









Summary of Representation and Implementation				
		A 1 · ·	Byles	
Kernel	Granularity	Coalescing	32-bit	64-bit
DIA	thread : row	full	4	8
ELL	thread : row	full	6	10
CSR(s)	thread : row	rare	6	10
CSR(v)	warp : row	partial	6	10
<i>COO</i>	thread : nonz	full	8	12
НУВ	thread : row	full	6	10
Table 1 from Bell/Garland: Summary of SpMV kernel properties.				
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	Other Representation Examples				
•	Blocked CSR				
	 Represent non-zeros as a set of blocks, usually of fixed size 				
	 Within each block, treat as dense and pad block with zeros 				
	– Block looks like standard matvec				
	 So performs well for blocks of decent size 				
•	Hybrid ELL and COO				
	 Find a "K" value that works for most of matrix 				
	 Use COO for rows with more nonzeros (or even significantly fewer) 				
CS6963	10 L12: Sparse Linear Algebra				









