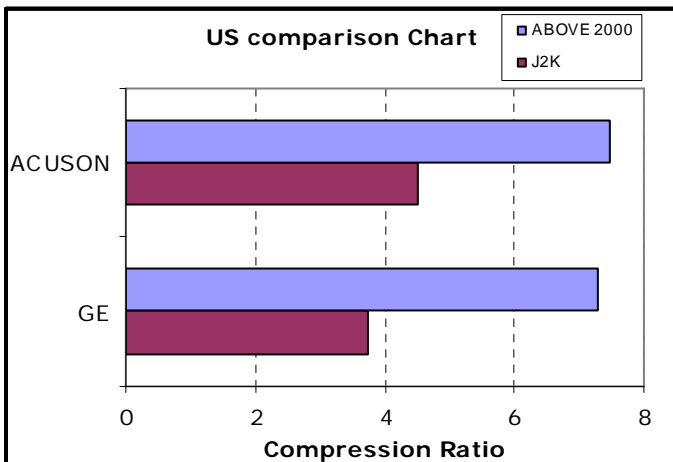
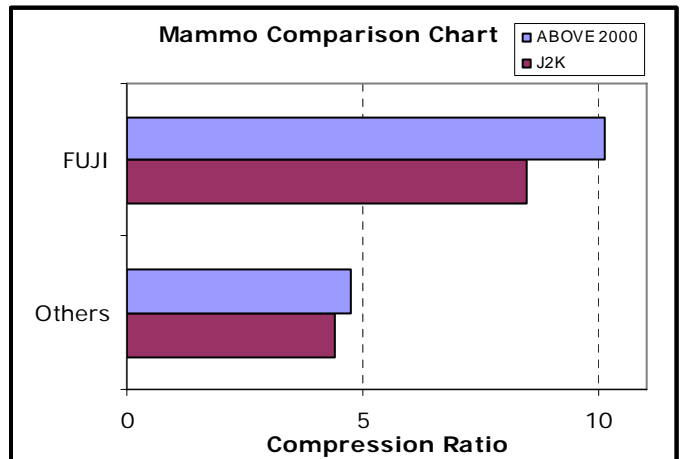
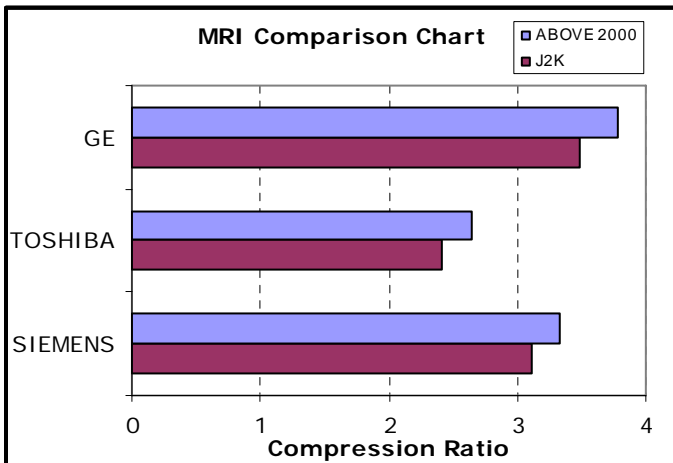
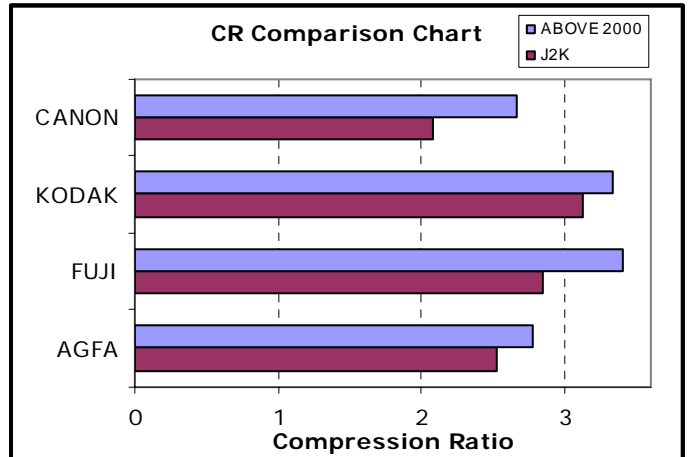
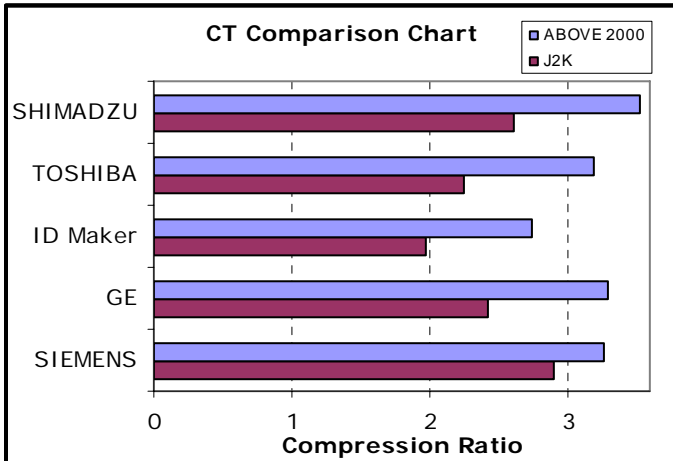


PART 1

2D Lossless Compression



Test Statistics:
 Sample Set: 13000 images

Note: JPEG2000 is denoted by J2k

ABOVE2000

Data Sheet

Performance Summary (Compression Ratio):

1. Average improvement of 12% over J2k for CR images.
2. Average improvement of 15% over J2k for Mammo images.
3. Average improvement of 20% over J2k for CT images.
4. Average improvement of 10% over J2k for MR images.

2D Lossy Compression

Test Statistics:

Sample Set: 1500 images

Note:

- BPP = Bits per Pixel
- All sizes are in bytes

Sample Set 1	Original Size	BPP	Compressed Size	Compression Ratio	Average PSNR
	132120576	1.01	8371234	15.78	49.79
	132120576	0.90	7455649	17.72	49.27
	132120576	0.60	4956916	26.65	47.88
	132120576	0.39	3182415	41.52	39.47

Sample Set 2	Original Size	BPP	Compressed Size	Compression Ratio	Average PSNR
	262144000	2.35	38503954	6.81	49.79
	262144000	2.08	34115975	7.68	47.79
	262144000	1.40	22929794	11.43	41.01
	262144000	0.30	4983776	52.60	34.37

Sample Set 3	Original Size	BPP	Compressed Size	Compression Ratio	Average PSNR
	26214400	1.10	1809619	14.49	42.84
	26214400	1.05	1726443	15.18	42.15
	26214400	0.95	1548909	16.92	40.31
	26214400	0.40	649028	40.39	32.52

Sample Set 4	Original Size	BPP	Compressed Size	Compression Ratio	Average PSNR
	268435456	1.07	17902703	14.99	54.02
	268435456	0.60	10034261	26.75	52.22
	268435456	0.53	8933446	30.05	52.09
	268435456	0.36	6105625	43.97	46.51

Performance Summary:

1. Significant compression ratios for various BPP

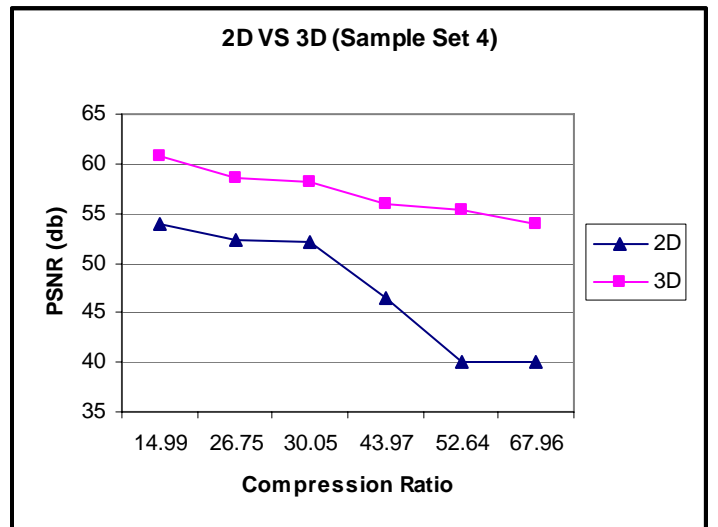
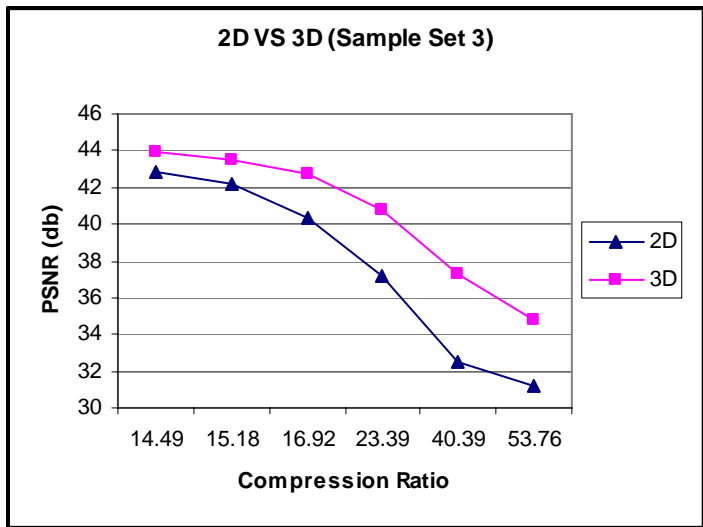
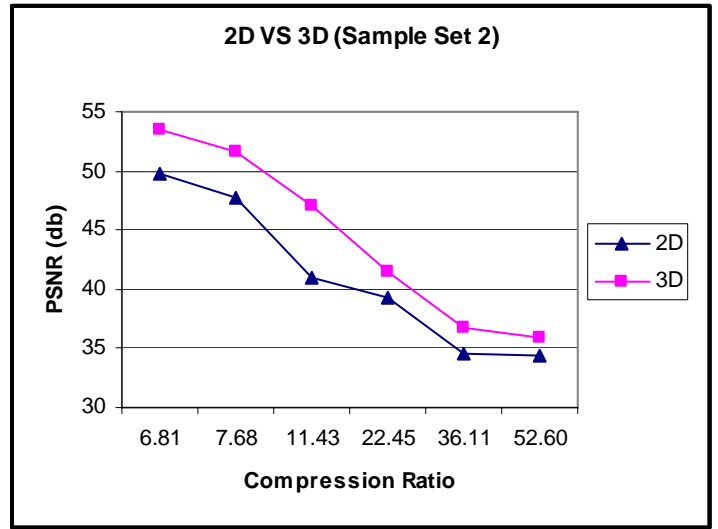
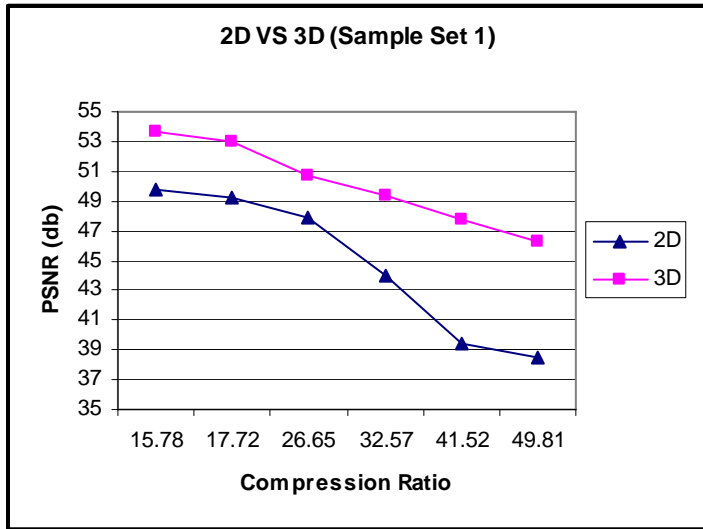
For more information, please write to technology@matrixview.com

PART 2

3D (Volumetric) Compression – Lossy

Test Statistics:

Sample Set: 1500 images



Performance Summary:

1. Results tabulated for a constant size in ABOVE 2000 2D and ABOVE 2000 3D.
2. Average difference of 4 dB overall between 2D and 3D lossy compression.
3. Even at 1:50 compression the average PSNR value is about 35 dB, which signifies a very good visual quality even at 1:50 compression.

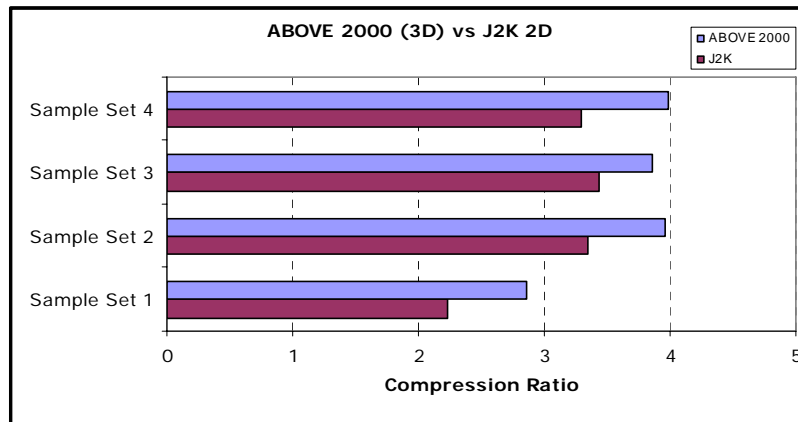
ABOVE2000

Data Sheet

3D (Volumetric) Compression – Lossless

Test Statistics:

Sample Set: 1500 images



Performance Summary:

1. Average improvement of 20 % over JPEG2000 2D
2. No of frames (N) taken together for 3D processing is 32 – higher 'N' – higher resources needed - improved performance

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PART 3

Echocardiogram (cine loops) Compression – Lossless

Test Statistics:

Sample Set: 4000 frames

	Compression Ratio	Encode Time	Decode time
Sample Set 1	13.99	22.97	19.46
Sample Set 2	9.44	26.02	20.53
Sample Set 3	6.44	36.20	27.79
Sample Set 4	33.11	31.32	22.24

Performance Summary:

1. Higher Compression Ratios delivered at 25 fps(P4 2.8 GHZ)
2. Fast Mode for Ultrasound (Echo) compression
3. Encode/Decode time in millisecond.

Echocardiogram (cine loops) Compression – Lossy

Test Statistics:

Sample Set: 1500 images

		PSNR	Bit Rate (kbps)
Sample Set 1	ABOVE 2000	39.94	5754
	MPEG-2	39.7	5722
Sample Set 2	ABOVE 2000	41.5	6896
	MPEG-2	40.83	6806

Performance Summary:

1. Better PSNR at similar Bitrate/ Compressed Size
2. ABOVE 2000 compression is frame by frame and delivers 25 fps

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