

Birth of television in Uzbekistan

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The invention and development of television art is undoubtedly closely connected with scientific research. The historic facts have witnessed the influence of scientific research progress on the development of television art. In this paper, the author intends to reveal some phenomenal facts which are known by very few people, namely, the first-ever appearance of electronic television in Uzbekistan. This paper gives us some authentic and valuable historic materials for the invention and development of television set in the world.

Keywords: television, electronic television, television system

We became witnesses of a birth of the first purely electronic television in the world, in Uzbekistan and in its capital Tashkent.

—Sliviskiy. K. K.

The Television Returned to Tashkent (1967)

Introduction

The invention of television has exerted a profound and wide-reaching effect on the nature and quality of modern everyday life. More vivid than radio, more intimate than film, television became one of the central and most significant technologies of the twentieth century. Television took a long time to reach maturity, as it required the technology to broadcast as well as receive images, along with the cooperation of government and commercial interests to coordinate the supply of programming. But once television broadcasting became a reality and television sets were for sale to the average home, it quickly became the primary source for entertainment and information, first in the United States and England, and eventually throughout the world.

In recently published books and articles, all over the world, it was seldom referred to the history of television and its sensational opening in Uzbekistan. Being born in Uzbekistan, my motherland, the “blue screen” began its procession all over the world and conquered the heart of all people of planet. The purpose of this paper is to demonstrate the dominant role and merit of the Republic of Uzbekistan in the creation of the first electronic television in the world.

When writing the paper, the author studied historic documents of Central State Archive, and also other reliable documents. The 26th of July and the 4th of August in 1928 were the dates which initiated a brand new era in the history of mankind—an era of television.

At the corner of the Sayilgoh street and Sh. Rashidov avenue (see figure 3) was installed a transmitter, and a receiver was also installed on the wing of the cinema “Khiva”, and the operator of Uzbek newsreel put the video on a moving tram. And the moving Tashkent tram was for the first time seen on the screen, in that way the first television set appeared in the world with electronic-beam tube and the first in the world television transmission. That was the birth of electronic telecast—the prototype of modern television.

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Figure 3, The project of a monument to a telephot in Tashkent. 1968

This historical fact was filmed by Tashkent movie studio, and the film is kept in the CSA (Central State Archive) of the RUz. Frames of newsreel, in those long years, showed before film started, and there were a lot of recorded evidences of film-goers in the CSA of the RUz who saw in a big screen of the cinema television of B. P. Grabovskiy moving their familiar tram. In these long years, it was just a normal scene for viewers in our country. At that time, besides the polemics in Germany and television breakthrough in USA, most foreign experts acknowledged the top priority in Tashkent television technology. On October 1965 in a French journal, "Television" appeared in the quotation of the president of international association on radio engineering and electronics. E. Iysberg (1965) frankly said: "Practically 100% telesystems tubes with cathode ray should date back to as far as 1925 in Tashkent. Uzbekistan" (p. 27). Another important document is the certification of International Union of a Press on Radio Mechanic and Electronics about the indisputable merits of Grabovskiy and Belyanskiy, who realized the first television transmission in the world by means of electronic television in 1928 in Uzbekistan.

On June 7, 1971 in Paris, according to the solicitation of one of the originators of televisions mister Ivan F. Belyanskiy, International Union of a Press on Radio Mechanic and Electronics (UIPRE) attentively considered and studied the patent of B. P. Grabovskiy, N. Piskunov and I. F. Belyanskiy under the numbers of 5592 and 16 733. The UIPRE gave patents for electronic device for issuing and receiving the moving displays on the radio in accordance with the rules of International convention.

The author studied all related scientific and technical materials and historic documents, which confirmed the fact of B. P. Grabovskiy and I. F. Belyanskiy about the first realization of television transmission by means of electronic television for the first time in the world. Thus the first television appeared in 1928 in Uzbekistan. B. P. Grabovskiy and I. F. Belyanskiy's work influenced the development of the world electronic television, since it was used on transmitting and on receiving stations of cathode-ray tubes. Their contributions were also reported in detail in the bulletin of International organization of radio and televisions on November 6, 1969. Knowing the history of development of technical facilities of electronics, we can confirm that merits of B. P. Grabovskiy and I. F. Belyanskiy in development of electronic television are indisputable. The inventor later said: "I personally didn't know such legal fact, which testifies about the experiments of electronic television before July 26, 1928, so, my colleagues and me declare that the first electronic television appeared in the USSR in Uzbekitan". (Mukhamedov, 1967).

Documents are Enclosed

A long time before many specialists acknowledged the authority of Tashkent in opening of electronic television, world television Olympus only began taking its beginning with a small building of mahalla (quarter) of Sheyhantaur.

Later merited inventor B.P. Grabovskiy, at that time, was a laboratory assistant at CASU (Central Asian State University, now National University of Uzbekistan named after M. Ulugbek). There he got the first skills of experimental research. In an old city, a small comfortable house of mahalla (quarter) became the laboratory of world scale, where for the first time began the development of this great invention. Exactly here created and checked in practice the first in the world real working system of electronic television. But for breakthroughs in making the television one needed electronic-beam tube, which was impossible to make it at home workshop conditions, they needed fine instruments and help from specialists of this field, and the most important thing was material support for testing research.

In his last interview, Honored Inventor of Uzbekistan B. Grabovskiy said:

Being a laboratory assistant at CASU (Central Asian State University) in Tashkent, I invented cathode commutator, experiments with them gave positive results. With the help of Yuldash Akhunbabaev, who was very interested in this work and appropriated money for research program. We managed to conduct the experiments further. Certainly, we could not obtain such successes if without the help of Yuldash Akhunbabaev and other specialists of this area in Tashkent. (Mukhamedov, 1967)

Continuing this theme, the assistant of B. Grobovskiy, merited inventor of Uzbekistan I.F. Belyanskiy said:

I got acquainted with Boris Grobovskiy in 1927, he captivated me with his ideas about electronic television so much that I could not think about other things. But there was a question where should we take money from for the realization of these ideas, and thinking about this question, I decided to go to Samarkand, straight to Yu. Akhunbabaev. At that time, the government of the Republic of Uzbekistan was in Samarkand. We started to explain to Yu. Akhunbabaev the importance of our work and sense of invention. Certainly that was very difficult time, but Yu. Akhunbabaev listened to us and gave us much money for our work. So our work was in full swing. (Mukhamedov, 1967)

In the foreword of his book, B.P. Grabovskiy—an inventor of Telephoto wrote: “Yes, for developments of new technology of communication in conditions of commodity-money relations one needed much money. Frequent currency amounts embedded in development of product defined the degree of its readiness to mass production and introduction” (Vays & Urvalov, 1988, p. 5). From the investigation we found that both the developments and high-priced experiments of electronic television were financed by the government of the Republic of Uzbekistan. As a result, one of the wonder in 20th century took place under the administration of Uzbekistan.

There was a archival file named “Personal fund of Grabovskiy B.P. Fund 2562”, which is kept in State archive of the Republic of Uzbekistan, can testifies the financial support of this project. The following is the statement of Grabovskiy and Belyanskiy to CPC (Council of Popular of Commissioner) of the UzSSR about asking for financial support on June 5, 1929.

We have invented a device, which can send pictures at any distance and the former experiments give brilliant results. We need 300 roubles and we will definitively finish the whole work. We also want to ask you to give each of us 200 roubles as we have been working for more than a year and we have not got our salaries so far yet. We are

deteriorated, and now it is impossible to work in such condition. We have no power. We want you either to satisfy our request, or to refuse flatly. Then we shall throw to invent. (Grabovskiy & Belyanskiy, 1929, p. 190)

There was a memory of K.Slivitskiy in CSA (Central State Archive) of the RUz, who participated in developments of electronic television. K.Slivitskiy was a professional technician-engineer and creator of the first radio receiving-transmitting radio stations in Central Asia. And under the order of Yu. Ahunbabaev, he took part in improvement of “telephoto”. What K.Slivitskiy said in its time:

Central executive committee of the Republic of Uzbekistan and Mr. Yu Akhunbabaev personally appropriated money for research program. In this period for the first time I met with Grabovskiy. V.P. Ichalov and me worked there under the order of V.A. Mokhryakov. Ichalov was master of his craft, fantastically worked at any tools, tools and devices he made by himself. And here we saw the first results: at the distance of 10 metres, Grabovskiy managed to send and get the picture of flame of a candle, carrying to transmitting tube. We began our collaboration on reconstructions of a telephoto, we enlarged sensitivity, stability, focusing sending and receiving device. Our industry didn't do resistances, mica capacitors, variable mercury-alcohol resistances, and other details so that we had to do them ourselves. We tried great number of variants while finally we did not get satisfactory results.

To enlarge the sensitivity of receiving part of a telephoto and install it in the premises of authorized people's post and telephone committee on Central Asia in the office of Mr. V. A. Mokhryakov (see figure 1) in distance of 20-30 metres from transmitter, they installed antenna. Here began the final test and adjustment of an equipment of telephoto. (Mukhamedov, 1967)



Figure 1, The Uzbek engineer Saidkhadzhayev with a tele phot Newsreel was put on film—this first television transmission in movie-theatres of Central Asia at the end of the 20th years demonstrated this film. The priority of Uzbekistan in invention

of electronic television in 1925 and in realization of the first in the world television transmission in 1928 was recognized all over the world.

Undoubtedly there is no need to speak about the modern times of television. We see their practical results with our own eyes. We watch the transmissions from thousands and thousands kilometers, with the help of televisions visited on the Moon and it does not surprise us. But in future our grandchildren and great-grandsons will see the transmission from other planet, will have the pocket video-telephotos. But do not forget that all this began with telephoto in Tashkent.

Learning from the historical documents, it clearly stated what was going on the development of electronic television. Uzbek government selected his best specialists of that time for the improvement of a device. Apotheosis of invention took place due to hard and productive work of our prominent aces. All financial investments were also profitable because the main purpose was reached.

After invention had been approved by all scientists and different departments, all documents and devices were taken away to Moscow. Our invention of “Telephot” was not taken there the whole. But further development of a television also passed under the personal management of the Republic.

Elated by success, inventors continued to improve their device, insofar the condition allowed. After some months, on request of Tashgestram, professor Zlatovratskiy (see figure 2) gave the conclusion that those work followed to carry out in the laboratory of Moscow or Leningrad. The trust hurried to send all installation with slow speed by railway in CBIRA - Central Bureau of Inventive and Rationalization Activities. Inventors looked forward to the notices of arrival of a cargo on its place. They prepared reports, set documents in order, and did the additional drawing. However, till the third months a cargo arrived at Moscow. At first it was not sent to the right address.



Figure 2, Grabovskiy and the first director of the Uzbek television Mukhamedov (in the center)

Grabovskiy and Belyanskiy quickly went to Moscow with the first train. They went with small baggage: six files with the documents and drawings, three volumes of manuscript “encyclopedia of telephot” and underwear. We nearly had no money. In spite of this, they were all in high spirits and nobody had doubt in victory. In Moscow, hastily settling in the hotel, we hurried to the engineering department of CBIRA. Here is what the spouse of B. Grabovskiy, L. Grabovskaya (1978) wrote in her own recollection.

We were in shock when we saw what happened. In boxes, where should be instruments sent by us, there were only broken glass and warped frameworks. Grabovskiy with shaky lips and pale face, shouted aloud.

What shall we do now? —shouted I.

Shall ask...to restore the equipment—tried to be calm us Ivan.

Of course, of course—Grabovskiy was hastily pleased.

We tried to reassure each other, but all tortured the thought: how it could be so? Who could do this? Why? And that do?

Write the explanation—demanded on us.

We shall write.

Fortunately, soon after arrival in Moscow, friends met with Yu. Akhunbabaev, who arrived on official deals in GEC (General Executive Committee). They told him about this trouble. A chairman of Uz GEC deeply thought about it. How should one help those young and bold enthusiasts? Taking the tube of a telephone, he talked on the phone for a long time with someone in Uzbek who understood neither Ivan nor Boris.

Now I rang to permanent mission—said Akhunbabaev. There will be concerned with your work. Uzbek government will undertake all expenses connected with making telephoto. If will be appeared any problem, address personally to me.

Our industry is not so well developed to make such device. Specialists recommended sending you for abroad.

If it depends on only us, we are ready to go to world's end—declared Grabovskiy.

An Order for telephoto will be made through our trade mission in Berlin in company of "Telefunken". Foreign passport you will get in foreign department of AOMSA of Moscow Soviet (city council), all other documents—a warrant to currency and train tickets you will take in National committee of Foreign Trade. Corresponding letter has already directed there.

Luckily, Grabovskiy and Belyanskiy hurried to Moscow Soviet (city council). But there their expected new disillusionment: for getting passport, they needed recommendations from corresponding organizations about practicability of business trip.

But we have such recommendations from specialists of Uzbek Republic, and Grabovskiy pulled out from briefcase a reviews of different persons and Uzbek permanent mission. But all those were not enough.

They demanded the conclusion of CBIRA. Inventors work fell into the hands old specialist engineer Makhnovskiy. He kept it more than two weeks, finally, called the authors of telephoto.

It happened that Belyanskiy caught cold and because of diseases could not go to CBIRA, and Grabovskiy left alone.

Mahnovskiy, bald, carefully shaven, shortsighted, long through spectacles looked at Grabovskiy's scrawny figure and not asking to sit, asked:

Are you Grabovskiy?

Yes, I am Grabovskiy—answered Boris Pavlovich.

But I thought that you had beard and moustache—continued engineer ironically.

No, I don't wear moustache and beard—nearly with hate answered Boris.

And I consider that maturity of wit of person is not at all defined by the amount of vegetation of his face.

By the way, you are also shaved.

Grabovskiy from the first minutes felt hostility to Mahnovskiy and further continued to answer with such tone. But that, having eaten the pill, asked more carefully:

What kind of education do you have?

Finished the first course of Medical Institute, preparatory course of Tashkent university and studied at industrial technical school.

Little...But what education do you have comrade Mahnovskiy?

He also had secondary technical education.

It is clear.

Makhnovskiy was silent, then took off his spectacles and carefully cleaned them with handkerchief.

Well what did you invent?—he asked.

All are said in papers, - hardly controlling himself, answered Grabovskiy.

But you explain yourself.

Well.

With what to start?—thought Grabovskiy—to tell him about the whole history of nerve-racking searches, about massive efforts of wit, worrisome days and sleepless nights? But will he understand? Everything seems to indicate that— no—he answered shortly.

We are working on the way of an issue and acceptance of moving images. Such a radio, it will be a great boon to the mankind. Person will see from thousand kilometers, through rocks, through any barrier...

Mahnovskiy whole was compressed, his shaven face became purple.

This... this some kind of idle fancy!—began he, stammering just a little—Yes, will you understand anything about electronics? You thought about impossible thing. Nobody from greater wits neither in Russia, nor on West, nor in America does not think about such thing. But you solved to overlay all! Think, Grabovskiy, are they all not funny?

Our idea was approved by many and even Rozing, was to say Grabovskiy.

And we have already made much progress in this matter. Our experiments showed that we stand on correct ways. Only give us now possibility to show it practically. But as to our not competencies, as you confirm, to the history of technical opening and inventions know much events.

I see, about what are you going to speak—Makhnovskiy interrupted him—But all these don't refer to your idea.

Don't refer?! Grabovskiy lost his head—Then give us written conclusion, why it, our idea is insolvent.

Well, we shall give. (pp. 124-142)

After some days Grabovskiy and Belyanskiy really got conclusion from CBIRA that at present working on telephoto is hopeless, possibility of influence of thermoelectrons cathode ray in supposed scheme is doubtful.... And the letter was sent to Tashkent, in which was written that inventors were characterized by the swindlers and crooks; they gave advice to stop any covert activity around electronics.

This was the last heavy knock. And if Belyanskiy was on the strength of his nature, carried it comparatively easy, but Grabovskiy was worried, and forgot about dreams and withdrew. Grabovskiy returned to Tashkent bewildered and devastated. In Moscow, they did not return him files with drawings, schemes, calculations, and the manuscript of “encyclopedia of telephot”, which could killed him. Soon after, Boris Pavlovich was seriously ill.

On January 13, 1966, the heart of an enthusiast inventor B.P.Grabovskiy stopped. B.P.Grabovskiy’s wife, according to his before death desire, sent his whole personal archive to the Central State Archive of Uzbekistan.

Practically, after officially concerning Uzbekistan with invention of electronic television, native researchers and big organizations began working hard on its development. They participated such organizations as Tashkent Assotiations of Inventors, Central Asian district of communication. SASU, public bodies of ITR, plant of named after Ilich, Leningrad plant “Svetlana”.

For creation of the first television set “telephoto” (tele-fot in Greek tele-far off, phot—a light) and electronic television system helped personally T.A.Saidkhodzhaev, the first Uzbek power engineer, which personally controlled the completing of device and checked the technical equipping of the laboratory. Exactly immeasurable potential of our country created the first real electronic television set! Created on that principle works modern “blue screens”. And today follows obligatory postulate this historical fact. The apogee of television era of mankind begins with small building of mahalla (city quarter), of an old city in Tashkent.

After years, the first broadcasting in Central Asia, the first movie theatre in Central and East Asia, as well as the first direct television airwaves would appear exactly in Uzbekistan.

Conclusion

Television was not invented by a single inventor, instead many people working together and alone over the years, contributed to the evolution of television. At the dawn of television history there were two distinct paths of technology experimented with by researchers. Early inventors attempted to either build a mechanical television system based on the technology of Paul Nipkow’s rotating disks; or they attempted to build an electronic television system using a cathode ray tube developed independently in 1907 by English inventor A.A. Campbell-Swinton and Russian scientist Boris Rosing. Electronic television systems worked better and eventual replaced mechanical systems. However we cannot ignore the dominant role and merit of the Republic of Uzbekistan in the creation of the first electronic television in the world. Grabovskiy and Belyanskiy realized the first television transmission in the world by means of electronic television in 1928 in Uzbekistan. Their contributions should be memorized by us forever.

References

- Mukhamedov, F (1967). The television returned to Tashkent. Tashkent. DVD
- Grabovskaya, L. (1978). Reminiscence. Ural, 7, 124-142.
- Vays, M. L. & Urvalov, V. A. (1988). Collection of documents: B. P. Grabovsky the inventor of Telefot. Tashkent
- Rasina, P. I. & Urvalova, V. A. (1965). Destiny of one patent. Bulletin of communication, 5, 146-153.
- Iofe, V. G. (2006). Documents of the personal B.P.Grabovsky's fund on television stories. Herald of an archivist,1, 234-242.
- Iysberg, E. (1965). Electronic television system. Télévision.
- Slivitskiy, K.K. (1971, February 11). Description of television broadcast of K.K. Slivitskiy. Archive files of K.K. Slivitskiy. 1928. QSL cards 1928. Central State Archive of the Republic of Uzbekistan. Tashkent.
- Grabovskiy, B. P. & Belyanskiy, I. F. (1929, June 5). Statement for financial support. CSA UzSSR, f. R -89, on. 1 .f. 164, 1, 190. Original, manuscript, autograph. Central State Archive of the Republic of Uzbekistan. Tashkent.
- Iysberg, E. (1965, October 15). The President of UIPRE E. Iysberg. Translation from French. Original there also, l. 1. There is a stamp on original: Union Internationale de la Presse Radiotechnique et Electronique. UIPRE. CSA UzSSR, f. R-2562, on. 3, f. 69, l. 2. Central State Archive of the Republic of Uzbekistan. Tashkent.