

- 67% –
- 14% –
- 13% –

7700

214
130

3000

2010

14

•

)

•

•

•

•

2.

(2).

•

•

•

78 %.

15,2 %,

– 5,4.

Рынок телевидения в Украине



Показатели рынка

	603.7 кв.км
Население	46 млн.
	17.679 млн.
Телевизоры	23 млн.

Прием телевидения в Украине

		13.95	
()			(78%)
(, DVB-T)			
4	(MPEG-2)		2006
5			
5-	10 (MPEG-4)	18	17
1	10 (MPEG-4)		2008 70 74
(, DVB-S)		0.085	(0.3%)
(, DVB-C)		0.05	(0.18%)
()		2.7	(15.2%)
IP			0.1%
(, DVB-S)			
		0.95	(5.4%)

2 -

(-06) 2006 .
2015 .

2006 .

174... 230

470...862

DVB-T.

(DVB- , DVB-S, DVB- , IPTV).

DVB-

DVB-

« » , « » , « » , « » .

DVB-T

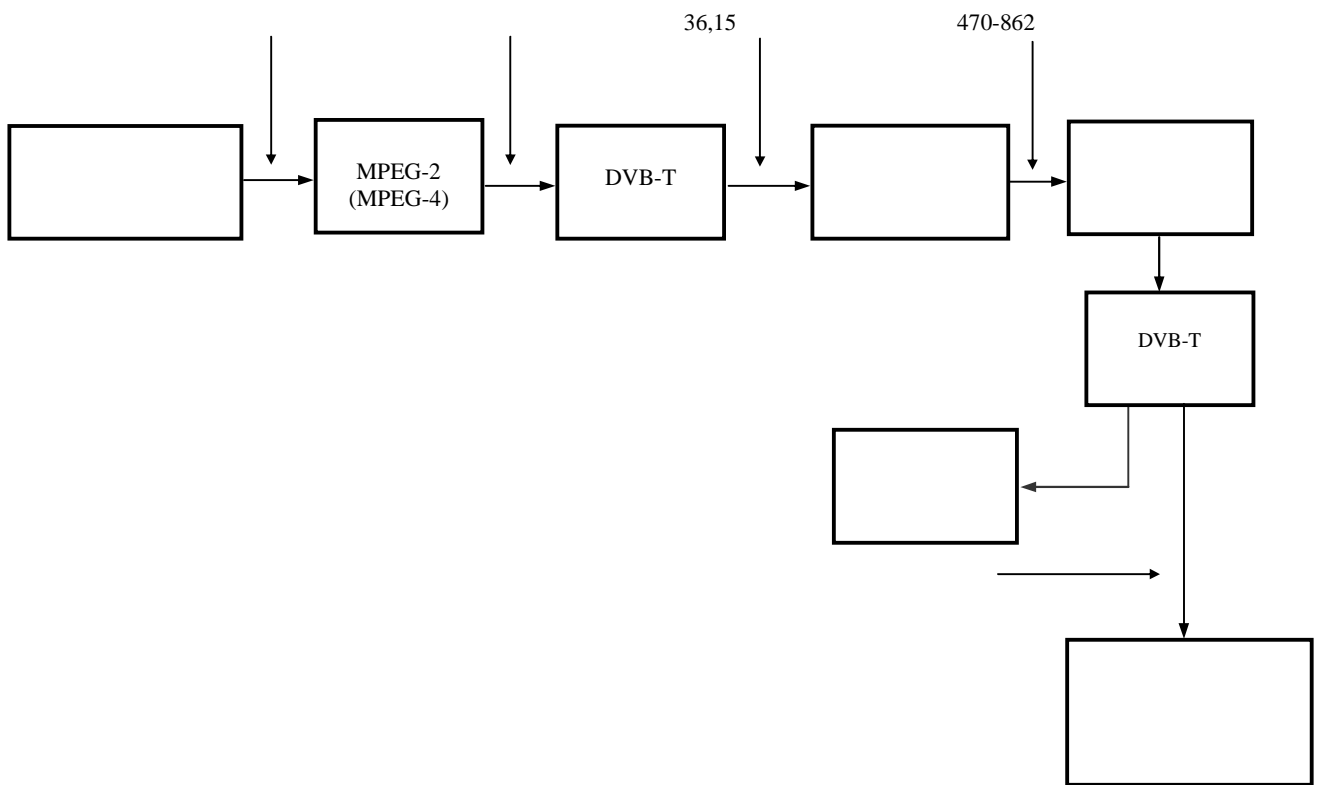
MPEG-2/MPEG-4,

DVB- ,

.3.

MPEG-2 (MPEG-4)

EMS-100.



3 -

DVB-T

ASI MTD-100, 36,15 174...230 470...862 -20 70 DVB- PAL (QPSK, COFDM), 47...2250 -2 120 1,5 (MER) 1 (SNR) 30 (BER) (FEC). [5], () DVB- BER, 2×10^{-4} DVB- 2×10^{-11} , () BER - BER $\geq 1,8 \times 10^{-8}$. DVB- BER, 2×10^{-4} DVB-T (7M61X7FWX) QPSK 3,6 QAM- 64 - 18,6 BER SNR, BER $\leq 2 \times 10^{-4}$ « » « »

[6-7]:

$$P_{\min} = \dots (-1) \cdot SNR, \dots$$

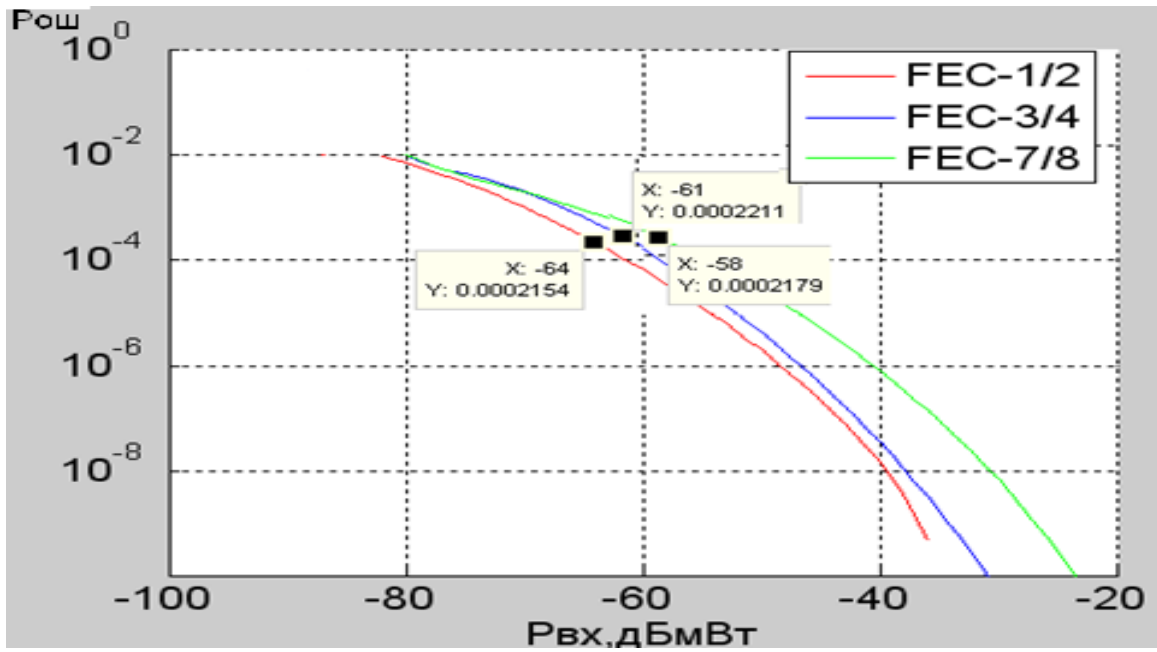
$$= 1,38 \cdot 10^{-23} \dots / ; \dots$$

... ; ... ; SNR -

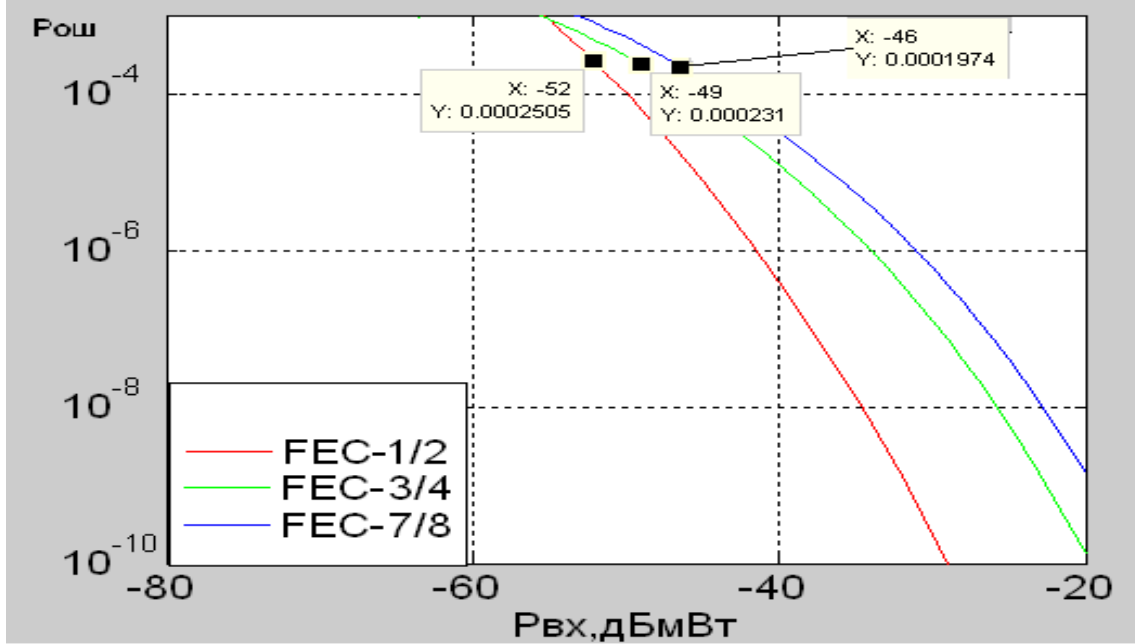
EMS- MTD-100
 MTD-100,

5-3800 -SD; 4510; 8310; Technosat,
 MPEG-2/MPEG-4 DVB-T.
 BER

DVB-T TE4510 (69, 2 , QAM-16), 4
 "TECHNOSAT" (55 , 2 , QAM-64), 5 -
 TE8310: General satellite (55, 2 , QAM-16).

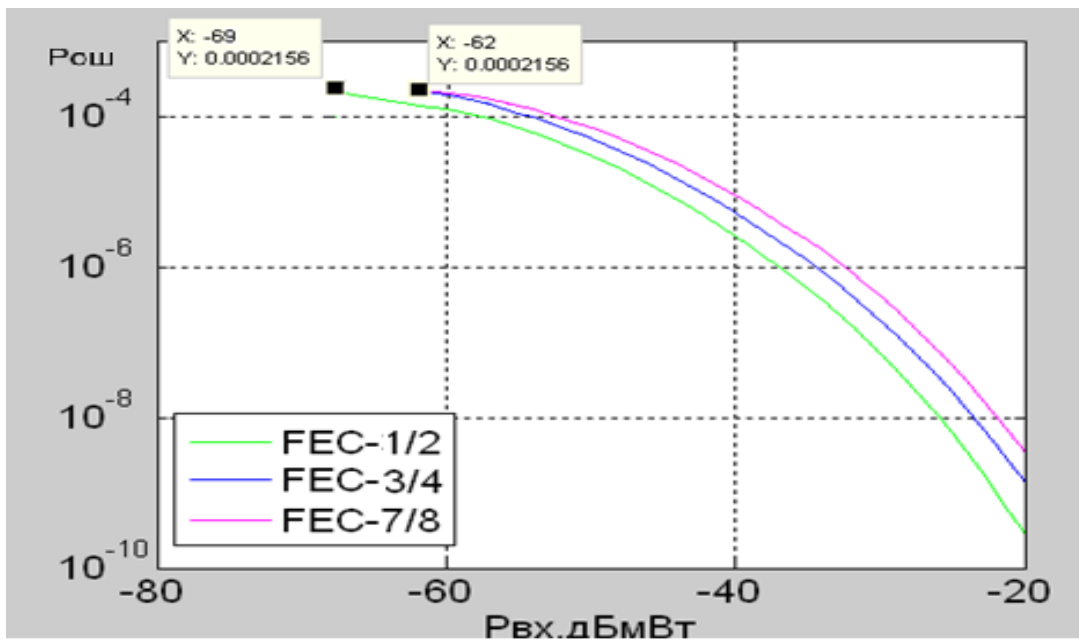


4 -
 4510 (QAM-16, 69, 2



5 –

“TECHNOSAT” (55 , 2 , QAM-64)



6 –

TE8310: General satellite_(55_ , 2 , QAM-16)

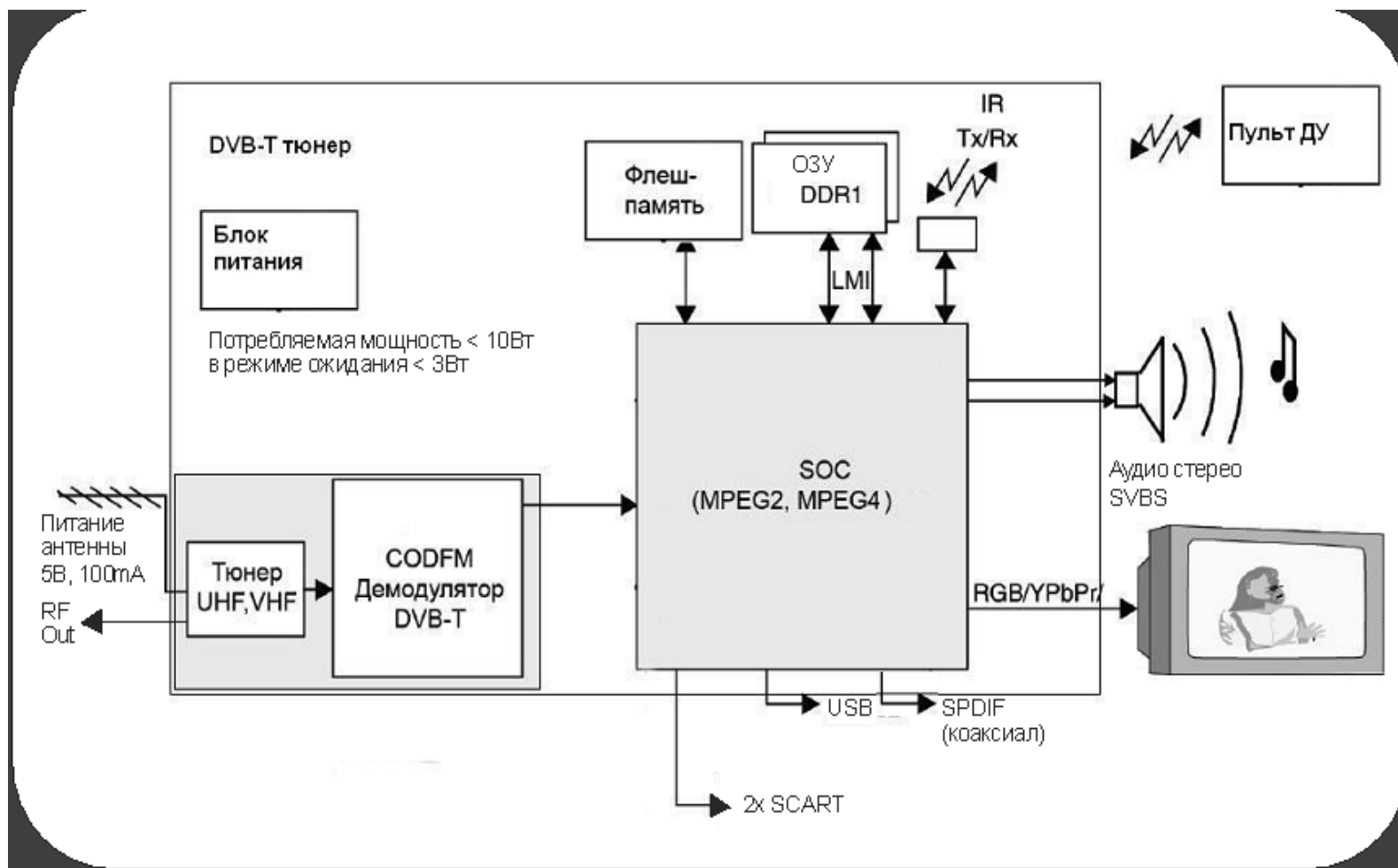
QAM-64 (QPSK) .

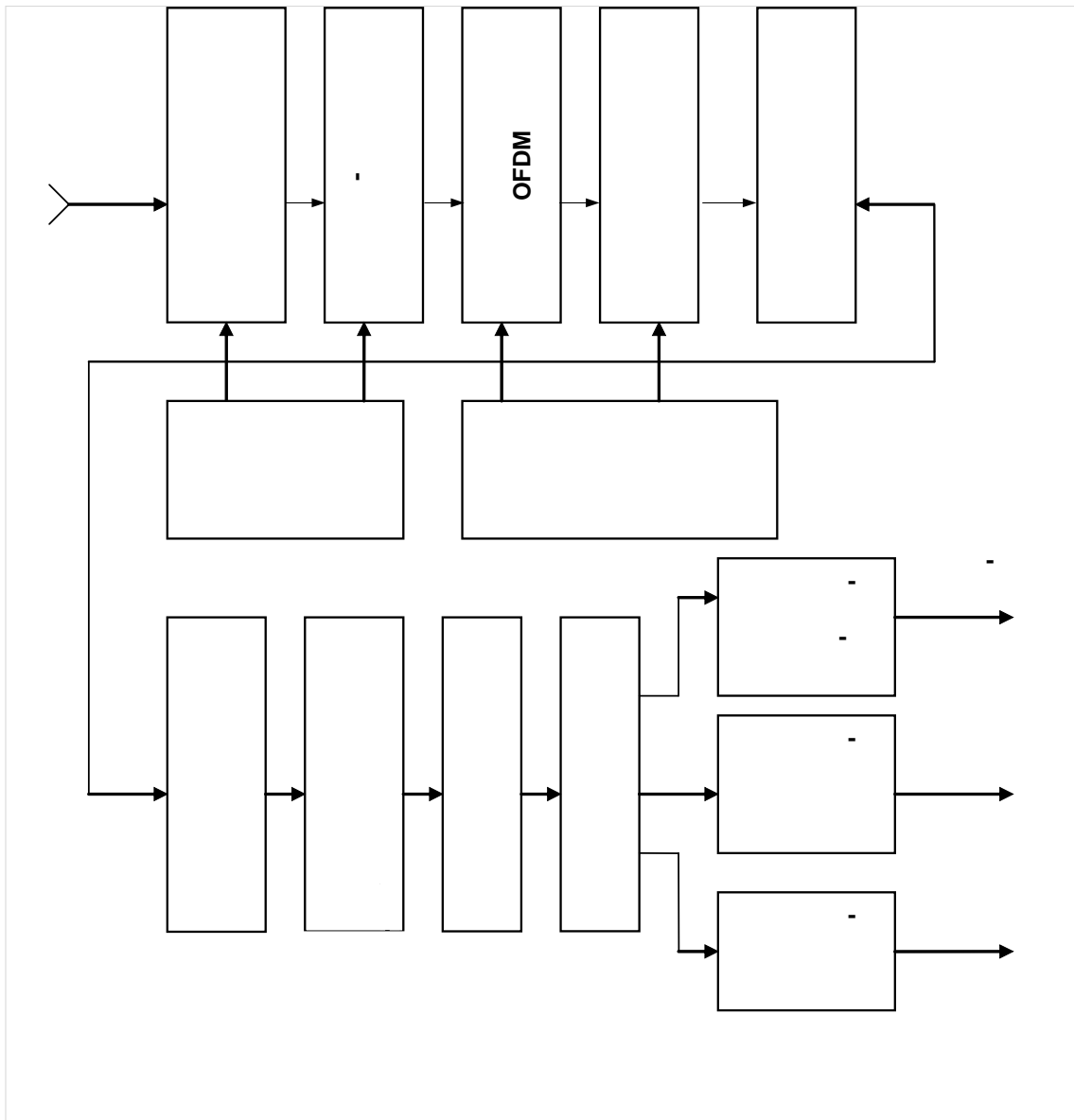
DVB-T, .7.
DVB-T.

.8
« , » .
:

() . , , , ,

31,67 /). DVB-T QPSK (4,98 /) QAM-64(





8 -

DVB-T

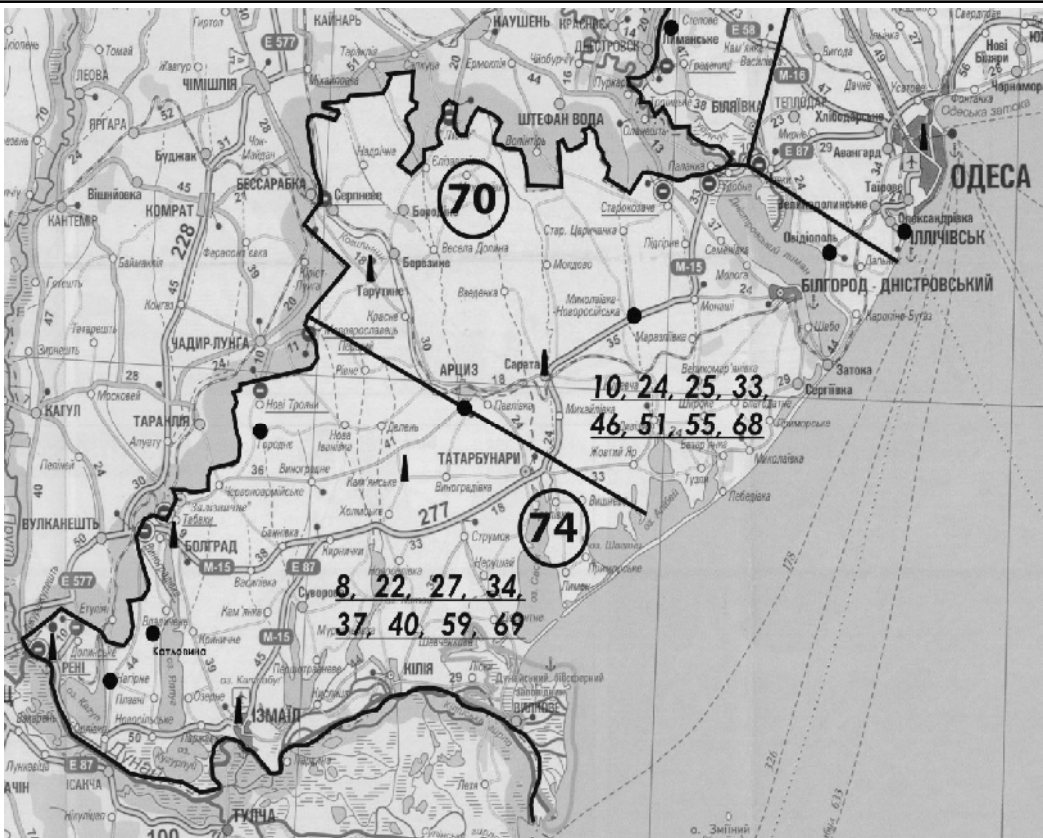
«

»,

70 74

(.9)

18 -



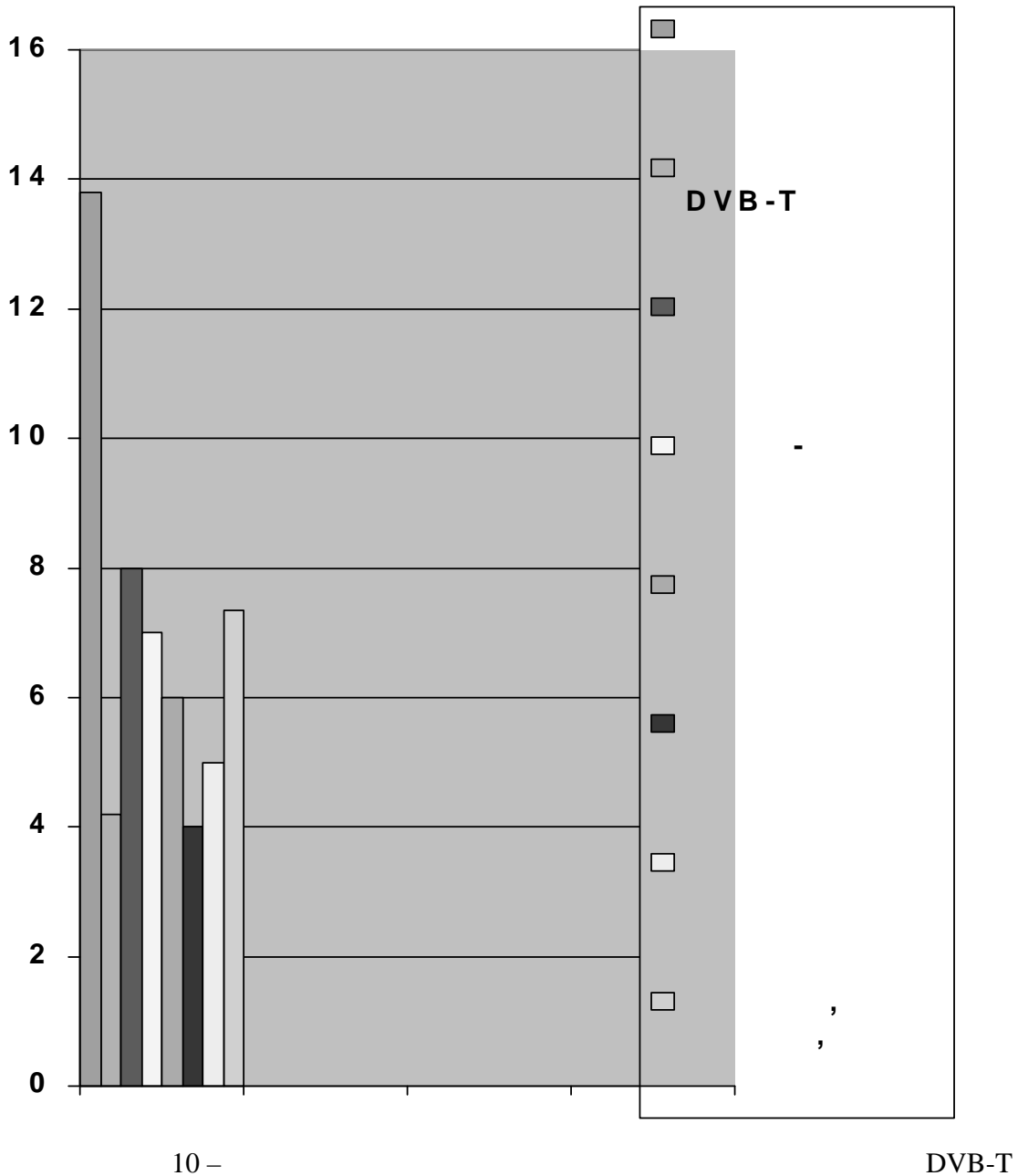
9 –

70, 74,

MPEG-2, MPEG-4,

MPEG Layer b1,2 AAC,

DVB-T . 10



- -82 -20 .
- : OFDM, 2 /8 .
- : COFDM.
- : QPSK, QAM-16, QAM-64.
- : 1/4, 1/8, 1/16, 1/32.
- : 1/2, 2/3, 3/4, 5/6, 7/8.
- : H.264/AVC, MPEG-2.

