

. . . , . . . , . . . , . . .

2015

2002 .. , , -  
 1 . -  
 Sentinel-1 Sentinel-1 . -  
 2002 .. , , -  
 1 . -  
 Sentinel-1 Sentinel-1 -

The study aim is to analyze the capability of the Ukrainian market for Remote Earth Sensing at high resolution, and to assess this volume in money terms. Comparison with the similar evaluations conducted by the authors in 2002 showed that for the period under review the space-based systems have been evolved with the optical and radar equipment at resolution of 1 m and more. The tendency for cost cutting the assessment and forecast of the environment in Ukraine with the necessary quality is demonstrated. Essentially, this is due to cost cutting the satellite images and a possibility to make free images on the Sentinel - 1A and Sentinel - 1B satellites to resolve non-operational tasks.

: , , ( ), [1], ( 5 ).

: WorldView GeoEye  
 ( 2007 .) 5 ( ), Pleiades ( 2011 .) -  
 2 , SkySat 2 ( 2013 .. 24 ) -  
 (0,5 – 0,9 ) ,  
 ; SAR-Lupe ( 2006 .) 5  
 Cosmo-SkyMed ( 2007 .) 4 -  
 (0,5 – 1,0 ) , Sentinel-1, 2  
 5  
 ( 1 ) , ;  
 ( ) ;

100

WorldView GeoEye (GeoEye Inc) [2].  
(U.S. Geological Survey) [11]

) [3, 4].

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[11],

» [5].

«

[6],

Cosmo-SkyMed-1, 2, 3, 4),

(TerraSAR-X, TerraSAR-Tandem,

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				( )	( )	( )	( )
<b>I.</b>							
1.1	:	600	5	120	1 (1)		1 (1)
1.2	, -	2	1	2	1 (1)	-	1 (1)
1.3	-	580	5	116	1 (1)		1 (1)
1.4	-	~ 100	1	100	3 (1-8)		1 (1-8)
1.5	( )	70	5	14	3 (1-2)		1 (1)
1.6	-	200	5	40	4 (4-10)	2 (10)	1 (4-10)
1.7	-	15	1	15	1 (1)		1 (1)
1.8	-	1	3	4	1 (0,5)	2 (2-5)	3 (1-5)
<b>II.</b>							
2.1	( ) -	1,3 (13 10×10 )	1 9	356	4 (4)	4 (10)	1 (4)
2.2	( ) -	70	1 9	630	4 (4-10)		
<b>III.</b>							
3.1	( ) -	1,1 (11 10×10 )	1	400	5 (1-10)	4 (10)	4 (20) 1 (1-10)
3.2	( , )	5,0 (50 10×10 )	1 10	50	3 (4)	2 (10)	2 (20) 1 (4)
3.3	( )	5,0 (50 10×10 )	1 5	25	3 (4)	2 (10)	2 (20) 1 (4)
- ( ) ; - ( ) .							

Hyperion EO-1.

2014 . [7],

376 143

2014 . 2013 . - 11 , 2012 . - 15

[1]:

I. ( ) ;

II. ( 10 ) ;

III. ( 0,5 20 ), (~1-2 ) ( 100<sup>2</sup>). [1]

SkySat (24 ) . 2.

" "

					2014	2015	2016	2017	2018	2019
WV-3 Imager	WorldView-3	VIS-1/ VNIR-4	0,3/1,2	/						
GIS	GeoEye-1	VIS-1/ VNIR-4	0,4/1,6	/						
WV-3 Imager	WorldView-2	VIS-1/ VNIR-4	0,5/1,8	/						
HiRI	Pleiades-1,-2	VIS-1/ VNIR-4	0,5/2,8	/						
PIC-2	EROS-	VIS-1	0,5							
PIC-2	EROS-B	VIS-1	0,7							
AEISS-A	Kompsat-3	VIS-1/ VNIR-4	07/2,8	/						
HR PAN	Cartosat-2	VIS-1	0,8							
	SkySat-1,-2,-3	VIS-1/ VNIR-4	0,9/2,0	/						
HiRAIS	DubaiSat-2	VIS-1/ VNIR-4	1,0/4,0	/						
-	- -1,-2	VIS-1/ VNIR-4	1,0/4,0	/						
NAOMI	SPOT-6,-7	VIS-1	2							
MSS	- 1	VIS-1	2,1							
MSS	-2	VIS-1	2,1							
VHRI	Nigeriasat-2	VIS-1/ VNIR-4	2,5/5,0	/						
PanMUX	BERS-3,-4	VIS-1	5							
	RapidEye	VNIR-5	5							
	SAR-Lupe-1 - 5	MIC-1	0,5-1,0							
	Terra-Sar-X	MIC-1	1, 2, 3							
	TanDEM-X	MIC-1	1, 2, 3							
SAR-2000	Cosmo-SkyMed-1 - 4	MIC-1	1, 3							
	Risat-1	MIC-1	1-3							
PRISM	ALOS-2	MIC-1	1-3							
C-SAR	Sentinel-1,-2	MIC-1	5							
<p style="text-align: center;">:</p> <p>                     VIS - [12]:                      (0,4 - 0,75)                      VNIR - + (0,4 - 3,0)                      MIC - (0,1 - 100) ;                      - , - ;                      - , - .                 </p>										

:

- (5 6 ); - 11

- ( 11 ); - 13

- 2 );

- 10 10 10 - 50;

- 10 10 5 - 50.  
 - , [8] 1.01.2012 .: -  
 - 603,5 . 2;  
 - ( 309,3 . 2 , ) 415,4 . 2;  
 - 74,5% - 67 . 2;  
 - 21 . 2;  
 - 2,0 . 2;  
 - 1265 ;  
 - 15,0 . 2.  
 . 1 -  
 -  
 - 5 -  
 , , -  
 , -  
 ) , ( , -  
 , -  
 .  
 1 2 , I, II III  
 SkySat  
 Sentinel-1. -  
 :  
 - SkySat 24 , -  
 , -  
 - Sentinel-1 [9]; Sentinel-1 -  
 Copernicus ( GMES) -  
 .  
 Sentinel-1 [10].  
 3 4 , -  
 , -  
 .  
 (

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.5,

I, II III

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Sentinel-1

5 1

3-

	( . 2)			
	(SkySat-1) [9]		(Sentinel-1) [10]	
	, ( )			
	0,9 ( )	2 ( - )	1 ( - )	5 ( - )
	,			
	8 × 8	8 × 8	20 × 20	20 × 20
I.1 -	120	-	120	-
I.2 - , , -	2	-	2	-
I.3 -	116 1.1	-	116 1.1	-
I.4 -	-	100	-	100
I.5 ( ) -	14 1.1	-	14 1.1	-
I.6 , -	-	40	-	40
I.7	15	-	15	-
I.8 -	4	-	4	-
, . 2	141	140	141	140
( 50% ), .	3281	3280	530	525

		( . . <sup>2</sup> )	
		(SkySat-1) [9]	(Sentinel-1) [10]
		, ( )	
		2 ( )	5 ( )
		, ,	
		8 × 8	20 × 20
II.1	( )	165*	165*
II.2	( )	630**	-
III.1	( )	400	400
III.2	( , , , )	50	50
III.3		25	25
		12700	640
- , :		10000	-
- 50 %		14766	1600
* 46 %		3.1.	2.1 54 %
**		-	-

5 –

( )		, -	- ,	1 <sup>2</sup> ,	
(SkySat)	-	0,9	8×8	20	
	-	2,0	8×8	30	
(Sentinel-1)	-	1,0	20×20		[10]
	-	5,0	20×20		

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I, II III

	-	, -		,		, . . ,
SkySat	0,9	3281	1280		4200	
	2,0	18046	1920		34650	
	2,0	10000	1920	1000	2920	
						41770
Sentinel-1	1,0	530				
	5,0	525		500	263	
						263
						<b>~42033</b>



