

기획리포트

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DVR(Digital Video Recoder)

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KETI



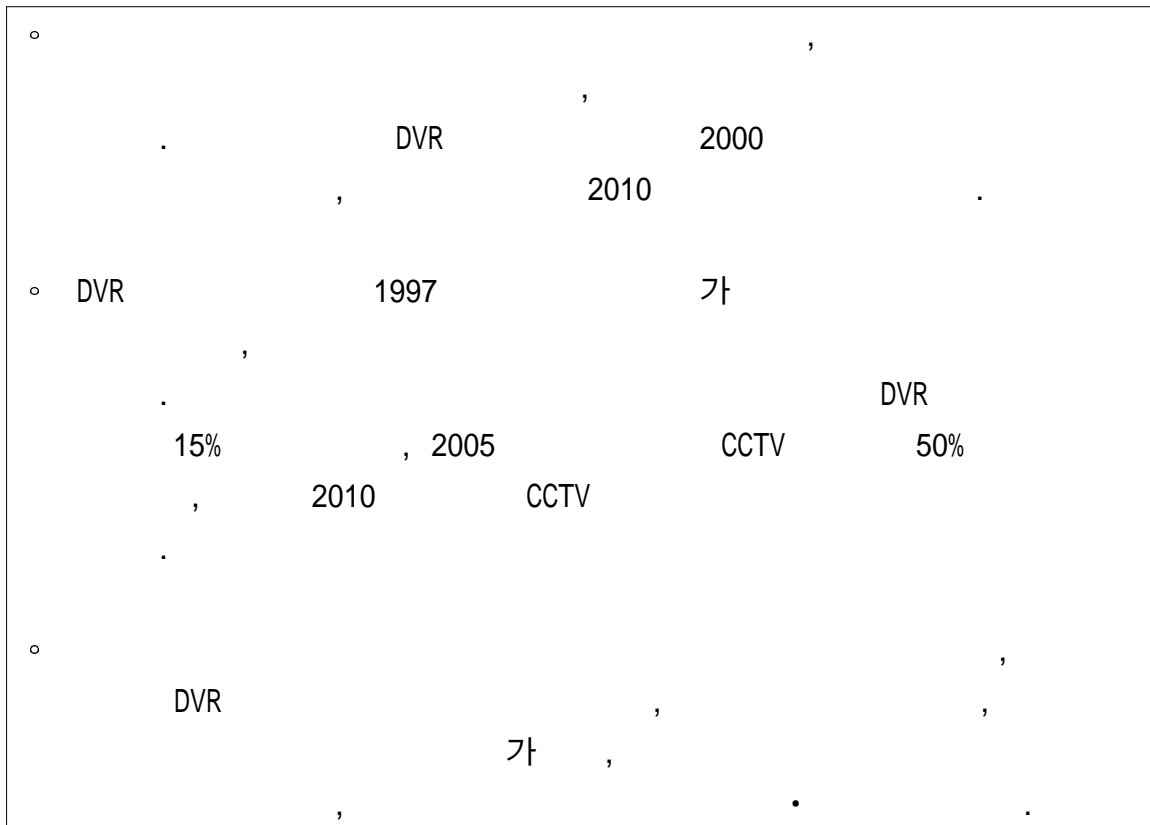
주간 전자정보

Biweekly Electronics Information

2004. 07. 16

보안용 DVR 산업동향

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I. 산업개요

1. DVR

- DVR “Digital Video Recorder” , DVR '가 DVR ' , PVR(Personal Video Recorder) .

○ “ DVR ” “ DVR ”
 가 가 , “ 가 DVR ” PVR(Personal Video Recorder)
 DVR . ,

○ DVR :

- CCTV
 , ,
 TV(CCTV) ,
 가 .

- , MPEG HDD
 ,
 가 .

○ 가 DVR (PVR : Personal Video Recorder) :

- (Magnetic Tape) VCR
 (HDD) 가
 .

- TV
 (HDD) VCR ,
 가 가 .

2. DVR

- (CCTV) 가
VCR
 , DVR 가
 , , , ,
가
- DVR ,
Auto Pan, Tilt, Zoom, , ,
 , ,
가 . 가, HDD, ODD , 가
CCTV .
- , , 가 가
 , 가 ,
 .
- DVR , ,
 .
 .
- CCTV ,
가 , DVR 가 .
- , DVR 1997 가
 .

3. DVR CCTV

- CCTV VCR
Video Tape , , , , .

< 1> DVR CCTV

	CCTV	DVR
		HDD
	6	3 ~ 5
		가
Over lay		
	(8)	(16)
		, ,
	가 가	(S/W 가)
	2	5
		가
	가 ()	HDD 가
	가가 ,	가
		가

II. 시장동향

- 1997 , 100 가 ,
10 ~ 20 ,
.
- DVR CCTV ,
 ,
.
- DVR 15%
, 2005 CCTV 50% 2010
DVR .

< 2>

(:)

	‘ 02	‘ 03	‘ 04	‘ 05	‘ 08
	26.8	31.8	37.2	43.2	-
DVR	-	-	17.0	24.0	-

* : (5/25, 6/16)

- 45% ~ 48%
, DVR
30% 가 가 .

< 3>

(:)

	‘ 02	‘ 03	‘ 04	‘ 05	‘ 07	‘ 08
	12.3	14.7	17.3	20.1	23.1	26.3
CCTV	1.2	1.1	1.0	0.8	0.7	0.5
DVR	0.9	1.4	1.9	2.5	3.0	3.6

* : J.P. freeman

○ DVR 9. 11 , 가
DVR 가 , .

- , SI 가

○ CCTV DVR 7:3
2003 1,750 , 2004 1,900 ,
2005 2,230 , 2008 3,200 12.8%
DVR .

< 4> DVR (:)

	‘ 02	‘ 03	‘ 04	‘ 05	‘ 08
DVR	-	1,750	1,900	2,230	3,200
DVR	-	-	3,420	4,200	-

* : (6/16, 6/21)

○ 5 가
 ,
가

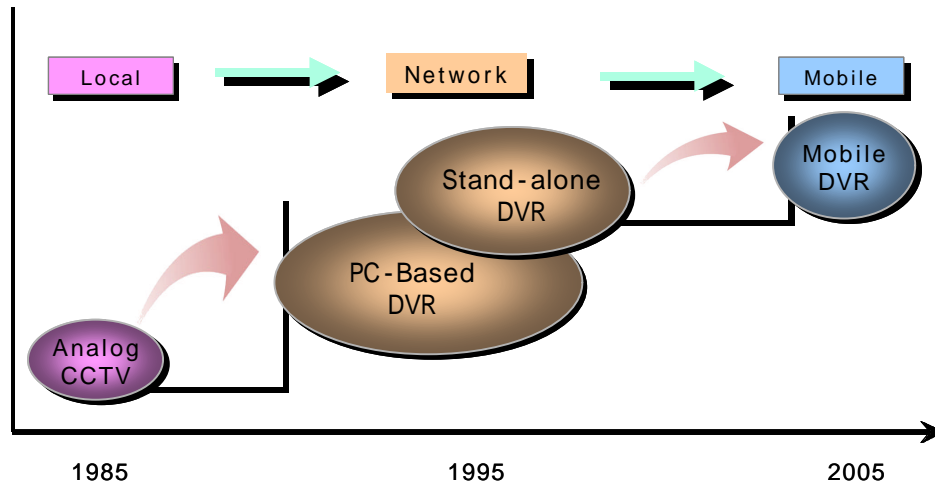
○ , DVR
 , LG
가 , 가
 ,
 .

III. 기술동향

1.

- 1997년 DVR
 - 1 (1997년) : (Stand-alone) DVR
 - + + ()
 - , , , PTZ
 - 2 (1998년) : 1:1 DVR
 - + + +
 - 1:1
 -
 - 3 (1999년) : (Video Server) DVR
 -
 - N : N : /
 - PC DVR
 - , , , PTZ
 - 4 (2000년) : (Voice) DVR
 - (=)
 - DVR 1 ~ 2 (Mono/Stereo)
 - 5 (2003년) : DVR
 - POS DVR
 - IP DVR
 - DVR
- * DVR : DVR(Transit DVR)
 - , , , ,
 - ,

< 1> DVR



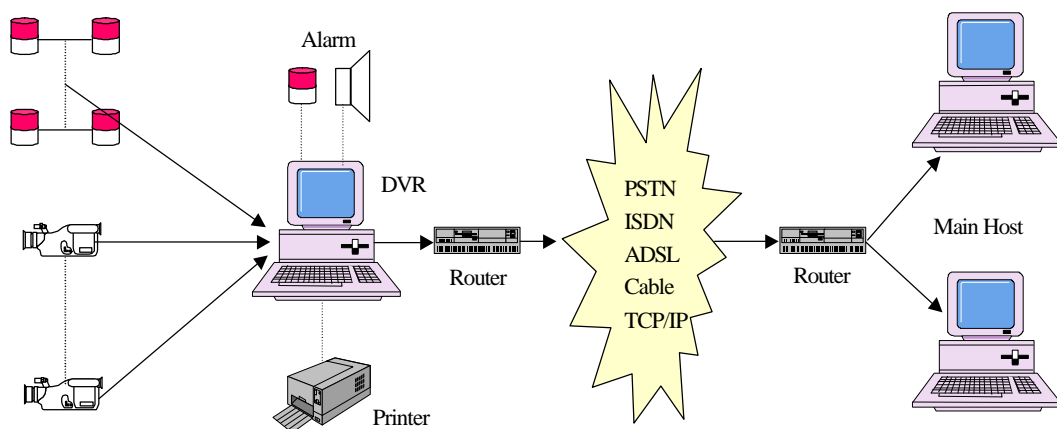
2.

- DVR MPEG-1, MPEG-2
 , PSTN
 , 가

- DVR CCTV

가

< 2> DVR



3.

- Stand-Alone DVR 가 , 가가 , PC DVR

< 5> PC Type Stand-Alone DVR

	PC-Based DVR	Stand-alone DVR
	가	
	<ul style="list-style-type: none"> • 가가 • Customizing SI 	<ul style="list-style-type: none"> • OS / 가 • CCTV 가 • 가
	<ul style="list-style-type: none"> • 가 • 가가 	<ul style="list-style-type: none"> • 가 • CCTV 가
	<ul style="list-style-type: none"> • Stand-alone DVR 가 PC-Based DVR 	

- PC Stand-Alone DVR , GPS Mobile DVR , POS ATM DVR, IP DVR, DVR

- DVR , , DVR, Mobile DVR DVR 가 .

-
- D1 (720 × 480 × 2bytes × 30fps) = 20.7Mbytes/sec 1.8 Tbytes/day

- JPEG Wavelet가 , 15 ~ 40kbytes .

-
-
- H.263 -
- MPEG 1 - VCD
- MPEG 2 - DVD ()
- MPEG 4 H.264가 .
- DVR , , Pre-Processing Post-Processing .

-
- 1 Channel : VCR
- 4 Channels : Quad
- 9, 16 Channels : Multiplexer
- 32, 64 Channels : •
- 1024 Channel :

-
- Analog : 60/60 가
- 120/480, 240/480, 480/480()
- D1 (720 × 480) ,

- - Back-up, Copy
 - SCSI
 - USB 1.1(10Mbps) USB 2.0(480Mbps)
 - IEEE 1394
 - Internal CD-RW, USB Flash Memory, Memory Stick, SD/MMC etc...

- - 24 , 365
 - 가 VCR PVR 30

- Multimedia Data Base
 - Windows, Linux File System :
 - Multimedia DB , ,

- HDD
 - S.M.A.R.T
 - 가
 - Bad Sector

- - EK, EMI, FCC, UL, CE, CCC
 - ,
 - ,
 - MTBF()

- (Motion Detection)
 - Activity detection Intrusion detection
 - Segment, direction

- (Time-Sync.)
 - : < 2sec/day
 - DVR
 - LAN, Modem
 - , ()

- (Authentication)
 - Watermark, Fingerprint
 - Chained Fingerprint
 - Watermark

- Smart Search
 - Calender search, Alarm/event search.
 - Museum Search(Object search)

- POS, ATM
 - Text input for Transaction.
 - Text Search - ,

- Access Control
 - (:)
 - RFID

- - ~ DVR , • •
 -
 -
 - , , ,

- IP-Camera DVR
 - Analog Camera IP Digital .
 - Di .

IV. 일체동향

- DVR 2001 6% 2003 30% .

< 6> DVR

	2001	2002	2003()
()	164	166	98
DVR ()	10	28	30
(%)	6	17	30

* : , 2003

- 가가 ,

- ,

- 60% , 가 , , ,

- 가 , HDD ,

- DVR

- , IP DVR 68 .

- 가 DVR , DVR
- MPEG4
- , VOIP, DVR
- ASIC RTOS 가 BMS 570 DVR
- , , , 5 , 7 , 8
- SI ,
- DVR ,
- 가 가 , 8 (motion detection) 가 8 DVR
- LG DVR , DAV
- DVR ,
- DVR 가
- PC DVR 1, 4, 9, 16 Stand-alone DVR 4

- DVR MPEG 4
 - ,
 - ,
 - SoC
 - SoC
 - 16 , 30 ~
 - 480 ,
 - DVR SoC
 - 16
 - MPEG4 , MPEG4
 - DVR
 - MPEG4 ,
 - MPEG4 ,
 - 30 가
 - PC DVR ‘ MV9100 ’
 - 30
 - MPEG4 ,
 - MPEG4
 - (MAP) , MPEG4
 - (CAP) 2004
- ,
- 가

V. 정책적 지원방안

- DVR

- DVR

- , 가가

,

(: 2005 20)

- DVR

- CCTV가
DVR가 ,
DVR가
, NT, KT
(

- DVR

5. DVR DB
- DVR , 가
, ,

* DVR

(HS 8471-50-1000)

*

(HS 8521-90-9000) :	70
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(HS 8471-50-1000) : 80

6 29 , ,
DVR 가 COEX
“ DVR ”

- , 6394(2004. 06. 29)
- , , 2004. 04 ~ 2004. 07
- , , 2004. 04 ~ 2004. 07
- , , 2004. 05 ~ 2004. 07
- (<http://www.eic.re.kr/>)