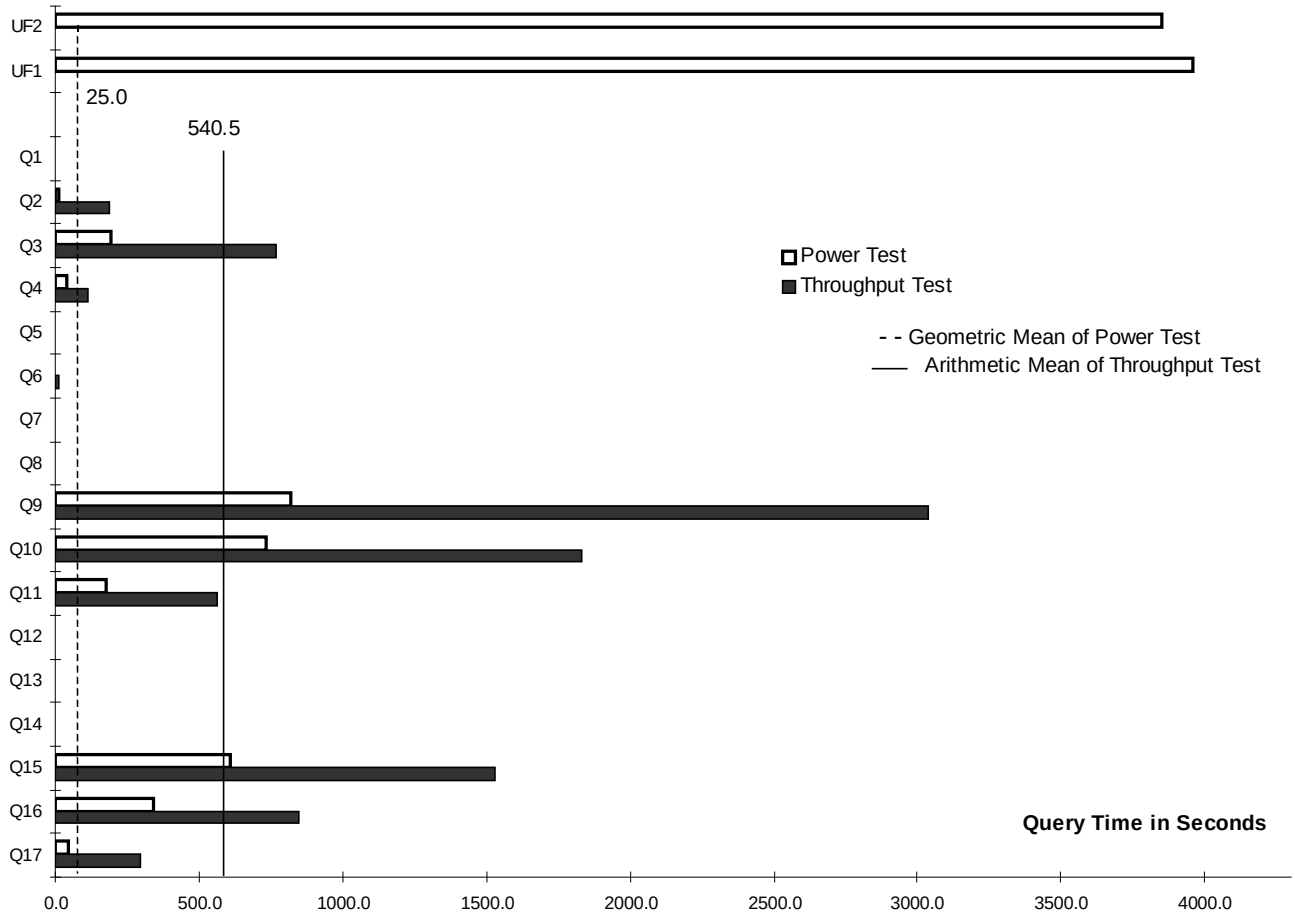
WorldMark 5200
Using Teradata V2R3.0

TPC-D Rev 1.3.1

Report Date: June 18, 1999

Total System Cost	TPC-D Power	TPC-D Throughput	Price/Performance	
$25,658,321	**431,349.7** **QppD@3000GB**	**15,580.5** **QthD@3000GB**	**$313** **per QphD@3000GB**	
Database Size	Database Manager	Operating System	Other Software	Availability Date
3000GB	**Teradata V2R3.0**	**UNIX SVR4** **MP-RAS 03.02.00**	**None**	**HW: 4-16-99** **SW: 8-10-99**



Database Load Time = 74 Hrs 09 Mins	Total Data Storage / Database Size = 5.32	RAID = Y

44 5200 Nodes:

4 Intel Pentium II Xeon 450 MHz CPUs 1 MB Cache
2 GB Memory
2 Ultra SCSI Adapters
1 CD-ROM Unit, Floppy Drive & Tape Drive
1 Network card
3 9GB internal drives
2 Modularized arrays, each with
20 x 9 GB drives

Total GB of Storage = 15,964.52

NCR	NCR 5200 Teradata DBS V2R3.0	TPC-D Rev. 1.3.1 Report Date: June 18, 1999

PRODUCT ID	DESCRIPTION	QTY	UNIT PRICE	EXT PRICE	5 - YR MAINT
9100-5200-8090	WM 5200 Dual Node Expansion Cabinet	22	$371,250	$ 8,167,500	$1,881,792
9101-5201-8090	BYNET V2 64 Node Switch Cabinet	2	$420,000	$ 840,000	$282,240
9100-F118	Memory DIMM 1 GB	44	$8,250	$ 363,000	$0
9100-F281	PQS - Shared Adapter Board w/Cable Assemby	88	$2,096	$ 184,470	$0
3426-9004-8090	AWS Console/4 (6+ Nodes)	1	$10,500	$ 10,500	$3,300
3498-2293-8090	21in Color Monitor [AWS]	1	$1,388	$ 1,388	$1,256
3426-F147	Ethernet Adapter, Fast PCI	2	$94	$ 188	$0
6000-K930	NSC Accessories Kit	6	$0	$ -	$0
9100-F936	Side Panels, Stabalizers, Manuals	6	$1,125	$ 6,750	$0
	Server Hardware			**$ 9,573,795**	**$2,168,588**
6000-9000-8090	NCR Storage Cabinet	**30**	$22,608	$678,240	$0
6285-1220-8900	Modular Array (MA) 1220	88	$10,650	$937,200	$532,224
6285-F101	MA Single Controller 32MB Cache	176	$6,408	$1,127,808	$0
6285-F409	MA (4) 9GB 7200K RPM disk drive	440	$3,420	$1,504,800	$0
6000-F900	Raid Manager for UNIX	30	$0	$0	$0
9100-K931-	NSC Cables & Terminators Kit	30	$738	$22,140	$0
	Storage Devices			**$4,270,188**	**$532,224**
F601-7730-0000	EOE/MPP 8 nodes	6	$18,750	$112,500	$90,668
F601-7811-0000	S40 AWS Operating Environment [AWS]	1	$3,000	$3,000	$15,051
F784-5030-0000	Teradata CLI for MPP Node	1	$3,000	$3,000	$5,332
F784-5031-0000	Teradata BTEQ for MPP Node	1	$375	$375	$0
F784-5032-0000	Teradata FastLoad for MPP Node	1	$3,000	$3,000	$0
F784-1425-0000	Teradata V2R3.0 4800/5200	1	$37,500	$37,500	$51,050
F784-1426-0000	Teradata V2R3.0 4800/5200 Nodes (nodes 2-4)	3	$112,500	$337,500	$153,151
F784-1427-0000	Teradata V2R3.0 4800/5200 nodes 5+	40	$146,250	$5,850,000	$2,451,398
	Software			**$6,346,875**	**$2,766,651**
	TOTAL			**$ 20,190,858**	**$5,467,463**
	FIVE YEAR COST OF OWNERSHIP				**$25,658,321**

(1) Each cabinet contains 2 nodes (4 x 450 MHz CPU and 1 GB memory per node)

"Prices used in TPC benchmarks reflect the actual prices a customer would pay for a one-time purchase of the stated components. Individually negotiated discounts are not permitted. Special prices based onassumptions about past or future purchases are not permitted. All discounts reflect standard pricing policies for the listed components. For complete details, see the pricing sections of the TPC benchmark specifications. If you find that the stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org. Thank you."

Audited by: Francois Raab
Information Paradigm

Numerical Quantity Summary

Measurement Results:

Scale Factor	=	3000
Total Data Storage / Database Size	=	5.32
Database Load Time	=	74 hrs 09 min
Query Streams for Throughput Test	=	3
Geometric Mean of Power Test	=	25.0
TPC-D Power Metric (QppD@3000GB)	=	431,349.7
TPC-D Throughput Metric (QthD@3000GB)	=	15,580.5
Composite QphD@3000GB	=	81,979.4
Total System Price Over 5 Years	=	$25,658,321
TPC-D Price/Performance Metric	=	$313

Measurement Intervals:

Measurement Interval in Throughput Test (Ts) = 35,352 seconds

Duration of stream execution:

Stream ID	Seed	Start-Date	Start-Time	End-Date	End-Time	Total Time
Stream00	680085452	2/12/99	14:43:26	2/12/99	17:43:09	10,783
Stream01	680085453	2/12/99	17:43:09	2/12/99	20:17:48	9,279
Stream02	680085454	2/12/99	17:43:09	2/12/99	20:15:36	9,147
Stream03	680085455	2/12/99	17:43:09	2/12/99	20:15:30	9,141
Updates		2/12/99	17:43:09	2/13/99	3:32:21	35,352

TPC-D Timing Intervals (in seconds):

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Stream0	0.5	11.6	193.8	39.6	0.9	0.5	0.8	1.0	819.9	734.9
Stream01	0.5	147.1	1122.4	168.7	0.8	0.3	0.8	4.3	3898.8	1418.5
Stream02	1.0	66.6	448.1	85.0	0.8	28.3	2.3	3.6	2661.8	2521.1
Stream03	0.7	349.0	730.9	81.1	0.8	0.6	3.6	1.1	2551.1	1553.6
Minimum	0.5	66.6	448.1	81.1	0.8	0.3	0.8	1.1	2551.1	1418.5
Average	0.7	187.6	767.1	111.6	0.8	9.7	2.2	3.0	3037.2	1831.0
Maximum	1.0	349.0	1122.4	168.7	0.8	28.3	3.6	4.3	3898.8	2521.1

	Q11	Q12	Q13	Q14	Q15	Q16	Q17	UF1	UF2
Stream0	174.2	0.4	0.9	0.5	607.9	341.7	47.7	3956.7	3850.2
Stream01	288.2	0.7	2.0	2.2	1310.3	542.3	370.9	13574.2	4392.2
Stream02	871.8	1.4	4.5	1.3	1485.4	761.1	202.1	4285.2	4439.5
Stream03	522.8	0.6	0.9	0.5	1801.4	1230.7	311.0	4302.8	4357.7
Minimum	288.2	0.6	0.9	0.5	1310.3	542.3	202.1	4285.2	4357.7
Average	560.9	0.9	2.5	1.3	1532.3	844.7	294.6	7387.4	4396.5
Maximum	871.8	1.4	4.5	2.2	1801.4	1230.7	370.9	13574.2	4439.5