Tomorrow

*how modern telecommunication change the definition of work*

In 1876 Alexander G. Bell created the thing that changed our world. Changed again…

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### Introduction

And it wasn't the last change in the modern history. Later in the XX century the modulator-demodulator also known as modem was created and really started the Telecommunications Age. First computers were connected together and the Net started growing.

In the last 20 years the lifestyle changed very much. Cellular phones and electronic mail changed the way we communicate, satellite TV and WWW sites changed the way we get the news and on-line shops and junk e-mail changed the way we buy products and do our business. Work, social life, politics – the telecomms are coming everywhere, bringing freedom, equality and productivity. Now I will try to go deeper into these spheres.

### The concept of work

Since the end of XIX century, when Marx wrote his famous book, "Capital", the economic meaning of work has changed dramatically. For Marx labour was nothing more but another resource like capital or land.

In XX century manager shows a bit more respect to employees. They are now individuals, who need to develop themselves and should be treated and motivated in right way.

XX century brought us a new idea: workers are paid for their time. Later, in mid-sixties, it was thought that companies pay their employees for their skills and personal qualities. Among those qualities were creativity, company loyalty. For those companies that eventually switched to new system, it became very difficult to properly measure worker's contribution to company's results. These companies try to increase workers morale, motivate them, because it is evident: if workers don't want to work, they won't work. Or at least, the results will be extremely poor. That's why in addition to motivation by money, managers try to create a feeling of mutual trust, belonging to company and common interests.

### Telework – a new hope

What new brings telework to this field? First it is ease of control and measurement. Results in electronic form can be easily archived, analysed by computers, forwarded for checking and copied. Next, all information about time and efforts spent is available. Another thing is that fixed time-based salaries are gone. The company will no longer care so about who and how much spent on a task. This will become a question of personal choice. Now everyone will be given a freedom to decide whether to work or to have a rest. This can differentiate workaholics from ordinary lazy people. Right now there are same rules for everybody. Rarely a company wants to have a lot of part-time workers. We cannot imagine a worker coming to factory when he is in the right mood. But with distant jobs you can have workers switching every now and then. We can even dream about perfect labour marketplace with contracts signed electronically for several hours. The psychological problems of switching jobs will be minimised. The retirement will no longer mean break of social relations, because they aren't based on physical presence in the company HQ or at the factory.

This system of personal freedom have the potential to eradicate unemployment by allowing real-time communications and negotiation between employers and employees, leading to equilibrium labor price.

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If you can measure the result of an office work, you can evaluate if it worth paying the money for result you get. Or the jobs are completely useless and ineffective. This can lead to boost in productivity. In telework usually people are paid for results, not for time. This motivates them to get better results, thus increasing productivity again! On the other hand, regardless of employee's results, the company always gets what if pays for! Combined efforts of ten people can cost the same for the company if they have the same effect. And now together with perfect labour market we come to what Marx was talking about – labour is just the same as machines or land. The motivation is the problem of the person himself! And with a freedom of work choice motivation is not the problem. With telework one can easily apply for the job he likes and the company can review all candidates just comparing the results of their work.

Thanks to the efforts of many people all over the world the Net commerce and work is still not limited as their off-line counterparts. Zero taxes attract more and more of the trade turnover. The Stock Exchange and Currency Exchange systems already inculcated in the telecommunication world. With decreased transaction costs, development of telecommunications and computers the efficiency of these financial spheres is quickly increasing.

Electronic auctions have already came to reality. On AOLtm auctions there are 600 000 bids in different categories now. Surplus directtm and tens other electronic auctions are now in the Internet. This is a dream of classic economists – perfect market with all relevant information freely available. With continuous decrease in transportation costs this can make every market global and make competition perfect, stopping the monopolies. One example is Microsofttm. Can we imagine that it will not succeed in stopping alternative OSes and browsers several years ago, without Internet? Free communications greatly increase the competitiveness of any product. Most on-line shops can offer lower prices for all products than their off-line colleagues can.

Distant work makes sexual and race discrimination very difficult and almost impossible. How can you behave badly toward your colleague if you only read his e-mails? How the program written by Chinese is worse than the one written by French? And all harassment will be logged, documented and backed up on a tape drive to be used in the Court.

Also it will provide new unique opportunities for unable people. Nobody will knew about his inabilities and nobody will keep him away from the job.

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### The drawbacks

But the problem with results measuring still remains. How can we train managers and change their minds in order to deal with telework? What I think is that all internal relations need to be built on a completely new basis. The basis of mutual respect and trust. How can "white collars" remain superior over a worker if they are communicating over the computer network? How superiority can survive in the environment where both worker and manager have the same access to information? I am sure this is impossible without personal pressure of managers. So, this will surely lead to a democratisation in the work.

Next problem is that telework isn't as universal as we want. It isn't possible for any job: for example, you won't agree with a distant driving of your taxi in rush hour. The control is necessary when human lives depends on the worker. And until we are not sure that communications will be 100% error free, we cannot avoid physical presence of worker. An example is distant control of an aircraft. Modern aircrafts can take off and land without anybody on board, but human pilots should be available for emergency case. Several pilots in the airport could work for tens of aircrafts, helping them to take off and land safely, then giving several hours of direct flight to a machine. But the storm can terminate the communications and lead to human deaths in non-controllable plane. This shows us how careful we need to be with a new power that computers and communications give us.

In some areas we can't cope without live human being, but… The situation changes. Right now the technologies are available that can change the whole global economy. I mean telesales. This includes all TV presentations, on-line stores, direct mailing. There was a bad idea of paying too much attention to a customer. In the shop there is always a sales manager, available for questions, but most time doing nothing. And he cannot new everything about all the products he is supposed to sale. The situation is different in a modern on-line store. All the information about the product is available in clear form. This can be a multimedia presentation, a chart, table or just a plain text. If additional information is necessary, then the customer can initiate chat session with a competent person, or ask for an e-mail response. Minimised costs. Maximised convenience.

Other spheres of physical presence are special services, including police and ambulance, rescuers and fire-fighters. All these jobs require a trained strong and hardy person, physically presenting on the place.

Next problem is socialising. As we know, work is one of the most important places together with family and school, where socialising goes. In some countries this is the main place of social interaction and the result work itself plays only secondary role. The contact is much more important. In countries with strong traditions of corporativism this is especially important. The person will be not able to identify himself with appropriate social group.

Another problem is quite specific, but isn't less serious. Some American physicians believe that obesity is a kind of epidemic in the US! Imagine what can happen with Americans if telecommunication will replace conventional lifestyle.

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### Education

Telecommunications will make high-quality education accessible for everybody. The costs for giving a virtual lecture to one student and one thousand of students are equal. This unimaginable scale economy (and as a result – marginal costs of zero) will greatly increase educational level. The standards will be almost the same in all countries thus making the workers worldwide more interchangeable. This will back up the globalisation tendency. And strong arising competition from newly educated people of third world will increase the desire to study among American and European students.

### Conclusion

To sum it up, I believe that next millennium will bring us to new horizons of social, political and economical interaction in the virtual world of modern telecommunicating. This tool offers us not only hope for economic prosperity but also a possibility to participate more in the community activities and decision-making in the political system. This even makes possible the direct democracy, which was left in the times of ancient Athens. Created by the scientists – the most intelligent and advanced part of our society, Internet offers equality, freedom of speech and unique possibilities for self-realisation.