

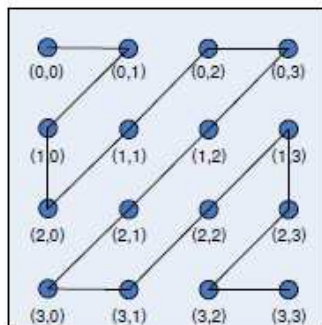
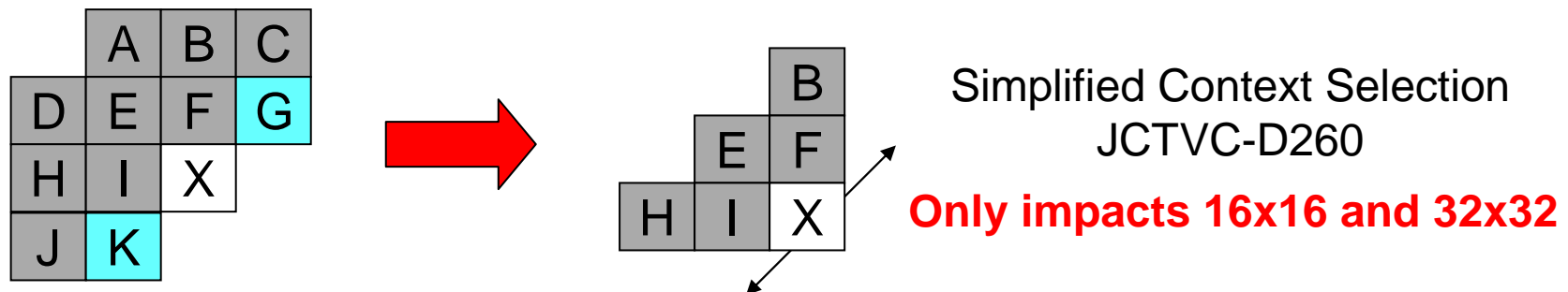
Modification to JCTVC-E227 in CE11 for reduced dependency with MDCS (JCTVC-E489/m20208)

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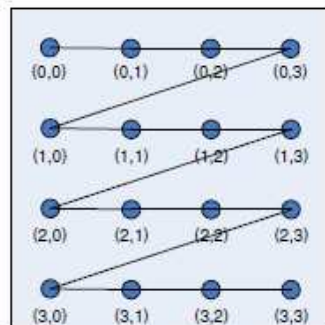
**Joint Collaborative Team on Video Coding (JCT-VC)
of ITU-T SG16 WP3 and ISO/IEC JTC1/SC29/WG11
5th Meeting: Geneva, CH, 16-23 March, 2011**

Reduce Dependency in Sig Flag Coding

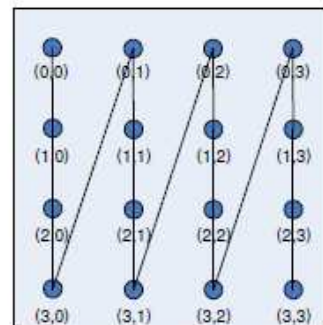
- In Daegu, several contributions in CE11 focused on reducing dependency for parallel processing
 - Specifically addressed conditional context of sig flag (D260, D393, D195)



Zigzag scan



Horizontal scan



Vertical scan

Mode Dependent
Coefficient Scanning
JCTVC-D393

Only impacts 4x4 & 8x8

CE11: JCTVC-E227

- E227 reduces number of contexts by 24
- However, it also includes conditional context dependency for 8x8, which conflicts with MDCS for parallel processing
- Removing conditional context dependency for 8x8 results in
 - No coding loss compared to HM-2.0 anchor
 - Reduces number of context by 11
- Propose to adopt this modified version of E227

	Intra			Random access			Low delay		
	Y BD-rate	U BD-rate	V BD-rate	Y BD-rate	U BD-rate	V BD-rate	Y BD-rate	U BD-rate	V BD-rate
Class A	-0.02	0.00	0.02	0.04	0.41	0.19			
Class B	-0.02	0.00	-0.03	-0.03	-0.12	-0.15	-0.03	0.02	0.18
Class C	-0.01	0.06	0.07	-0.02	-0.09	-0.11	-0.08	-0.23	-0.28
Class D	-0.02	0.08	0.11	-0.04	-0.26	-0.40	-0.15	-0.33	-0.67
Class E	-0.04	-0.01	0.04				-0.17	-0.32	0.42
All	-0.02	0.02	0.04	-0.01	-0.02	-0.12	-0.09	-0.19	-0.10
Enc Time[%]	106%			98%			99%		
Dec Time[%]	105%			105%			107%		

Results cross-checked by Panasonic (JCTVC-E491)