

### User Ratings of Minicomputers and Small Business Computers

TABLE 2. USER RATINGS (Continued)

Manufacturer and Model	No. of User Replies	No. of Computers Represented	Average Length of Time in Use, Months	Average Memory Size, Words or Bytes	Weighted Average User Ratings*												
					Ease of operation	Reliability of mainframe	Reliability of peripherals	Responsiveness of maintenance service	Effectiveness of maintenance service	Technical support	Operating system	Compilers and assemblers	Applications programs	Ease of programming	Ease of conversion	Overall satisfaction	
IBM:																	
System/3—																	
Model 6	5	5	64	16KB	3.6	3.6	3.6	3.6	3.8	3.4	3.2	3.4	3.3	3.4	3.5	3.4	
Model 8	10	11	16	27KB	3.3	3.8	3.6	3.6	3.2	2.9	3.3	3.2	2.7	3.2	2.8	3.5	
Model 10	31	32	56	26KB	3.4	3.7	3.4	3.4	3.4	2.9	3.4	3.4	2.7	3.4	2.9	3.3	
Model 12	21	22	19	54KB	3.7	4.0	3.5	3.4	3.5	3.0	3.2	3.2	3.0	3.5	3.5	3.4	
Model 15	43	45	27	165KB	3.4	3.7	3.4	3.4	3.4	3.0	3.1	3.2	2.8	3.3	3.1	3.2	
Unspecified	9	10	22	79KB	3.4	3.7	3.4	3.2	3.0	2.7	3.2	3.1	2.4	3.4	2.8	3.1	
System/3 Totals	119	125	19	85KB	3.5	3.8	3.4	3.4	3.4	3.0	3.2	3.2	2.8	3.4	3.1	3.3	
System/7	19	23	28	29KB	2.8	3.5	2.6	3.1	3.0	2.6	2.9	2.6	2.2	2.4	2.7	2.7	
System/32	36	93	16	22KB	3.6	3.8	3.6	3.6	3.5	3.1	3.3	3.2	2.7	3.3	3.1	3.3	
System/360 Model 20	2	2	120	16KB	3.0	3.5	3.5	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.5	
IBM 1130	14	15	102	16KW	3.1	3.7	3.0	3.4	2.9	2.3	2.5	2.4	2.8	2.4	3.0	3.0	
IBM 1800	8	14	91	26KW	2.9	3.8	2.9	3.0	3.3	2.6	3.4	3.1	3.2	2.9	2.3	3.3	
IBM 5100	4	4	8	48KW	3.5	4.0	4.0	3.5	3.5	2.7	3.5	2.5	2.7	3.5	2.7	3.0	
IBM Totals	202	276	26	—	3.4	3.7	3.3	3.4	3.3	2.9	3.1	3.1	2.8	3.2	2.9	3.3	
Interdata:																	
Interdata Model 70	5	16	45	67KB	3.2	3.4	3.3	3.0	3.3	3.0	3.0	2.8	2.0	3.5	2.7	3.3	
Interdata 7/16	1	4	6	64KB	3.5	3.0	3.5	3.0	3.0	3.0	3.0	—	3.5	2.0	3.0	3.0	
Interdata 7/32	5	5	24	237KB	3.0	3.0	2.8	2.8	2.8	2.3	2.8	3.0	2.0	3.2	2.8	2.6	
Other models	4	5	15	60KB	3.3	3.5	2.5	3.5	3.5	2.0	2.0	3.0	3.7	3.3	3.0	3.5	
Interdata Totals	15	30	25	118KB	3.2	3.3	2.9	3.1	3.1	2.5	2.7	2.9	3.0	3.3	2.8	3.1	
Jacquard J100	2	2	11	110KB	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.0	3.5	
Litton (all models)	3	4	29	19KB	2.3	2.0	1.7	2.0	1.7	1.3	2.0	2.0	2.7	1.0	1.0	2.0	
Microdata:																	
REALITY	14	34	15	55KB	3.7	3.1	3.2	3.4	3.2	2.9	3.2	3.0	2.4	3.2	3.0	3.2	
Other models	2	2	—	72KB	3.0	2.5	4.0	4.0	4.0	4.0	4.0	3.5	4.0	4.0	4.0	3.0	
Microdata Totals	16	36	15	151KB	3.6	3.1	3.3	3.5	3.2	3.0	3.3	3.1	2.6	3.3	3.1	3.2	
Modcomp (all models)	5	5	16	85KB	3.0	3.2	3.0	2.3	2.5	2.3	3.3	3.2	3.3	3.2	2.5	2.4	
NCR:																	
Century 50 & 100	7	8	73	27KB	3.1	2.4	2.6	3.4	2.7	2.1	2.9	2.6	2.5	2.9	2.7	2.7	
Century 101	19	24	48	54KB	3.4	3.6	2.8	3.3	2.9	2.2	3.2	3.1	2.9	3.3	3.3	3.2	
Century 151	6	6	17	120KB	3.2	3.2	2.7	3.2	2.7	2.7	3.0	3.0	2.4	3.0	3.2	3.0	
Century Totals	32	38	46	61KB	3.3	3.3	2.7	3.3	2.8	2.3	3.1	2.9	2.7	3.1	3.2	3.0	
NCR 299/399/499	3	32	15	19KB	3.0	3.0	2.7	3.0	3.3	2.3	3.0	3.5	3.5	3.3	2.3	3.0	
NCR 8200/8250	9	9	8	89KB	3.9	3.6	3.1	3.4	3.4	2.0	2.9	3.4	2.4	3.1	2.8	3.0	
NCR Totals	44	79	36	64KB	3.4	3.3	2.8	3.3	3.0	2.2	3.0	3.1	2.7	3.1	3.0	3.0	
Prime Computer (all models)	4	4	25	463KB	3.0	3.3	3.3	3.5	3.0	3.0	3.5	3.7	2.3	3.3	3.7	3.3	
Raytheon (all models)	3	3	12	117KB	2.7	2.0	1.7	2.0	1.7	2.0	1.0	1.3	2.0	2.3	1.5	2.0	
Singer (ICL) System Ten	7	36	43	42KB	3.7	3.3	3.0	2.9	2.9	1.9	3.0	2.9	2.0	3.0	2.8	2.6	
Sycor 440	3	8	11	64KB	3.3	3.7	3.0	2.3	2.7	2.3	2.3	2.7	2.0	2.7	2.5	3.0	
Systems Engineering Labs (all models)	2	2	—	96KW	3.5	4.0	3.0	2.5	2.5	2.5	3.0	3.0	1.0	3.5	3.5	3.0	
Texas Instruments (all models)	5	10	16	30KW	3.2	3.4	2.8	1.3	1.7	1.0	2.3	2.0	2.5	3.0	3.3	2.6	
Univac:																	
Univac/Varian 620 Series	2	16	92	20KW	3.0	4.0	3.5	4.0	4.0	2.0	2.0	2.0	1.0	3.0	3.0	3.5	
Univac/Varian V70 Series	5	11	7	132KW	3.5	3.5	3.2	2.5	2.5	2.5	2.5	2.8	3.0	2.4	2.5	2.8	
Univac/Varian Totals	7	27	24	95KW	2.9	3.1	3.3	2.8	2.8	2.4	2.4	2.6	2.3	2.6	2.7	3.0	
Univac 90/30	15	16	15	218KB	3.3	3.3	2.9	3.3	3.1	2.7	3.5	3.4	3.0	3.3	3.1	3.3	
Univac Totals	22	43	17	—	3.2	3.2	3.1	3.2	3.1	2.7	3.3	3.2	2.9	3.1	3.0	3.2	
Wang Labs, 2200 Series	16	21	13	26KB	3.7	3.4	3.0	2.9	2.6	2.7	2.9	3.4	2.3	3.6	3.2	3.2	
All Other Manufacturers	17	20	23	—	3.3	3.5	2.9	2.8	2.9	2.2	2.8	2.9	3.1	2.8	2.7	3.0	
GRAND TOTALS	816	2362	25	—	3.4	3.4	3.0	3.0	3.0	2.6	3.0	3.0	2.7	3.1	3.0	3.1	

\*Weighted Average User Ratings are calculated on a scale of 4.0 for Excellent, 3 for Good, 2 for Fair, and 1 for Poor.

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▷ In this case, of course, the percentage figures total less than 100 percent because many of the respondents were not using any independent peripheral devices on their systems.

Finally, and most importantly, the users were asked to rate their minicomputers and the associated software and vendor support by assigning a rating of Excellent, Good, Fair, or Poor to each of 12 factors: ease of operation, reliability of mainframe, reliability of peripherals, responsiveness of maintenance service, effectiveness of maintenance service, technical support, operating system, compilers and assemblers, applications programs, ease of programming, ease of conversion, and overall satisfaction.

The resulting user ratings of more than 60 popular minicomputers and small business computers from 30 vendors are reported in Table 2. All ratings are expressed in terms of Weighted Averages, which were calculated by assigning a weight of 4 to each user rating of Excellent, 3 to Good, 2 to Fair, and 1 to Poor, and then dividing the sum by the number of users who rated each factor.

*Prospective buyers should note that the small sample sizes for some of the minicomputer models make it unwise to draw firm conclusions from the indicated ratings. Rather, the ratings should be used as guides to potential product strengths and weaknesses that may call for further investigation in selecting the most suitable equipment for your needs. A minicomputer user's degree of satisfaction may depend heavily upon his specific application, the overall system in which the minicomputer is incorporated, and the quality of support and service provided by the vendor's nearest branch office. Also, as this survey clearly shows, many minicomputer users get*

*their software, technical support, and/or peripheral equipment from sources other than the minicomputer makers.*

The ratings assigned by all of the responding users can be combined to form the following overall picture of user satisfaction with the current minicomputers and small business computers:

	<u>Weighted Average User Ratings</u>
Ease of operation	3.4
Reliability of mainframe	3.4
Reliability of peripherals	3.0
Responsiveness of maintenance service	3.0
Effectiveness of maintenance service	3.0
Technical support	2.6
Manufacturer's software:	
Operating system	3.0
Compilers and assemblers	3.0
Applications programs	2.7
Ease of programming	3.1
Ease of conversion	3.0
Overall satisfaction	3.1

None of these overall weighted average user ratings differs by more than 0.1 from the results of last year's survey. Therefore, we can conclude, as we did in 1976, that most minicomputer and small business computer users are fairly well pleased with their equipment and the associated software and maintenance service. The only significant weaknesses are in the areas of applications programs and technical support—and these are precisely the areas that have been neglected by many of the minicomputer vendors until quite recently. □