Procedure:

a) try to match the existing EVN 'standard' 128MHz range on the sky in the most popular Gb/s frequency bands (L,C,X,K) as much as possible

b) use the VLBA LOs from Walter's "How to tune the VLBA" from Jan'13, controlling a 512-1024 IF

c) obey the DDC "fences" at 640 & 896 MHz away from the LOs

d) use 64MHz channel widths (2x 64 per pol) to keep to 4 DDC channels from 1 RDBE

I come up with for each band:

L-band: EVN standard = 1594-1722 (lowest legacy BBC=1610, highest=1706)

VLBA LO = 2.4 GHz (first mix = LSB)
IF range = 1376-1888
fences = 1504, 1760

This is already compatible with the EVN standard:
VLBA channels = 1594-1658 (806-742)
1658-1722 (742-678)

C-band (the most complicated):
EVN standard = 4926-5054 (lowest legacy BBC=4942, highest=5038)

There were 4 VLBA LOs, each which require shifting the standard sky-frequency range a little bit; (a) is the one Craig thought best

(a) VLBA LO = 4.1GHz (first mix = USB)
IF range = 4612-5124
fences = 4740, 4996

This works if the legacy ranges shift up +6MHz (2nd fence):
VLBA channels: 4932-4996, 4996-5060 (832-896, 896-960)

legacy lowest BBC= 4948, highest= 5044

Whether any EVN station suffers because of these possible band-shifts might well be a question for the TOG (the shift for [a] isn't very much...)

X-band: EVN standard = 8351-8479 (lowest legacy BBC=8367, highest=8463)

VLBA LO = 7.6 GHz (first mix = USB)
IF range = 8112-8624
fences = 8240, 8496

This is already compatible with the EVN standard:
VLBA channels = 8351-8415 (751-815)
8415-8479 (815-879)

K-band: EVN standard = 22171-22299 (lowest legacy BBC=22187, highest=22283)

VLBA LO = 21.5 GHz (first mix = USB)
IF range = 22012-22524
fences = 22140, 22396

This is already compatible with the EVN standard:
VLBA channels = 22171-22235 (671-735)
22235-22299 (735-799)

In the few sessions we've had with Ef using the DBBC/DDC, I've not been warned about similar 640/896 fences (in the 2nd Nyquist zone), nor have I noticed any. Maybe they've selected firstLO's to avoid any such thing. Checking into this is one thing that has suffered by my not starting this early enough before the conference call.....

In terms of BBC tunability, as mentioned by Jon, a commensurate miniminum
tunability in light of the 10kHz legacy & 15.625kHz RDBE tunabilities is 250kHz. This is no problem for the above, but does move away from the

phase-cal friendy n.49 or n.99 legacy BBC tunings. I suppose it would be simple enough to turn the phase-cals off for the legacy stations in such globals.

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