MULTISERVICE WIRELESS TELECOMMUNICATION SYSTEM "UMDS"

Project idea

Production of universal equipment for microwave multiservice access provides both Internet and HDTV services simultaneously.

The number of HDTV channels rises in 4 times, the Internet speed rises in 12 times.








Radio technologies used in the system

The system is based on the following UMDS radio technologies:

- multichannel ground broadcasting for radio frequencies 11,70-12,50 GHz
- multiservice radio access for radio frequencies 12,75-13,25 GHz and 10,15-10,65 GHz
- broadband radio access based on the standard IEEE 802.11 and for 5,15-5,85 GHz radio frequencies

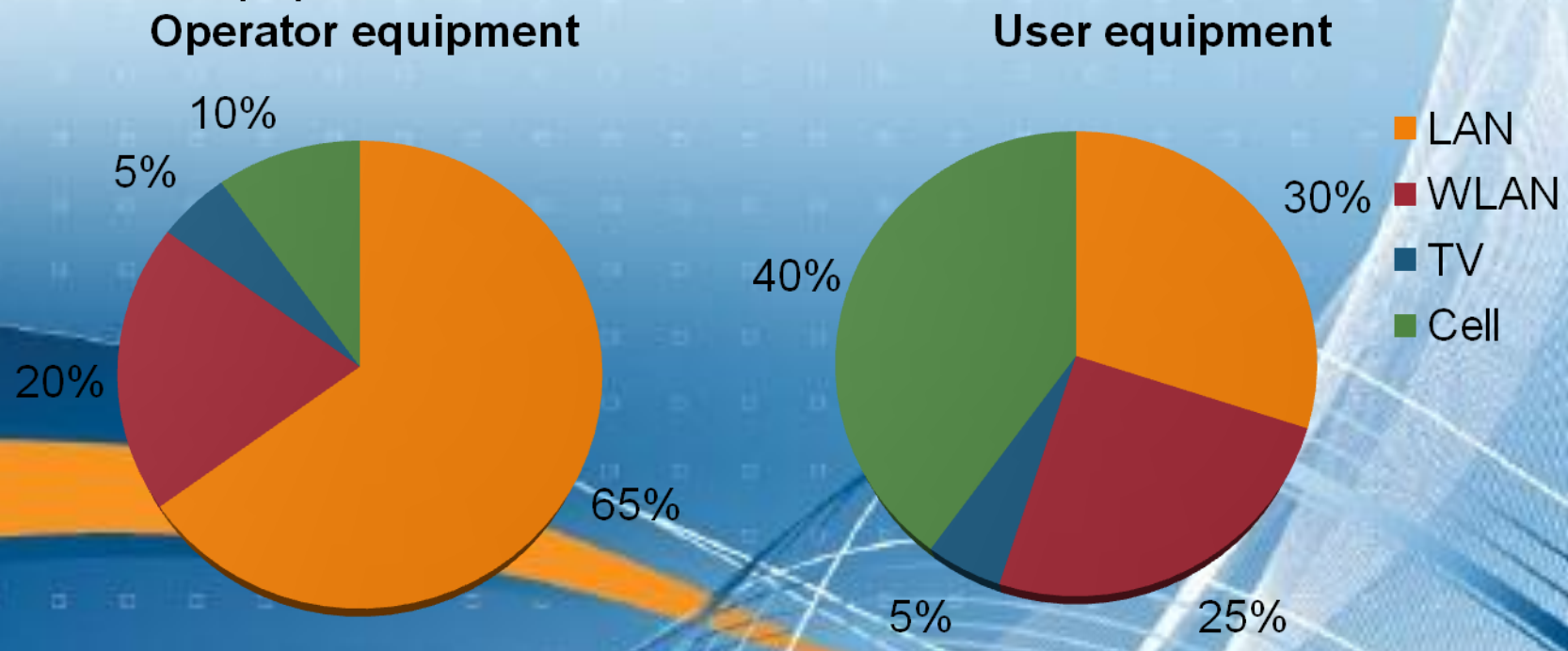
State of the project

- Ideas embodied in the prototype are protected by patents of Ukraine and Russia
- The prototype was tested by SEC "Victoria", "Ukrainian multimedia technologies"
- **The prototype is certified for use on the territory of Ukraine**

Market

The volume of the target market of Ukraine WLAN+TV (06.2012-06.2013)

- Operator equipment - 310 million $
- User equipment - 370 million $



Problems that can be solved and new opportunities

Problems

- User receives HDTV services and Internet access to different companies with different quality
- Unintended usage of a large number of complicated and expensive equipment by a user.

New possibilities

- **Free choice of services from one provider**
- **Simplifying the user's ability to get local services of multiservice access**
- **Ability to build a transport network for remote video monitoring services, IP-telephony**

Suggested product

Complex of equipment for providing wireless multiservice access to informational communication services

Central station
(TV, Internet gateways)

User terminal (antenna + radio module, Internet access module)

Product advantages

- Versatility and compactness of the equipment
- Free choice of services received by the user
- Optimal solution for areas with a complicated relief
- Quantity increase – 4 times more HDTV channels
  – 12 times more Internet traffic

Competing products and analogues

- There are no direct rivals
- Closest rivals are equipment manufacturers of cable and satellite multi-informational and communication services
- Competing technologies: DVB-T2/C2/S2, WiMAX

Efficiency evaluation of the project

Investments:

- Test running - 20 k $
- Organization of mass production - 80 k $
- Organization of product sales– 10 k $
- Total – 110 k $

Financial results in annual sales
10 central stations,
100 subscriber stations :

- **Gross profit: 2,6 million $**
- **EBITDA: 26 million $**
- **NPV: 520 k $**
- **Payback - 1 year**.

Risks and anti risk events

Risks	Anti risks actions
• interruptions in the components supply • forced increase of the prices of manufactured products • competition in the market of Ukraine	• supplier diversification • увеличение номенклатуры продукции • nomenclature increase of the products • access to foreign markets

Legal and regulatory framework for the application of microwave integrated TV and radio informational multiservice for radio access to UMDS

UMDS system technical specifications TYY 26.3-19123337-018:2013 were developed and registered on April 16, 2013 in Ukraine Derzhspozhyvstandard (Government consumption standards).

Upon the decision of the National Commission on the State Regulation of Communications and Informatization of 23.07.2013 № 462 central and subscriber stations system UMDS were included in the Register of electronic tools that may be applied on the territory of Ukraine in the public frequency bands.

Memorandum on the construction of the Sudan National TV and radio informational network based on the UMDS system was signed with the Ministry of Communications of Sudan

Prospects for integrated microwave television and radio informational system of multiservice radio access UMDS

Implementation of the concepts of "Vidkrytyi svit" and “Intelektualnyi gorod" is based on the creation of microwave multiservice radio access systems of new generation, in which coordinated interaction of three major informational communication networks exists:

- digital television broadcasting, including high and ultra-high definition, IP TV
- services and data Internet access
- process of collecting video (video monitoring)

Implementation of this direction will contribute to the development of national informational telecommunications infrastructure based on technology MITRIS (Cabinet of Ministers of Ukraine resolution of 12.03.2012, № 294).