor of space technology. In the future, he could control his asthma with a small device also used by crew members on board the International Space Station. Because of it, he knows almost everything about nitric oxide, an important gas we all breathe out. Nitric oxide, or nitrogen monoxide, as it is properly called, is both a good and bad molecule, found almost everywhere as an air pollutant that is produced by vehicle exhaust and industrial processes burning fuel. Nitric oxide is a contributor to the damage of the ozone layer and easily converts into nitric acid, which may fall as acid rain.

Intriguingly, tiny amounts of nitric oxide are released locally in inflamed tissue of humans and other mammals. Tracing it back to its source can reveal different diseases.

In people with asthma, inflammation in the lung adds nitric oxide to exhaled air. Measuring the gas can help to diagnose the disease and may prevent attacks if the levels of nitric oxide indicate that medication should be adjusted.

Nitric oxide is also an interesting molecule on the space station. Dust and small particles floating around in weightlessness can be inhaled by the astronauts, possibly triggering inflammation of the airways. It also plays a role in decompression sickness that may arise from spacewalks.

The European Space Agency, or ESA, uses a lightweight, easy-to-use, accurate device for measuring nitric oxide in exhaled air. The aim is to investigate possible airway inflammation in astronauts and act before it becomes a health problem. Following its development by the Swedish company Aerocrine AB and ESA, the device has been found beneficial in space exploration and everyday use on Earth. NIOX MINO® is now used by patients like Kallie at health centers. They can monitor levels of asthma control and the efficiency of medication, leading to more accurate dosing, reduced attacks and improved quality of life.

Conclusion

There have always been explorers and pioneers, it is a basic instinct, and not necessarily only a human instinct, for animals in search of new pastures, for prehistoric man who crossed continental divides in pursuit of food and to find new places to live, and for people in our own times who have sailed the oceans and traversed the land in search of adventure. Where would we be today without the great explorers of the past? So we have an in-built need to explore new places, especially the tiny pinpricks of stars in the night sky, simply because they are there and we are human expedition are still just that, soon we will be able to buy a ride to space at a price equal to two or three years' salary. Inspiration comes from the vastness of space and the ability to see beyond our limited horizons. The great telescopes of our time are indeed enabling us to see into our past and view our future, thus yielding ever more puzzles to challenge us further.

In addition obviously we will use a lot of advantages of space technology and its application to improve our life's quality and we can make our life easier with the help of space.