

Recording/playback systems in the EVN

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Current situation

- Mark5A, B, B+, all end of life
- Mark5C: end of life before it was put to use (?)
- New, high-performance, COTs-based equipment:
 - Mark6 (open source)
 - Xcube (proprietary)
 - FlexBuff (open source, minimizing physical shipping of disk packs)
 - Any mixture of the above?
- Not just recorders, what about disk pool?

EVN disk pool	nr packs	nr PB	% packs	% PB
PATA	488	1.1	69	42
SATA	222	1.5	31	58
total	710	2.6		

Mark6

upgrade cost Mark5 - Mark6 (8Gbps)	USD
upgrade of chassis	8,735
cable management tray	55
SAS data cables	340
total	9,130
new Mark6 (8Gbps)	
unit	10,000

upgrade cost expansion chassis (16Gbps)	USD
upgrade of chassis	1,175
new expansion chassis (16Gbps)	
unit	2,675

upgrade cost SATA disk module (w/o disks)	USD
upgrade existing module	300
new SATA disk module (w/o disks)	
module	495

EVN disk pool upgrade	USD
280 4TB SATA drives	98,000
upgrade 222 disk modules	66,600
35 new modules	17,300
total	181,900

- Upgrade:
 - 10000 USD / station
 - 250000 USD JIVE
 - 180000 USD EVN disk pool
- Open source
- Geodetic community has chosen (?)
- Kind of upgrade-ish
- Form factor disk packs

XCube (8Gbps)	USD
unit	6,000
SATA disk module (w/o disks)	
module	325 - 375

EVN disk pool upgrade	USD
280 4TB SATA drives	98,000
257 new disk modules (350 USD each)	90,000
total	189,000

- Upgrade:
 - 6000 USD / station
 - 150000 USD JIVE
 - 189000 USD EVN disk pool
- Proprietary software
- But, guaranteed performance (?)
- Cheaper..
- Geodetic community?

FlexBuff, e-shipping

various equipment	USD
FlexBuff (144 TB)	21,000
HarroBox	3,000
Mark5C	20,000
Mark5C upgrade kit	12,000

- much less shipping, simplified logistics
- near-immediate results from a large subset of EVN stations
- modest investment at stations
- no need to upgrade EVN disk pool
- no need to expand EVN disk pool (currently 7000 euro/station/year)
- no big investment in labour
- if FlexBuff present at station: considerable simplification of operations

