IBM System/370
New Product Announcement

MODEL 3031 and 3032 PROCESSOR SYSTEMS: On October 6, 1977, IBM announced two smaller companion systems to its high-powered Model 3033 Processor, the Model 3031 and 3032 Processors. The two new systems evoked the usual market and industry interest but did not cause the frantic competitive pricing and product realignments that followed IBM's April 1977 announcement of the Model 3033. The more restrained reception was largely due to widespread industry rumors of the impending announcement coupled with IBM's early acknowledgement that additional 3033-like products would follow.

The 3031 is expected to provide about 1.2 times the performance obtained from a 370/158-3, and the 3032 should yield about 2.75 times the performance of the 158-3. Thus, the 3032 will provide performance nearly equal to that of a 370/168-3, while the 3031's performance level will fall somewhere between those of the 370/158-0 and the 370/165. The 3031 is estimated to provide 10 times the performance of the 370/138 and about 3 times that of the 370/148.

The new processor enhancements include additional high-speed buffer (cache) memory (32,768 bytes instead of 16,384) and the two most significant features of the 3033 processor, integrated channels and the System/370 Extended Facility microcoded operating system functions. One feature of the older large-scale System/370 processors that is not currently included in the new systems is the ability to configure dual-processor systems.

The basic 3031 Processor System consists of a 115-nanosecond CPU with 2 megabytes of error-correcting memory and 32K bytes of cache memory; 6 integrated channels (1 byte multiplexer and 5 block multiplexers); extended-precision floating-point; and the Virtual Memory Assist, the OS/VS1 Extended Control Program Support (ECPS), and the System/370 Extended Facility microcode enhancements. The price for this minimum configuration is $23,450 per month (rental) or $21,320 per month (4-year lease). Purchase price is $830,000. However, all 3031 systems require a 3017 power unit and a 3036 dual console, which raise the prices for a minimum system to $27,497, $25,000, and $1,000,000, respectively. Memory can be expanded to 6 megabytes in 1-megabyte increments. Optional features offered with the 3031 include the 1850 Channel-to-Channel Adapter for loosely coupled systems, and the 3274 Direct Control Feature.

Operating systems supporting the 3031 processor include DOS/VS, OS/VS1, OS/VS2 (SVS and MVS), and VM/370, including the MVS/System Enhancements that provide additional performance increases through the System/370 Extended Facility.

The basic 3032 Processor System consists of an 80-nanosecond CPU, also with 2 megabytes of error-correcting memory and 32K bytes of cache memory; 6 integrated channels; extended-precision floating-point; and the System/370 Extended Facility. The basic 3032 is priced at $40,700 per month (rental) or $37,000 per month (4-year lease). Purchase price is $1,590,000; but, as with the 3031, the 3036 dual console and a 3027 power and coolant distribution unit are also required, raising the system prices to $48,110, $43,740, and $1,900,000, respectively. Memory for the 3032 can be expanded to 6 megabytes in 2-megabyte increments, and the I/O subsystem can be expanded to 12 integrated channels by adding the 3850 Extended Channels feature. Also available as options are the 1850 Channel-to-Channel Adapters and the 7850 Two-Byte Interface. Operating system support for the 3032 Processor is the same as that for the 3031.

In terms of pricing, IBM has definitely attacked its plug-compatible competition—again—while simultaneously obsoleting two of its high-end System/370 processors, the 158-3 and the 168-3, which have now been taken out of new production. Although the performance levels of the new models fall into the 370/158-3 to 168-3 range, their pricing causes them to impact processors in the 370/148 to 158-3 region. For example, the minimum 3032 system includes a 2-megabyte CPU and six integrated channels and is priced at $1,900,000 with the console and power and coolant distribution unit. A 2-megabyte 370/168-3, *without channels or console*, is purchase-priced at $2,311,700, a difference of $411,700. At the other end of the range, a 2-megabyte 370/148 system, with power unit and five channels, is priced at $817,140, while a 2-megabyte 3031 with a power unit and six channels is purchase-priced at $1,000,000, providing about three times the performance at a price only 22 percent higher.□

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EQUIPMENT PRICES

		Purchase Price	Monthly Maint.	Rental (1-year lease)	Rental (4-year lease)
PROCESSOR SYSTEMS					
3031 Processor Systems include a 115-nanosecond CPU with four-way memory interleaving, 128-word instruction buffer, extended-precision floating-point, interval timer, instruction retry, extended control mode, time-of-day clock with comparator, dynamic address translation, one-microsecond timer, VM Assist, Extended Control Program Support (ECPS), S/370 Extended Facility, and store and fetch protection; error-correcting main memory as indicated; 32K bytes of high-speed buffer (cache) memory; and six integrated channels including one byte multiplexer channel and five block multiplexer channels; requires one 3017 power unit and one 3032 console.					
3031 Model 2	With 2,197,152 bytes of memory	830,000	2,450	23,450	21,320
3031 Model 3	With 3,145,728 bytes of memory	940,000	2,590	27,250	24,780
3031 Model 4	With 4,194,304 bytes of memory	1,050,000	2,730	31,080	28,240
3031 Model 5	With 5,242,880 bytes of memory	1,175,000	2,930	33,360	32,170
3031 Model 6	With 6,291,456 bytes of memory	1,285,000	3,070	39,160	35,630
3017	Power unit for 3031 Processor Systems; one required	20,000	30	462	420
3032 Processor Systems include an 80-nanosecond CPU with four-way memory interleaving, extended precision floating-point, interval timer, time-of-day clock with clock comparator, one-microsecond CPU timer, dynamic address translation, channel indirect addressing, extended control mode, store and fetch protection, remote log analysis and remote service facilities, storage configuration control, instruction retry, and S/370 Extended Facility; error-correcting main memory as indicated; 32K bytes of high-speed buffer (cache) memory; and six integrated channels including one byte multiplexer channel and five block multiplexers; requires one 3027 power and coolant distribution unit and one 3036 console.					
3032 Model 2	With 2,197,152 bytes of memory	1,590,000	5,700	40,700	37,000
3032 Model 4	With 4,194,304 bytes of memory	1,832,000	6,020	49,070	44,620
3032 Model 6	With 6,291,456 bytes of memory	2,058,000	6,310	51,730	56,880
3027	Power and coolant distribution unit for 3032 Processor Systems; one required	160,000	210	3,825	3,480
3036	Console for 3031 and 3032 Processor System	150,000	590	3,585	3,260
PROCESSOR FEATURES					
1850	Channel-to-Channel Adapter, for loosely coupled 3031 or 3032	15,000	10	410	375
3274	Direct Control Feature for 3031	3,700	1.50	104	95
3850	Extended Channels for 3032; provides one byte multiplexer and five block multiplexers	360,000	525	9,900	9,000
7850	Two-Byte Interface for 3032	1,400	1.00	38	35