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Medienwelt im Kindergarten

Der Begriff der Medienwelt stellt man der Komplex der Medien dar. In der Arbeit mit Kindern, Jugendlichen und Erwachsenen umschreibt der Begriff Medienpädagogik die vielfältigen Aspekte, unter denen Massenmedien in Lern- und Lehrprozesse einbezogen werden.

Die Medienauswahl und ihre didaktische Verwertbarkeit werden wie ihre Wirkung insbesondere auf den jungen Menschen diskutiert. Durch die Vielfalt der heutigen Medienangebote ist ganz in Vergessenheit geraten, was die eigentlichen Medien für Kinder sind. Wenn wir nun von Kindern im Vorschulalter ausgehen, so müssen wir feststellen, dass sie heute von einer vielfältigen Medienwelt umgeben sind.

Das Bilderbuch

Viele Pädagogen bezeichnen das Bilderbuch als das Medium für das Kind. Das stehende Bild für das Kind ist ganz besonders wichtig. Das Bilderbuch ist im eigentlichen Sinn ein Buch ohne Text. Im Bild der Text ist verborgen. Er muss auch aus den Bildern "herauslesbar" sein.

Das Bilderbuch gehört zu den ältesten verwendeten Medien in unserer Gesellschaft. Die Bilderbücher fördern vorrangig die Wahrnehmung, Sensibilität und Beobachtung, aber auch die Konzentration und die Sprache. Im eigentlichen Sinn ist das Bilderbuch für das Kind kein Buch, sondern ein buchförmiges Spiel- und Lernmittel. Es hat in seiner Geschichte durch Ziel, Inhalt und Aufgabenstellung bestimmten Zwecken (als Sachbuch, als Spielbuch, als kindertümliches Buch, als volkstümlichen Motiven, Buch mit als Phantasiebuch, als Sozialbuch) gedient.

Das Dia

Ein wichtiges Medium ist das Dia. Es führt Kinder in die Herstellung eigener Medien ein. Es gibt so viele Möglichkeiten!

Das Fernsehen

Das stehende Bild ist das Medium des Kleinkindes. Grundsätzlich gilt für das Fernsehen, dass das Kognitive überwiegt. Es bleibt kaum Raum für lebendige Phantasie und kreatives Spiel. Die Wirkung des Fernsehens und der Medien auf Kinder und Erwachsene ist ein brisantes Thema für die Elternarbeit in Kindergarten und Schule, aber auch in der Familien- und Erwachsenenbildung.

Märchenbilder

Kinder brauchen Märchen und Märchenbilder, denn diese sind Orientierungsbilder. Märchenbilder geben Hilfe und Schutz. Alle enden gut, Böses und Ungerechtigkeit werden überwunden und besiegt. Das Kind muss sich nicht mit einem perfekten, ehrgeizigen Helden identifizieren. In Problemsituationen oder seelischen Notlagen erzählen Sie den Kindern Märchen! Sie brauchen zur eigenen Lebensbewältigung.

Jedes Medium hat sein spezifisches Publikum, seinen bestimmten Adressaten- und Konsumentenkreis, aber die Kinder brauchen es. Die eigentlichen Medien für Kinder sind ganz wichtig und spielen eine große Rolle in unserer Gesellschaft.

Литература:

электронный ресурс <http://www.kindergartenpaedagogik.de/1032.html>

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Comparative Analysis of Cryptographic Virtual Laboratory

Cryptography, or cryptology, is the practice and study of techniques for secure communication in the presence of the third parties called adversaries. [1]

The purpose of the cryptographic system is to encrypt a meaningful original text (also called “a clear text”) and get a completely meaningless at first glance ciphertext as a result. The recipient, whom it is intended for, should be able to decrypt the ciphertext restoring this into the original.

In accordance with state standards, a physical cryptographic laboratory should include a hardware computing department equipped with a certain kind of computer equipment connected to the local area network and the Internet, academic network software and training software, as well as an information security software and hardware department equipped with anti-virus software systems, hardware user authentication tools, hardware and software for protection of information (including cryptographic protection of information). [2]

As it can be seen, the study of cryptography requires a large amount of equipment, which in its turn requires high costs. As a rule, not all schools can afford to create a full physical cryptographic lab, so we came to the idea that it is possible to create a virtual cryptographic laboratory.

Unlike virtual physics laboratory, a virtual one requires much less material costs, which would allow educational institutions to spend their budget on other equally important goals. This is one of the main ideas of this paper.

To use a virtual cryptographic laboratory, we only need a personal computer or a laptop. All cryptography and related processes will be modeled on a running machine.

Students will be able to work on projects outside the institute, which should increase the speed of performing tasks as everything they need is always available at any time.

This laboratory will also make a full report on the course of work at the end of different processes which in its turn will help students prepare documentation to hand in.

Cryptography today is the most important part of all information systems: from email to mobile, from access to the Internet to electronic cash. And in the future, as commerce and communications are all closely connected to computer networks, cryptography will become an integral part of our lives. Therefore, we must promote the development of the learning process, and we hope that development of a cryptographic virtual laboratory will be one of the steps on this path.

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Russians and Americans – two great nations.

Nowadays, there are two great nations in the world: Russians and Americans. They really have a great influence on the world stage. Many people try to understand and explain the Russian national character and the American. This subject is really hard, because each nation is unique. Both of them have their own secrets. It is the main reason which creates difficulties in understanding between Russians and Americans.

Despite Russia's ambivalence toward the West, and in the face of the political and cultural differences and the often diametrically opposed values of two societies, most Russians like Americans. Sir William Hayter wrote that Russians are very interested in America's life. They share many tastes with it including love of gadgets, technology, massive scale, life style... America is a favorite foreign country of Russians. Moreover, Russian people know that they have never had a war with the United States. There are no territorial disputes. They have no trade rivalries. In fact, America's power and size attract Russians and they have a syndrome which called «Big is Beautiful».

Russians are impressed with the size and numbers, and much that they do is on a grandiose scale: military size, buildings, sculpture, etc. That is not unusual for vast country. Russian think and act, and they do not do things in a halfhearted way. Nor are these traits uniquely Russian. Americans, accustomed to wide open spaces, and with an expansive outlook on life, are also known to think big.

Russians see themselves and Americans as citizens of two great powers. Joint endeavors between Russians and Americans are therefore seen as natural. Indeed, Russians get a psychological lift from working with Americans, regarding such cooperation as recognition of their coequal status. But they also expect Americans to accept them as equals, to return their admiration, and they are disappointed and puzzled when we do not.

One standard Russian complaint against Americans, says Eliza Klose, is that they lack *dusha*, or soul. Russians are sensitive to the feelings of others as well as their own. The Russian soul has been described as: sensitive, imaginative, an inclination to tears, compassionate, patience that permits survival in what would seem to be unbearable circumstances, poetic, mysticism, a penchant for walking the dark, introspective, sudden unmotivated cruelty, fascination - the list goes on. Russians maintain their integrity in a way that conforms to their inner notion of what a human being should be, with a blatant honesty and integrity seldom seen elsewhere in the world. Above all they have an appreciation for wholeness or complete commitment and faith, no matter what that faith might be related to.

Americans may indeed lack soul, nevertheless, Russians are very curious about the United States, and there is no country they wish to visit more.

Many exciting innovations in lives of Russians have come from America – jazz, jeans, Coke and Pepsi, and Big Macs, to name a few. Russians recognize that Americans are far richer than they are, but they resent being talked down to. While Russians themselves are outspokenly critical of their own society, they can be hypersensitive to criticism by a foreigner. To Americans, Russians are also puzzling.

To sum up, despite some similarities, Russians and Americans are indeed different. Fortunately, Russians admire Americans as people. Many of them really like their culture, history, etc. Besides, it is a privilege to study in the US. It is so popular among the younger generation. They are very open minded, well educated, and interested in new ideas. We can say, that young people is a connecting link. Well, Russian and Americans are different, but young people can overcome this difference. However, each nation must remain unique and unrepeatable.

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3D-Printing: History and Future

Since the beginning of a new millennium, the concept "3D" has become a part of our life. First of all, we connect 3D with motion picture art, photography and animation. But we could hardly find a person who hasn't heard about 3D-printing.

The technology of 3D-printing exists for a long time. In 1984, "Charles Hull" company developed a technology of three-dimensional printing to reproduce objects with the help of digital data, and two years later, it gave it a name and patented a technology of stereolithography.

Later, in 1991, "Helisys" company developed and put on the market a technology for production of multilayer objects, and a year later, in 1992, the first system of selective laser accustomed to soldering was produced by "DTM" company.

In 1993, "Solidscapе" company started mass production of printers on a inkjet basis which were capable to make small details with an ideal surface at rather small expenses. But the peak of its popularity is the 21st century. In 2005, "Z Corp" company developed the first 3D printer "Spectrum Z510", capable to print in colour, and in two years time, the first printer capable to reproduce 50% of its own accessories appeared.[1]

3D-printing is the construction of a real object on the pattern of a 3D computer model. The process of printing is a set of repeating cycles connected to creation of three-dimensional models, plotting a layer of materials, relocation of a home screen down the level of a ready layer and deleting waste from its surface on a desktop (elevator) of the printer.

Application of the three-dimensional printing is a great alternative to traditional methods of prototyping and to small-scale production. 3D-printing gives a chance to output volume information, that is to create three-dimensional physical objects. At the moment, the equipment of this class can work with photopolymeric pitches, different types of plastic thread, ceramic powder and metalclay.

In 2012, the organization "Defense Distributed" announced its plans to develop the operating plastic gun which any person will be able to download and print with the help of the 3D-printer". In May 2013, they finished its development, and soon afterwards the US State Department demanded to delete instructions from the company website.

2014 was a breakthrough in building when concrete blocks were made using 3D-printing. During this year, the Shanghai company "WinSun" announced construction of ten 3D-printed houses built in 24 hours time, and later, printed a five-storey building and a mansion.

The first testing of a large 3D-printer was conducted in the University of South California. This machine was capable to print a building with a total area of 250 sq.m in a day. In October 2015, the Russian company "SPETSAVIA Ltd" presented its developments and industrial samples of 3D construction at the Machine-Tool Construction Exhibition (Krokus-Expo).[2]

To sum up, we may say that nowadays the opportunities and spheres of the 3D printing permanently are constantly growing. The technology seems to be able to produce any object that we could imagine. 3D technologies allow to completely exclude manual work as well as paper drawings and calculations – the program allows to see a model in all foreshortenings on the screen and eliminate the revealed defects before it has been made. It also allows to create a model in several hours time . In addition, the possibility of errors is practically excluded.

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The concept of «Smart House»

The XXIst century is the time of technologies of the future and innovations of different kinds. Technology will play more prominent role in our lives making them simpler and providing people with new opportunities for realization of their most insane desires. Technology is our future. The concept of Smart Home was originally born in the US in the 50s of the last century with the idea of creating houses that understand the desires of their owners and successfully implementing them in reality. But the implementation of this concept meant a lot of money and practically did not pay off. Nowadays such a thing as a Smart Home becomes a part of our lives.

What is behind the system of Smart Home? The list of things it can suggest includes functionality style, comfort, safety etc. Modern engineering technology can instantly adapt to the users simplifying their lives in many ways. This is the essence of Smart Home system. In practice, of course, the implementation of smart home system concept is rather expensive pleasure, as it means a lot of different equipment, which can be divided into five classes such as:

1. The lightning and power supply
2. Security and access control
3. Climate control
4. Audio-video system
5. Communication and other engineering systems

Everyday using the «smart home» system saves a great deal of money due to the various operating modes: comfort mode, night mode, the mode «no one in the house». Modes change occurs on a schedule or on a command.

The concept of Smart Home system implies a total permanent control of all the systems installed in the building and managing them with one or more devices. Yet, the main task of the Smart Home is not only saving resources and simplifying management but also increasing the comfort level of the homestead. Smart Home control system is rather simple and does not require special skills possession of computers or computer programs study. All is done intuitively. Companies that supply and install the equipment for intelligent home systems also provide the owners with warranty service for an indefinite period to avoid incidents with the equipment failure. The designation of modern technologies is to simplify people`s lives and make them more comfortable and pleasant.

Smart House is able to control every detail of everyday life.

And that`s fine since true happiness lies in the details.

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How to Fight Spam

Spam is unsolicited anonymous mass mailing. The first case of mass spam emails in Russia was marked on August 19th, 1991. During the August putsch, the Director of "Relcom" Alexey Soldatov was distributed via email to all its customers the appeal of Boris Yeltsin.

The vast majority of spam is used for advertising. Usually some products or services are advertised for a wrap counter on the website, at least for infiltration of viruses and/or Trojans. But its common goal is to convey messages to the largest number of destinations possible at the minimum cost. And "authors" are not interested in the kind of audience, the main thing is the number of people who get the message.

The most common types of spam are advertising, anti, illegal products advertising, phishing, chain letters, political propaganda, mass mailing for the postal system output out of operation (DoS-attack), mass mailing of messages containing computer viruses (for initial distribution), mailing of letters containing sob story with information that for each dispatch of a letter by a certain Internet service provider allegedly paid the family of the victim a sum of money "on treatment", "Nigerian letter".

"Nigerian letter" is one of the most common types of spam. Such letter contains a message that a recipient of the letter can get a large sum of money, and the sender is able to help him. Then, the sender wants you to send him some money, for example, for paperwork or opening an account. Extortion of this sum is the purpose of swindlers.

There are some ways to fight spam.

The first is not to let spammers know your email address. For this purpose, you should not publish your email address on public sites or represent your email address in the form of pictures. You may also create a special box to sign up for services that do not cause much confidence and not use it for other operations. It is better to have an off-email address to use in doubtful cases. The most famous of such services is mailinator.com. Never respond spam emails or follow the hyperlinks provided. Create an e-mail address in such a form that it would be long and hard to guess name. It is desirable that the name was not shorter than 6 characters, but if there are no digits, not shorter than 7 characters.

Because of advertising letters which are much different from usual correspondence, a common method of dealing with them is the screening of their inbound mail flow. The first thing available to almost every user is to configure filters of a mailbox. There are also specialized online services, for example, "Kaspersky Lab" or "ContSpam" providing protection from spam. There is special software for automatic detection of spam.

In Russia, the total loss of all victims of spam exceeds \$200 million a year, and the income of spam companies may amount to several million dollars a year. However, this amount is not comparable with the damage that this small sector of the Internet industry has to do with society as a whole. So, spam is a serious threat for information security systems used in both public and private sectors.

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Virtual Reality in Our Life

The world is changing. Every day new creations of the smartest engineers around the world appear in the world of high technologies. The phrase "Nothing is impossible" is the motto of today's developers who believe that even such a thing as "reality" may be susceptible to digitization.

In 2013, the world-famous corporation "Google Inc." presented their first gadget at the event "Glass Foundry". It was the groundwork for the emergence of a division in modern culture gadgets – Google Glass. The device consisted of a conventional glasses attached to the peripheral device, which, in turn, was connected via Bluetooth to the user's smartphone. The gadget was equipped with a screen, camera, microphone, touch sensors. It also allowed its owner to do a lot on command "Ok, Glass": go online, get directions, create notes, take pictures and shoot video, as well as receive incoming notifications that arrived on the smartphone. The only drawback of "news" was the price – \$1500 in retail – which greatly influenced the innovative device sales figures from the "corporate good." Google Glass was a very interesting, but – alas! – failure device, then the manufacturer no longer produced software updates, and subsequently stopped its production at all.

It took a few months for everybody to forget about Google Glass. In 2013, Oculus company introduced its first device in this format at the Electronic Entertainment Expo conference. This device – Oculus Rift – marked the beginning of modern "Helmets VR" popularity. The gadget was created on the basis of an LCD display with a diagonal of 5.6 inches, combined with a pair of lenses that allow to obtain a stereoscopic effect with a view field of 90 degrees horizontally and 110 degrees vertically. The device turned out to be really a breakthrough that was the reason for Mark Zuckerberg (the creator of the popular social networking site Facebook) to buy Oculus company. He stated that virtual reality helmets are not only means of entertainment, but in the long run the whole platform to build a new high-tech infrastructure, which, in his opinion, would replace smartphones.

Virtual reality helmets have already won an audience of users who follow the updates of the popular movement, but in any case cannot forget about the cons of virtual reality helmets. The main drawback is a variety of psychological disorders that can be caused by viewing the virtual world through the lens. 3D Format transmits the image depth and creates the effect of the volume in space. However, the perception and processing of the images is quite difficult for our eyes and mind. On various forums (xda.com, 4pda.ru, etc.) the issue of the loss of contact with reality, dizziness, lethargy and mood decline among people who used virtual reality helmets too long have often be raised.

To sum it up, we can say that we live in a fairly progressive time when we can see some incredible things. Advanced technologies help us in almost any sphere of our life: from smart watches to smart houses. But we must not forget that all is good in moderation, even such boundless good as products progress.

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Spain's Tourism Industry: an Example to Follow

Nowadays the Kingdom of Spain is one of the top tourism destinations: in 2014 it was third in terms of international tourist arrivals and second in tourism earnings worldwide [4].

In 2015 Spain was at the head of the Travel & Tourism Competitiveness Index owing to its cultural resources, infrastructure and adaptation to digital consumption habits (ability to support online searches for entertainment) [1].

Spain is third in number of the UNESCO World Heritage sites [5] and second in Europe from the standpoint of extension of natural spaces. Spain also has the majority of Blue Flag beaches in the Northern hemisphere and is the third country globally in number of hotel rooms [3].

Some considered measures taken by the government (building restriction, providing grants for organisations, soft loans for refurbishments, training in the tourist sector, implementing an investment programme to modernise public service facilities and infrastructure and to protect the environment [6]) resulted in increasing the number of international tourist arrivals to Spain by a factor of more than twenty: from 3 million in 1950 to 65 million in 2014 [2].

The Spanish experience can be an example for many developing tourism destinations to follow.

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Ecological Problems

People are the part of nature. As our civilization develops, people become stronger than nature.

But it's not so simple. People learned to influence our environment. They create different household items, medicines, food... So, they pollute the atmosphere. There are even ozone holes. People are not careful. They burn forests, pollute rivers. But nature doesn't forgive it.

And among the most pressing problems can be identified:

1 the ozone layer,

Ozone layer protects our planet from the sun's harmful rays. Due to atmospheric emissions of the so-called CFC's, the ozone layer depletes. This results in occurrence of the holes in the ozone layer.

One more dramatic thing is an increasing number of cars and other means of transport as their fumes penetrate into the atmosphere and destroy the ozone layer which protects the Earth from the dangerous light of the Sun.

2. acid rains,

Acid rain falls when poisonous gases from power stations and vehicle exhausts mix with oxygen and moisture in the air. These gases become part of the water cycle and may be carried a long way by the wind before they fall as acid rain, which kills wildlife in lakes, rivers, and forests, and damages the surrounding plant life.

3. global warming,

World temperatures are currently rising every year. This so called global warming is caused by the building of gases and water vapour in the atmosphere. These gases form a layer that reflects the heat back to Earth. This is what we get in return: the ground becomes very dry, a lot of rivers and lakes dry up, the forests start burning, the glaciers melt, people and animals start faint. And these are not all the outcomes of global warming.

As the planet warms up, the polar ice caps will start to melt. This could cause sea levels to rise and many habitats will disappear under water.

4. toxic pollution of atmosphere, and

5. contamination of underground waters by chemical elements,

The major sources of pollution in big cities are exhaust gases of cars. Sulfur oxides may cause acid rains and many other bad things. Various plants and power stations exhaust harmful gases; excrete toxic metals, radioactive pollutants and ammonia.

Water pollution is also dangerous because it ruins not only the water bodies, but also all the vegetation and living creatures around it. Because of in rivers, lakes and oceans, like plastic bottles, paper and other things. Besides, products of oil refinement may cause a disastrous effect to water

6. disappearance of forests,

Today forests cover about 30% of land. Every year this figure decreases more and more. People clear out new territories for residential buildings, new plants and factories. We must realize that deforestation causes the extinction of animals and plants.

7. Rubbish, household waste,

Various forms of pollution are happening due to some careless human actions. Littering is one of them. It can lead to water and air pollution, land and soil pollution, and to many other unwanted effects. Litter has become a serious environmental issue nowadays.

Ecological problems have no borders. However, environment disasters can be avoided if people broaden ecological education and every person understands that the beauty of nature is extremely fragile. Governments must take serious actions against pollution.

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The effect of climate change on tourism industry.

Tourism is one of the largest global economic sectors and it plays an important role in many national and local economies. For example, travel and tourism industry contributed 44.5 per cent of Macao Gross Domestic Product, 22.7 per cent of the Maldives GDP, 22.2 per cent of the Bahamas GDP, and 22.1 per cent of the Seychelles GDP. The tourism contribution to the Russian GDP is 1.5 per cent (2015).

Tourism and travel have been developing at a high scale. According to the latest report of the UNWTO, in 2015 international tourist arrivals reached record 1.2 billion.

The tourism industry is highly dependent on climate. The climate determines the length and quality of a tourist season (e.g. winter sports and beach holidays), affects tourism operations (the supply of water, heating or cooling rooms, irrigation, etc.), determines the environmental resources (wildlife and biodiversity, water level and quality), and environmental conditions (they can alienate tourists, for example, infectious diseases, forest fires, algal blooms, insect or pests, hurricanes).

But the climate has been steadily changing. Over the last 100 years the average surface temperature rose by 0.74 ° C, and it still increasing. According to the forecasts of the Intergovernmental Panel on Climate Change (IPCC) - the most authoritative international organization in the field of climate - in 20 years the growth of the temperature will reach about 0.2 ° C, and by the end of the 21st century, the Earth's temperature can rise by 1.8 to 4.6 ° C. The British scientists say that from January to September 2015 the average daily temperature exceeded the average of the XIX century (1850-1900 years) to 1.02 ° C. According to the observations of Russian meteorological stations, the average annual air temperature in Russia has grown by 1 ° C over the past 100 years (which is significantly higher than the world average). The main reason of climate change is greenhouse effect resulting in large amounts of carbon dioxide emissions into the atmosphere.

Climate change affects all the spheres of our life, including the tourism industry.

There are four broad pathways by which climate change affects the global tourism and travel sector.

1. Direct climate impacts: changing the length and quality of the tourist season. Raising temperature reduces the tourist season at ski resorts and worsens the conditions of the beach tourism. In addition, this will lead to the increase of natural disasters such as floods, earthquakes, tornadoes, tsunamis, etc. These disasters disrupt the tourist infrastructure, which leads to additional expenditure of travel providers and tour operators.

2. Indirect effects of environmental change. In a number of regions, tourism develops due to their beautiful, unique, and untouched nature. These may be mountain landscapes, seas, beaches, wild animals and rare plants. Climate change is leading to a deterioration of water quality, loss of biodiversity, reduction of landscape aesthetics, the deterioration of agricultural products (e.g. wine tourism), coastal erosion and floods. All these changes can deter tourists.

3. Impact on the tourism industry due to policy measures to mitigate climate change. Leaders of the tourism industry, as well as authorities are aware of the problem of climate change so they try to impact tourism flows by causing an increase in transport costs.

4. The indirect impact of social changes. The impacts of and adapting to climate change will have their economic cost. If not tackled, climate change may also threaten future economic growth and even political stability of some nations.

Tourism is one of the most climate-sensitive sectors of the economy. At the same time, tourism and travel contribute to the emission of carbon dioxide. For example, about 5% of global carbon dioxide emissions are produced by this sector. Transportation of tourists to and within destinations accounts for 75 per cent of all carbon dioxide emissions by the tourism sector, with air travel making up about 40 per cent of the total.

Thus, tourism and climate changes are interdependent. So, it is possible to reduce carbon dioxide emissions and mitigate or reduce the impact of climate change. So, a number of international agreements have been adopted obliging the nations to reduce emissions by 50% by 2050. Tourists can compensate the emissions produced by aircraft during their flights. But all these measures are voluntary. To cope with the impacts of climate change we need to work together.

There are also a number of mechanisms that could be used for addressing greenhouse gas emissions including:

1. Reduction of energy used. This should be the main and fundamental tool in the fight against climate change.
2. Improving the efficiency of energy use. Technology developments can help to reduce carbon emissions, for example, in aircraft, reducing fuel consumption and improving aircraft design.
3. The use of renewable energy. This is particularly important for the tourist industry, for example, the use of solar panels, water recycling, passive heating and cooling rooms.
4. Recycling carbon dioxide through greenery.
5. The use of environmentally friendly transportation for tourists within destinations.

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Robots in Our Life

Robots have become a part of our life. They fly to the space exploring other planets, help to do some work for military purposes – demine bombs and scout a situation from the air. It is hard to imagine many areas of industry without robots: they collect cars, help find new medicines and so on.

But today, the consumer robotics market is still fragmented. Different manufacturers make different and incompatible hardware. Every time technologies and tools are created to find solution to a specific problem, they are almost impossible to reuse. The area is very difficult and requires high efficient staff. At the same time, there is another factor: there is no transfer of knowledge and experience between different regions. Being concerned with this problem, Microsoft has offered a solution – Microsoft Robotics Studio (MSRS) aimed at programmers of different levels. It includes four basic components:

1. CCR (Concurrency and Coordination Runtime)
2. DSS (DecentralizedSoftwareServices)
3. VPL (Visual Programming Language)
4. VSE (Visual SimulationEnvironment)

Concurrency and Coordination Runtime is a library for working with parallel and asynchronous data streams is based on the .NET Framework. Interacting with the environment robots need to properly respond to the information that comes from a variety of sensors. Therefore, it was decided to transfer a substantial part of logics onto a computer which may be separate from the robot. The result of this was development of the CCR library-site, which makes it easy to create the code for parallel execution.

Decentralized Software Services is a lightweight framework for creating distributed applications based on CCR which provides a variety of management services to correct behavior.

Visual Programming Language was developed by Microsoft specifically for Microsoft Robotics Developer Studio. VPL is designed for beginners who know the basic principles, such as algorithms and variables. VPL generally describes some of the robot modules and their relationship to each other. Robot modules can be a variety of sensors (distance, touching, light, etc.), webcams, GPS-navigation devices, motors and actuators, speakers, LEDs, various indicators, displays and others. In addition, these modules in the Robotic Studio may make special dialogue windows, for example, manual robot remote control one.

Visual Simulation Environment is a simulation environment. It helps to simulate the behavior of robots in virtual environment. The presence of a robot is not necessary. A simulation environment is a graphical 3D-model mapping the actions of robots and objects surrounding them. Physical aspects of this are so deeply thought out that even coups modeling robots or robots separation from the ground and collision of objects become possible. To ensure realism in the virtual, NVIDIA PhysX technology is used.

Microsoft Robotics Studio is ideal for exploring robots and programming techniques. To do this, there are cheap, easy to use and program robots. In spite of this fact, they are quite feature-rich. A good example is iRobot Create and Lego NXT.

We consider Microsoft idea to create a dedicated development environment for robots a great one. In the future, it will simplify the task to create projects to many fans of robotics.

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Bohrer für große Aufgaben

Die Bankenkrise sorgt für Turbulenzen auf allen Märkten der Welt. Die Unternehmen müssen die Aufmerksamkeit auf die High-Performance-Bohrer. Neue Bohrer für mehr Produktivität. Die Marke Mapal verbessert sich das Bohrverfahren auf 60 %.

Bohrer Mapal haben 3 verschiedene Wechsel-Bohrköpfe zur Verfüzung: Typ für Stahl und Typ 2 für rostfreie Stähle und Typ für NE-Metalle. Die Schnittstelle garantiert mit der speziellen Verzahnung nicht nur hohe Drehmomente und Präzision, sondern eine optimale Kühlung der Schneiden und hohe Standwege.[2]

Neue Änderungen garantieren hohe Drehmomente und die optimalen Schnittdaten. Eine einfache und schnelle Prozess-Ersatz-Köpfe Bohrer spart Rechenzeit Verarbeitung der Produkte.

Im Zusammenhang mit den steigenden Preisen für Hartmetalle, Bohrer Mapal mit auswechselbaren Schneidköpfen Kosten senken Schneidwerkzeug. Daher sind dieser Bohrer als eine Alternative für alle Bohrgeräte aus Hartmetall.

Vollhartmetall- Spiralbohrer ihre Konkurrenten wie z.B. HSS-Spiralbohrer und Bohrer mit eingelöteten Hartmetallschneiden in der Serienfertigung weitestgehend verdrängt. Hohe Zerspanleistung, lange Standwege und verbesserte Bohrungsqualität gewährleisten hohe Produktivität und Wirtschaftlichkeit.[1]

Mega-Deep-Drill. Durch die voll ausgereifte Stirn- und Nutgeometrie wird eine optimale Spanbildung und -abfuhr sichergestellt. Zusätzlich erzeugt die Stirngeometrie besonders niedrige Vorschubkräfte, kombiniert mit sehr guten Selbstzentriereigenschaften. Darüber hinaus besitzt der Mega-Deep-Drill eine hohe Kantenfestigkeit, um optimale Ergebnisse beim Bohrungseintritt und -austritt zu erzielen. Insbesondere der Vierflächenanschliff mit S-Ausspitzung bietet eine erhebliche Leistungsfähigkeit. Die besonders glatten Spanräume mit einem Querschnittsprofil, die die Späne eng einrollen - aber nicht einklemmen- sind weitere Merkmale des Tieflochbohrers von Mapal. Die hohe Leistungsfähigkeit und Prozesssicherheit wird durch die speziell komponierte Hartmetallsorte des Mega-Deep-Drills unterstützt. Sie kombiniert die unbedingt nötige Biege- und Scherfestigkeit mit guter Elastizität, um zeitsparend mit höchsten Vorschüben bohren zu können. Das minimiert und unterbindet zudem Vibrationen und Schwingungen. Das Standardprogramm des Mapal Mega-Deep-Drills erstreckt sich über den Durchmesserbereich von 3 bis 16 mm. Bohrtiefen von 15xD bis 30xD sind erhältlich. Zusätzlich weisen alle Tieflochbohrer eine Innenkühlung für die optimale Kühlung der Schneiden auf.

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