



## THE OFFICE PRODUCTS ANALYST

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### FIRST ANNUAL MULTIFUNCTIONAL PRODUCT RELIABILITY STUDY

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In the April 2002 issue of *The Office Products Analyst*, we presented our Annual Multifunctional Product User study, focusing on user trends for multifunctional products. In this, the second of that series, we present our first annual Multifunctional Product Reliability Study. We present two different multifunctional studies because:

- Not all multifunctional brands would be represented if we presented only a dealer study. Xerox, Pitney Bowes (Imagistics) and others – distributing primarily through their own direct sales forces – would be missing. In addition, we would be underestimating the impact of dual distribution networks – companies that distribute their products through both independent dealers and direct branches.
- Dealers tend to focus their responses on current products, while users focus on products that may be two years old or more.
- User perceptions of reliability, while meaningful for each person interviewed, are influenced by the most recent service experience. Dealers, on the other hand, have more objective service data available (service call reports, etc.) upon which to base their ratings.

#### METHODOLOGY

We conducted in-depth telephone interviews with 137 dealer service managers in copier dealerships nationwide. Responses encompassed 60,428 multifunctional units. Significant probing occurred in those cases where the data showed inconsistencies. In some cases, we faxed those portions of the survey dealing with model specific service statistics, giving service managers time to verify the information with actual service record data. In other cases, these portions of the questionnaire were completed through subsequent telephone interviews.

In cases of multi-brand dealers, we asked respondents to focus their responses on the multifunctional brand that accounts for the most revenue from new placements for their dealership (Primary Brand). Our experience shows that focusing on the Primary Brand will limit responses to those brands with which the service manager is most familiar, resulting in more accurate and complete information.

One of the difficulties in any analysis addressing the market for multifunctional products is the manner in which one defines those products. The staff at Industry Analysts, Inc. defines a multifunctional product as any platen based device that can be connected to a computer workstation or local area network (LAN) and which supports at least two of the four traditional office functions (copying, printing, facsimile, scanning). We asked dealers to use this definition when responding to the survey. In effect, this definition results in a device that combines copying (platen-based) with at least one other function.

As you review this report, please note that some chart columns have no entries, indicated by “- - -”. If a particular response category had a statistically insignificant number of responses, we did not calculate the results. This should not be confused with an entry of “0.0” which indicates that there were no responses in a particular cell. We deemed as significant those instances where an item received no response and displayed this result as a zero entry.

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## DATA ANALYSIS

We, first, examined the brand distribution in our sample. Table 1 shows Canon with the leading sample share (18.2%) – significantly higher than second place Konica (11.4%). Hewlett-Packard ties with Panasonic and Savin for the smallest MFP sample share (5.3%). This relates only to HP’s MFP share, rather than their overall printer share, which we did not address in this study.

Note that the shares listed in Table 1 are indicative of our sample rather than the actual installed bases for these companies. However, other than Konica, whose sample share is somewhat higher than their actual market share, the remaining brands track rather closely when we compare sample and market shares.

By definition, multifunctional products perform more than one function. It’s important, when examining this market, to understand the primary function for these products. The data pertaining to primary function are summarized in Table 2. We note that, despite the emphasis on printing and scanning “solutions” by manufacturers, the primary use for these systems as indicated by 77.3% of our sample is copying.

Service managers indicated printing as the primary function in only 1.1% of our sample, while scanning, the so-called “hot” application, is not given as the primary function by service managers in our study. This is not to say that these functions are never used. Rather, they are not considered primary in importance.

Note that 10.0% of Konica dealers indicate printing as the primary function – the only Primary Brand group to do so.

Canon .....	18.2%
Konica .....	11.4%
Ricoh.....	10.6%
Minolta .....	9.1%
Sharp .....	8.3%
Kyocera Mita .....	6.8%
Toshiba .....	6.1%
Savin .....	5.3%
Panafax/Panasonic .....	5.3%
Hewlett-Packard.....	5.3%
Brother .....	3.8%
Other.....	10.1%

**Source: OPA**

**TABLE 2 – Primary Function**

	<b>Universe</b>	<b>Canon</b>	<b>Konica</b>	<b>Kyocera Mita</b>	<b>Minolta</b>	<b>Ricoh</b>	<b>Savin</b>	<b>Sharp</b>	<b>Toshiba</b>
Copier	77.3%	83.3%	90.0%	87.5%	87.5%	90.0%	62.5%	100.0%	100.0%
Facsimile	21.6%	16.7%	0.0%	12.5%	12.5%	10.0%	37.5%	0.0%	0.0%
Printer	1.1%	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Scanner	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

**Source: OPA**

Table 3 summarizes data relating to how the multifunctional system was initially sold. Most of the functions (print/scan/fax) can be added after the initial installation. Even the copy function can be added to some printer-based system through the addition of a scanner.

We note that only 68.9% of multifunctional devices (connectable by definition) are sold with a print option, although that option might be added at a later date. Contrast this with the fact that 94.1% are sold as copiers. We find the highest percentage of initial printer option sales (84.6%) in the Kyocera Mita Primary Brand group.

We can also analyze this issue by examining the equipment replaced by the multifunctional device. Here, we find that 78.5% of the systems sold replace a copier, while they replace a printer in only 36.9% of cases. We find the highest percentage of printer replacement in the Kyocera Mita Primary Brand group.

**TABLE 3 – Placement/Replacement Activity**

	<u>Universe</u>	<u>Canon</u>	<u>Konica</u>	<u>Kyocera Mita</u>	<u>Minolta</u>	<u>Ricoh</u>	<u>Savin</u>	<u>Sharp</u>	<u>Toshiba</u>
<b>% of Placements Sold With:</b>									
Copy Function	94.1%	95.8%	96.7%	93.1%	95.0%	97.5%	95.0%	80.5%	96.0%
Print Function	68.9%	52.6%	56.7%	84.6%	69.6%	68.8%	64.0%	55.6%	67.5%
Fax Function	36.5%	31.6%	22.3%	29.6%	34.0%	35.8%	44.0%	13.8%	33.5%
Scan Function	30.6%	27.1%	19.1%	26.3%	27.8%	33.4%	26.0%	17.2%	20.9%
<b>Digital Products Sold:</b>									
% Replaced a Copier	78.5%	74.6%	87.5%	89.6%	80.9%	77.5%	80.0%	84.7%	85.0%
% Replaced a Printer	36.9%	39.1%	38.9%	48.0%	34.5%	35.6%	30.0%	40.0%	37.0%
% Replaced a Fax	17.7%	16.8%	12.3%	13.4%	15.1%	17.5%	29.0%	6.1%	20.5%
% Replaced a Scanner	5.5%	3.7%	3.6%	7.8%	8.3%	2.2%	8.9%	4.7%	4.6%

*Multiple Responses Allowed*

**Source: OPA**

We examined scanning activity as a separate topic, since most manufacturers are stressing this function in their new product releases. Table 4 shows that, when the scanning option is part of the system, users scan an average of 4,606 pages per month. These pages could be part of facsimile, e-mail archiving or workstation activities. Note that 71.3% of our respondents do not know the number of scanned pages. Furthermore, only 10.8% of the dealers who were aware of scan volume charge for it.

We find the highest percentage of dealers who charge for scanning activity in the Kyocera Mita Primary Brand group (41.7%).

**TABLE 4 – Scanning Activity**

	<u>Universe</u>	<u>Canon</u>	<u>Konica</u>	<u>Kyocera Mita</u>	<u>Minolta</u>	<u>Ricoh</u>	<u>Savin</u>	<u>Sharp</u>	<u>Toshiba</u>
Avg. # of Pages Scanned Per Month	4,606	----	----	3,263	2,367	----	4,900	----	----
% of Dealers Who Don't Know # of Scanned Pages	71.3%	85.7%	75.0%	63.6%	75.0%	85.7%	54.5%	75.0%	50.0%
% of Dealers Who Charge for Scanning	10.8%	6.7%	9.1%	41.7%	0.0%	7.7%	0.0%	10.0%	22.2%

**Source: OPA**

We asked service managers to rate the reliability of the Primary Brand multifunctional products serviced by their dealerships. Ratings were compiled using a scale of 1 – 10, with “10” being the highest possible rating. The ratings in Table 5 include only those multifunctional products for which we received a significant number of responses.

The table also includes the speed range for each model listed. Speed ranges are:

1 = Less than 15 PPM	4 = 45 – 59 PPM
2 = 15 – 24 PPM	5 = 60 – 69 PPM
3 = 25 – 44 PPM	6 = 70+ PPM

**TABLE 5 – Dealer Ratings of Reliability**

<b>MODEL</b>	<b>RATINGS</b>	<b>PPM</b>	<b>MAXIMUM RECOMMENDED VOLUME</b>	<b>CONFIGURATION</b>	<b>SPEED RANGE</b>
<b><u>CANON:</u></b>					
IR105	8.5	105	600,000	Console	6
IR110	8.2	110	2,000,000	Console	6
IR210	7.9	21	75,000	Desktop	2
IR2200	8.7	22	75,000	Desktop	2
IR2800	8.5	28	120,000	Desktop	3
IR3300	8.4	33	120,000	Desktop	3
IR330	8.7	33	120,000	Console	3
IR400	8.8	40	150,000	Console	3
IR5000	9.0	50	200,000	Console	4
IR550	8.9	55	200,000	Console	4
IR6000	8.3	60	230,000	Console	5
IR600	8.8	60	250,000	Console	5
IR8500	9.0	85	400,000	Console	6
<b><u>GESTETNER:</u></b>					
1502	7.8	15	12,500	Desktop	2
1802	8.0	18	15,000	Desktop	2
2212	7.8	22	35,000	Desktop	2
2712	7.8	27	45,000	Desktop	3
3215S	7.3	15	15,000	Desktop	2
3218	7.0	18	20,000	Desktop	2
3222	7.5	22	35,000	Desktop	2
3227	7.5	27	45,000	Desktop	3
3355	8.0	55	175,000	Console	4
3370	8.0	70	NA	Console	6
3502	8.0	35	80,000	Desktop	3
4502	7.8	45	100,000	Desktop	4
5490	7.0	120	500,000	Desktop	6
<b><u>KONICA:</u></b>					
7020	7.4	20	100,000	Desktop	2
7025	8.1	25	100,000	Desktop	3
7030	7.8	30	100,000	Desktop	3
7035	8.6	35	100,000	Desktop	3
7045	8.3	45	150,000	Console	4
7055	8.1	55	300,000	Console	4
7065	8.5	65	300,000	Console	5
7075	8.9	75	500,000	Console	6
7115	8.5	15	12,000	Desktop	2
7118	8.7	18	16,000	Desktop	2
7155	8.4	55	300,000	Console	4
7165	8.9	65	300,000	Console	5
7410	7.6	10	5,000	Desktop	1
7415	6.9	15	10,000	Desktop	2
<b><u>KYOCERA MITA:</u></b>					
AI2310L	8.3	23	40,000	Desktop	2
AI3010L	8.4	30	50,000	Desktop	3
KM1510	8.5	15	15,000	Desktop	2
KM1530	8.5	15	20,000	Desktop	2
KM1810	8.4	18	15,000	Desktop	2
KM2030	8.5	20	30,000	Desktop	2
KM2530	8.5	25	85,000	Desktop	3
KM3530	9.1	35	120,000	Desktop	3
KM4230	8.6	42	120,000	Console	3
KM4530	9.3	45	175,000	Console	4
KM5230	8.7	52	150,000	Console	4
KM6230	8.8	62	300,000	Console	5
<b><u>MINOLTA:</u></b>					
DI151	6.8	15	10,000	Desktop	2
DI181	7.3	18	20,000	Desktop	2
DI183	8.5	18	16,000	Desktop	2
DI200	8.0	20	60,000	Console	2
DI250	7.6	25	120,000	Console	3
DI250F	7.4	25	120,000	Console	3
DI251	8.1	25	120,000	Console	3
DI251F	7.8	25	120,000	Console	3
DI350	7.3	35	150,000	Console	3
DI350F	6.5	35	150,000	Console	3

*Table 5 continues on the next page.*

**TABLE 5 – Dealer Ratings of Reliability – Continued**

<b>MODEL</b>	<b>RATINGS</b>	<b>PPM</b>	<b>MAXIMUM RECOMMENDED VOLUME</b>	<b>CONFIGURATION</b>	<b>SPEED RANGE</b>
<b><u>MINOLTA:</u></b>					
DI351	8.1	35	150,000	Console	3
DI351F	8.2	35	150,000	Console	3
DI450	7.6	45	160,000	Console	4
DI520	7.9	52	200,000	Console	4
DI550	7.4	55	200,000	Console	4
DI620	7.8	62	275,000	Console	5
DI650	7.7	65	300,000	Console	5
DI750	7.2	75	500,000	Console	6
<b><u>PANASONIC:</u></b>					
DP-150	8.0	15	40,000	Desktop	2
DP-2000	8.0	20	75,000	Desktop	2
DP-2500	8.2	25	100,000	Desktop	3
FP-D455	8.0	45	150,000	Desktop	4
<b><u>RICOH:</u></b>					
Aficio 1013/f	7.9	13	5,000	Desktop	1
Aficio 1015	8.0	15	12,500	Desktop	2
Aficio 1018	6.6	18	15,000	Desktop	2
Aficio 1022	7.8	22	35,000	Desktop	2
Aficio 1027	7.9	27	45,000	Desktop	3
Aficio 1035	8.0	35	80,000	Desktop	3
Aficio 1035G	8.7	35	80,000	Desktop	3
Aficio 1035P	7.8	35	80,000	Desktop	3
Aficio 1045	8.3	45	100,000	Desktop	4
Aficio 1045G	9.0	45	100,000	Desktop	4
Aficio 1045P	8.0	45	100,000	Desktop	4
Aficio 1085	8.5	85	400,000	Console	6
Aficio 1105	8.6	105	500,000	Console	6
Aficio 180	7.2	18	20,000	Desktop	2
Aficio 220	7.3	22	35,000	Desktop	2
Aficio 250	7.8	25	30,000	Desktop	3
Aficio 270	7.5	27	45,000	Desktop	3
Aficio 3006	7.0	6	12,000	Console	1
Aficio 3506	7.7	6	12,000	Console	1
Aficio 4006	7.2	6	12,000	Console	1
Aficio 4106	7.2	6	12,000	Console	1
Aficio 551	8.4	55	175,000	Console	4
Aficio 6010/6110	7.5	10.5	20,000	Console	1
Aficio 700	8.3	70	200,000	Console	6
Aficio 850	8.4	85	400,000	Console	6
Aficio FX10	7.5	10	2,000	Desktop	1
<b><u>SAVIN:</u></b>					
2055DP	8.4	55	175,000	Console	4
2070DP	8.5	70	200,000	Console	6
2085DP	8.8	85	400,000	Console	6
2515	7.8	15	12,500	Desktop	2
2518	8.0	18	15,000	Desktop	2
2522	8.0	22	35,000	Desktop	2
2527	8.3	27	45,000	Desktop	3
2535	7.9	35	80,000	Desktop	3
2545	8.1	45	100,000	Desktop	4
9922DP	7.8	22	35,000	Desktop	2
9927DP	8.3	27	45,000	Desktop	3
<b><u>SHARP:</u></b>					
AR-160	7.4	16	15,000	Desktop	2
AR161	7.2	16	15,000	Desktop	2
AR-162	7.5	16	20,000	Desktop	2
AR-163	8.3	16	20,000	Desktop	2
AR-200/205	7.5	20	25,000	Desktop	2
AR-201	7.6	20	30,000	Desktop	2
AR-207	7.6	20	30,000	Desktop	2
AR-235	7.3	23	50,000	Console	2
AR-275	8.0	27	50,000	Console	3
AR-287	7.5	28	100,000	Console	3
AR-336	7.7	33	150,000	Console	3
AR-337	7.6	33	125,000	Console	3
AR-405	8.0	40	160,000	Console	3

*Table 5 continues on the next page.*

**TABLE 5 – Dealer Ratings of Reliability – Continued**

MODEL	RATINGS	PPM	MAXIMUM RECOMMENDED VOLUME	CONFIGURATION	SPEED RANGE
<b>SHARP:</b>					
AR-407	7.8	40	160,000	Console	3
AR-505	7.3	50	180,000	Console	4
AR-507	8.0	50	200,000	Console	4
AR-F151	8.0	15	10,000	Desktop	2
<b>TOSHIBA:</b>					
DP-1250	6.3	12	10,000	Desktop	1
e-Studio16	6.9	16	20,000	Desktop	2
e-Studio20	7.1	20	35,000	Desktop	2
e-Studio25	7.6	25	50,000	Desktop	3
e-Studio28	8.3	28	90,000	Desktop	3
e-Studio35	7.3	35	120,000	Desktop	3
e-Studio45	7.0	45	150,000	Desktop	4
e-Studio55	7.0	55	340,000	Console	4
e-Studio65	7.2	65	400,000	Console	5
e-Studio80	8.0	80	440,000	Console	6

Source: OPA

After reviewing the ratings presented in Table 5, we compiled a Recommended Purchase list made up of those models with an average rating of 85% or higher. This list is based upon the perceptions of the service managers interviewed who have serviced each model. Note that Canon and Kyocera Mita each have nine models on this year’s list – higher than any of the remaining Primary Brands.

**TABLE 6 – RECOMMENDED PURCHASE LIST**

Canon:	Konica:	Kyocera Mita:	Minolta:	Ricoh:	Savin:
IR105	7065	KM1530	DI183	Aficio 1085	2070DP
IR2800	7115	KM1510		Aficio 1105	2085DP
IR2200	7035	KM2030		Aficio 1035G	
IR330	7118	KM2530		Aficio 1045G	
IR400	7165	KM4230			
IR600	7075	KM5230			
IR550		KM6230			
IR5000		KM3530			
IR8500		KM4530			

Source: OPA

Table 7 shows the overall rating by brand for the multi-functional products included in our survey. We used a 1 – 10 scale, with “10” representing the highest rating. Note that we have not listed all of these models in Table 5, since, for some individual models we did not have a statistically significant number of responses. When we examine the overall average ratings, we find that Canon received the highest score of 8.4.

**TABLE 7– Weighted Ratings by Brand**

Universe.....	8.0
Canon.....	<b>8.4</b>
Gestetner.....	7.7
Konica.....	8.2
Kyocera Mita.....	8.2
Minolta.....	8.0
Panasonic.....	8.2
Ricoh.....	7.8
Savin.....	7.9
Sharp.....	7.9
Toshiba.....	7.4

Source: OPA

Table 8 shows each model that received the highest rating by speed range. Each of these models was judged to be the most reliable by the dealers that service them.

<u>Speed Range</u>	<u>Brand/Model</u>	<u>Rating</u>
1	Ricoh Aficio 1013/F	7.9
2	Canon imageRUNNER 2200	8.7
3	Kyocera Mita KM3530	9.1
4	Kyocera Mita KM4530	9.3
5	Konica 7165	8.9
6	Canon imageRUNNER 8500	9.0

**Source:** OPA

In Table 9, dealer service managers were asked to quantify the ratings of their products in terms of the type and frequency of service calls made for each model serviced. The final column (Months Between Calls) was calculated using the Average Monthly Page Volume, Preventive Maintenance, and Average Pages Between Calls. The following explanation of category terms used in Table 7 will be helpful in understanding the data presented.

- **Mean Installs** – The mean number of units installed for all dealers interviewed.
- **Average Monthly Page Volume** – The average monthly page volume for each of the multifunctional products listed. Note that these averages include pages from all functions (copy/print/fax)
- **Preventive Maintenance (PM) Cycle** – The average number of pages made between preventive maintenance service calls, assuming preventive maintenance is not performed as part of an emergency call. In other words, this would represent an incremental service call. It should be noted that these intervals are based upon the reported experience of the service managers interviewed and could vary greatly from the PM interval recommended by each individual manufacturer for each model.
- **Average Pages Between Calls** – The average pages produced between unscheduled emergency service calls, regardless of the reason. We have excluded preventive maintenance calls from these intervals.
- **Mean Response Time** – The average (mean) time from when a service call is placed to the arrival of the service technician at the installation site, excluding the actual number of hours needed to repair the copier (one full day = 8 hours).
- **Mean Call Back Percentage** – The average (mean) percentage of time there is a call back from an original service call on a machine.
- **Months Between Calls** – In this column, we have combined the Median Monthly Page Volume, Preventive Maintenance Cycle and Median Pages Between Calls to arrive at the number of months between service calls of any type. An entry of less than “1” indicates service call frequency of more than one call per month.

**TABLE 9 – Service Intervals**

<b>MODEL</b>	<b>Mean # of Installs</b>	<b>Average Monthly Page Volume</b>	<b>Preventive Maintenance</b>	<b>Average Pages Between Calls</b>	<b>Mean Response Time (Hrs.)</b>	<b>(Mean) Call Back Percentage</b>	<b>Months Between Calls</b>
<b><u>CANON:</u></b>							
IR105	67.8	39,000	74,400	120,875	2.7	8.8	2.9
IR110	100.0	50,800	48,200	89,100	2.6	14.0	2.5
IR210	62.4	11,556	60,700	83,688	4.0	7.9	1.6
IR2200	17.4	9,213	73,352	64,571	3.6	7.6	2.2
IR2800	15.0	8,250	73,000	65,500	3.2	7.2	3.3
IR3300	10.9	12,357	45,500	48,167	3.0	8.2	1.9
IR330	100.6	16,663	78,125	67,786	3.9	8.9	2.9
IR400	26.9	24,714	85,500	70,667	4.0	7.3	1.1
IR5000	80.6	51,667	91,600	170,000	3.9	6.0	1.7
IR550	33.1	38,438	128,800	78,143	3.6	9.0	2.0
IR6000	67.0	26,250	56,750	170,333	3.0	8.7	1.7
IR600	44.7	46,875	172,667	120,714	3.8	9.8	2.6
IR8500	14.0	33,900	48,000	55,750	2.9	7.8	1.7
<b><u>GESTETNER:</u></b>							
1502	7.0	3,300	38,125	15,000	4.1	9.4	3.9
1802	9.7	3,625	44,167	13,333	3.8	9.3	4.8
2212	7.0	4,600	58,400	20,500	4.1	16.4	4.3
2712	6.3	9,000	56,900	18,200	4.1	15.0	1.6
3215S	7.0	4,167	52,500	20,167	4.2	17.7	5.9
3218	12.3	5,500	24,333	17,167	4.4	18.3	2.3
3222	32.3	6,875	68,375	23,750	3.8	16.3	4.8
3227	11.3	7,125	68,375	23,750	3.8	16.3	4.5
3355	9.3	14,650	131,875	78,125	4.1	15.5	7.5
3370	4.8	34,960	166,000	84,000	3.7	13.4	6.5
3502	10.0	15,700	95,625	46,875	4.1	11.0	3.4
4502	9.3	15,600	97,000	44,500	4.5	11.8	2.9
5490	14.3	23,500	46,250	43,750	4.8	18.0	1.1
<b><u>KONICA:</u></b>							
7020	80.2	8,902	73,571	12,755	3.5	10.7	1.0
7025	19.4	14,186	55,833	21,438	3.4	10.9	1.0
7030	36.4	13,675	54,583	16,463	3.5	9.5	0.9
7035	21.9	14,364	55,417	22,193	3.3	8.7	1.0
7045	17.9	11,659	52,083	26,063	3.4	9.6	1.2
7055	15.6	20,987	68,214	31,147	3.4	10.3	1.1
7065	17.8	32,539	72,813	40,208	3.3	11.2	1.1
7075	11.6	64,167	106,500	79,000	3.5	11.7	1.0
7115	9.3	14,000	30,625	25,000	3.6	11.3	1.9
7118	10.0	12,875	30,500	28,750	3.5	9.8	1.9
7155	2.8	22,344	175,000	36,505	3.4	8.2	1.8
7165	3.8	25,715	131,250	37,246	3.0	9.2	1.1
7410	21.7	7,195	100,000	27,142	3.4	9.9	3.3
7415	17.4	2,557	19,000	15,985	3.4	11.1	2.5
<b><u>KYOCERA MITA:</u></b>							
AI2310L	41.1	8,987	66,500	19,222	3.3	7.0	2.1
AI3010L	52.7	15,860	73,143	18,750	3.6	8.3	1.8
KM1510	18.2	17,344	68,636	18,667	3.3	9.1	1.9
KM1530	16.1	6,637	53,800	18,000	3.5	7.9	1.6
KM1810	17.8	5,660	57,000	24,333	2.9	8.8	2.6
KM2030	13.5	7,052	92,750	17,800	3.5	7.7	1.7
KM2530	17.7	13,761	138,045	32,571	3.5	9.6	5.7
KM3530	11.0	13,396	197,625	30,500	2.8	7.9	3.0
KM4230	23.5	13,058	72,875	33,833	3.5	8.5	1.8
KM4530	22.3	13,575	117,250	30,000	2.1	5.3	2.9
KM5230	14.0	18,668	122,500	27,333	3.3	8.8	1.0
KM6230	19.0	26,120	160,000	56,100	3.8	9.6	1.0
<b><u>MINOLTA:</u></b>							
DI151	16.8	6,522	16,167	18,702	4.0	11.8	2.7
DI181	11.6	8,123	41,667	12,844	3.4	9.7	2.7
DI183	3.5	9,000	56,667	----	3.1	6.9	----
DI200	21.3	9,250	57,625	16,667	3.1	9.1	2.1
DI250	24.2	15,204	77,833	19,563	3.8	10.4	1.5
DI250F	16.5	10,675	71,167	17,356	2.9	11.0	2.2
DI251	42.2	13,000	68,500	26,667	4.2	8.4	1.6
DI251F	1.8	7,000	93,500	17,500	2.8	10.0	2.2

Table 9 continues on the next page.



**TABLE 9 – Service Intervals – Continued**

<b>MODEL</b>	<b>Mean # of Installs</b>	<b>Average Monthly Page Volume</b>	<b>Preventive Maintenance</b>	<b>Average Pages Between Calls</b>	<b>Mean Response Time (Hrs.)</b>	<b>(Mean) Call Back Percentage</b>	<b>Months Between Calls</b>
<b><u>MINOLTA:</u></b>							
DI350	28.5	19,426	77,667	22,024	3.8	11.9	1.1
DI350F	38.7	25,000	60,000	24,500	3.8	11.8	0.6
DI351	21.2	17,184	77,833	25,900	3.6	9.2	1.2
DI351F	22.0	20,000	150,000	22,500	3.3	8.6	1.7
DI450	28.8	21,338	175,833	26,264	3.5	10.2	1.2
DI520	26.4	19,815	210,000	44,368	3.2	9.9	2.2
DI550	27.0	33,167	198,000	48,894	3.3	9.5	1.9
DI620	36.5	24,320	247,500	23,792	3.3	10.9	1.1
DI650	12.6	25,333	278,333	26,000	3.0	10.4	0.8
DI750	14.8	----	----	40,667	3.4	11.8	----
<b><u>PANASONIC:</u></b>							
DP-150	24.2	4,500	65,000	30,000	5.8	12.6	2.7
DP-2000	13.2	5,600	63,750	40,000	5.2	12.6	3.0
DP-2500	26.6	9,250	55,000	40,000	5.8	12.2	1.9
FP-D455	1.5	16,250	65,833	32,667	3.3	10.8	1.3
<b><u>RICOH:</u></b>							
Aficio 1013/F	47.1	6,571	67,000	38,000	4.5	8.4	4.9
Aficio 1015	49.3	5,157	65,500	38,000	4.5	8.2	6.4
Aficio 1018	29.5	6,000	80,000	22,333	5.1	8.7	3.0
Aficio 1022	23.8	7,750	117,500	63,333	4.7	8.7	5.1
Aficio 1027	31.6	8,720	117,500	65,000	5.1	8.7	5.4
Aficio 1035	45.4	14,778	120,625	40,778	4.3	10.1	2.9
Aficio 1035G	40.7	10,500	125,000	27,500	5.3	10.0	2.3
Aficio 1035P	21.7	8,000	140,000	40,000	5.0	10.3	4.3
Aficio 1045	35.1	17,625	141,429	56,250	4.5	7.9	2.7
Aficio 1045G	34.0	11,333	93,333	35,833	5.0	9.5	2.2
Aficio 1045P	21.0	11,500	82,500	32,500	5.0	10.3	1.4
Aficio 1085	18.4	75,000	184,000	99,800	3.9	8.9	2.3
Aficio 1105	30.0	145,000	250,000	82,000	3.0	10.2	0.6
Aficio 180	57.9	5,150	70,714	35,044	4.5	10.7	8.3
Aficio 220	77.7	5,500	96,667	45,857	4.5	14.0	5.6
Aficio 250	63.5	7,760	96,667	47,444	4.3	10.4	5.6
Aficio 270	55.0	7,888	98,333	46,714	4.5	12.7	4.0
Aficio 3006	30.0	7,550	66,667	38,500	4.3	12.0	3.8
Aficio 3506	70.3	7,333	60,000	5,400	4.3	14.0	1.5
Aficio 4006	39.0	3,000	66,667	40,100	4.2	10.0	5.1
Aficio 4106	80.8	5,625	50,000	7,400	4.4	13.0	1.8
Aficio 551	32.6	20,500	205,000	93,000	4.3	9.5	6.1
Aficio 6010/6110	12.0	5,860	80,000	34,100	4.2	10.3	4.8
Aficio 700	15.8	55,714	230,000	100,000	4.2	9.6	4.4
Aficio 850	11.2	97,000	225,000	90,000	4.0	8.0	3.6
Aficio FX10	42.5	3,675	70,000	58,250	4.4	5.8	12.0
<b><u>SAVIN:</u></b>							
2055DP	21.7	35,606	141,500	49,831	3.3	12.1	1.0
2070DP	21.4	45,876	153,375	47,971	3.3	10.5	0.6
2085DP	9.8	75,662	365,000	48,661	3.3	8.6	0.6
2515	21.5	5,450	16,500	30,000	4.5	8.3	2.6
2518	17.2	4,075	45,500	20,000	4.0	7.3	2.8
2522	12.4	14,636	75,000	22,770	3.8	11.7	3.4
2527	10.3	6,017	66,786	26,079	4.0	11.3	3.1
2535	33.0	20,593	102,200	36,473	3.5	10.0	1.2
2545	26.1	20,664	102,125	34,776	3.6	10.1	1.0
9922DP	74.0	6,511	54,375	17,145	4.2	10.7	1.9
9927DP	62.8	9,133	51,875	16,324	4.1	10.5	1.5
<b><u>SHARP:</u></b>							
AR-160	100.8	23,960	34,000	8,000	4.2	11.4	0.8
AR-161	86.3	9,467	32,000	8,000	4.1	8.6	0.8
AR-162	74.5	8,250	28,333	7,333	4.1	10.0	2.4
AR-163	72.0	4,700	25,500	16,000	2.3	14.2	0.6
AR-200/205	38.4	7,000	34,750	9,000	5.7	10.7	0.6
AR-201	40.3	24,167	27,800	9,000	4.6	8.3	1.7
AR-207	81.2	11,700	25,800	12,667	4.2	8.6	1.0
AR-235	16.0	10,875	51,250	27,500	5.9	7.2	1.0
AR-275	16.3	16,375	38,750	27,500	5.0	10.0	1.6

*Table 9 continues on the next page.*

**TABLE 9 – Service Intervals – Continued**

MODEL	Mean # of Installs	Average Monthly Page Volume	Preventive Maintenance	Average Pages Between Calls	Mean Response Time (Hrs.)	(Mean) Call Back Percentage	Months Between Calls
<b>SHARP:</b>							
AR-287	50.5	13,000	90,000	34,000	6.7	9.5	1.7
AR-336	43.8	17,680	120,000	39,333	4.8	13.2	1.7
AR-337	47.8	47,950	93,333	42,667	5.2	9.3	1.7
AR-405	63.3	15,333	96,667	34,000	5.5	8.5	1.7
AR-407	36.2	15,900	92,500	39,333	6.2	8.3	1.6
AR-505	26.8	18,600	103,750	41,000	4.8	8.2	0.6
AR-507	26.2	34,600	118,750	44,333	4.8	10.0	0.8
AR-F151	79.3	2,975	21,000	13,500	6.7	8.8	0.8
<b>TOSHIBA:</b>							
DP1250	4.2	2,940	17,500	16,125	3.9	5.8	3.1
e-STUDIO16	22.9	6,042	46,556	36,964	3.0	12.3	3.6
e-STUDIO20	21.2	7,131	48,000	35,488	3.6	12.2	3.4
e-STUDIO25	18.1	7,371	55,714	22,422	3.7	6.5	3.2
e-STUDIO28	17.7	11,000	69,167	33,300	3.3	8.3	1.8
e-STUDIO35	49.8	14,056	67,889	83,843	3.1	10.3	2.4
e-STUDIO45	22.8	20,648	83,100	62,536	3.1	11.2	1.9
e-STUDIO55	23.7	37,311	215,714	136,151	2.6	9.3	2.5
e-STUDIO65	32.8	51,052	215,000	116,044	3.0	9.2	1.7
e-STUDIO80	36.3	137,417	157,500	122,316	3.6	9.0	1.5

Source: OPA

We asked the service managers in our study for typical per page charges at two volume levels – 25,000 and 50,000 pages per month – for service. While some respondents included supplies in their responses, we found little difference in the per page charges at each of these volume levels. Generally, the highest per page charges are found in the Minolta Primary Brand group, while the lowest are in the Sharp and Toshiba Primary Brand groups.

Note that, when dealers charge for scanning (see Table 4), they do not differentiate significantly between scanning and output functions such as printing, facsimile receptions and copying.

**TABLE 10 – Per Page Charges**

	Kyocera								
	Universe	Canon	Konica	Mita	Minolta	Ricoh	Savin	Sharp	Toshiba
CPP Charges for Volume of 25,000:									
Copies	.015	.017	.015	.017	.019	.015	.013	.011	.011
Prints	.015	.017	.015	.018	.019	.015	.013	.011	.011
Scans	.015	----	----	----	----	----	----	----	----
Fax Receptions	.015	.017	.015	.017	.019	.013	.013	----	----
CPP Charges for Volume of 50,000:									
Copies	.014	.015	.013	.015	.017	.013	.012	.009	.009
Prints	.014	.015	.013	.015	.016	.013	.012	.009	.009
Scans	.013	----	----	----	----	----	----	----	----
Fax Receptions	.014	.015	.013	.015	.017	.011	.012	----	----

Source: OPA

Table 11 summarizes the page volume distribution for the multifunctional devices in our study. Here, we note that 59.6% of total output is still copy volume, while only 25.7% is printer output. The devices are sold as copiers (see Table 2) and used accordingly.

**TABLE 11 – Volume Breakdown**

	<b>Universe</b>	<b>Canon</b>	<b>Konica</b>	<b>Kyocera Mita</b>	<b>Minolta</b>	<b>Ricoh</b>	<b>Savin</b>	<b>Sharp</b>	<b>Toshiba</b>
<b>% of Digital Volume That is a Result of:</b>									
Copy Volume	59.6%	62.3%	63.3%	65.4%	60.0%	66.1%	61.0%	53.3%	55.0%
Print Volume	25.7%	26.8%	27.5%	21.2%	24.0%	27.8%	21.0%	35.8%	26.1%
Fax Receptions	15.6%	10.9%	9.2%	13.4%	16.0%	12.8%	20.0%	10.8%	20.0%
<b>% of Dealers Who Do Not Know Volume Breakdown</b>									
	14.7%	15.4%	40.0%	7.7%	9.1%	18.2%	9.1%	25.0%	0.0%

**Source: OPA**

Since multifunctional products offer the potential for network connectivity, we asked the service managers in our study who was responsible for supporting these devices on the LAN. Table 12 shows that the dealer is responsible in 74.0% of cases. Only the customer's own MIS/IT department showed significant additional response rates.

**TABLE 12 – Network Support**

	<b>Universe</b>	<b>Canon</b>	<b>Konica</b>	<b>Kyocera Mita</b>	<b>Minolta</b>	<b>Ricoh</b>	<b>Savin</b>	<b>Sharp</b>	<b>Toshiba</b>
Dealer	74.0%	81.3%	72.7%	85.7%	36.4%	75.0%	90.9%	80.0%	80.0%
Other Vendor	7.3%	12.5%	0.0%	0.0%	36.4%	0.0%	0.0%	0.0%	20.0%
Customer's MIS/IT Department	19.5%	0.0%	36.4%	7.1%	27.3%	41.7%	9.1%	10.0%	0.0%
Manufacturer	2.4%	0.0%	0.0%	7.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Other	4.1%	12.5%	0.0%	0.0%	0.0%	0.0%	9.1%	10.0%	0.0%

*Multiple Responses Allowed*

**Source: OPA**

In Table 13, we asked the service managers in our survey sample to rate their Primary Brand models in each of 15 critical areas. We used a scale of 1 – 10, with “10” representing the highest rating. Kyocera Mita (KMA) received the highest overall rating (8.7). In addition, service managers rated Kyocera Mita first in 13 of the 15 performance categories. We congratulate KMA for their outstanding performance.

**TABLE 13 –Product Performance Ratings**

	Universe	Canon	Konica	Kyocera Mita	Minolta	Ricoh	Savin	Sharp	Toshiba
Product Reliability	8.3	8.3	8.3	<b>9.1</b>	7.9	8.5	8.2	7.7	8.4
Photocopier Reliability	8.2	8.5	8.3	<b>9.0</b>	8.1	8.0	8.2	7.6	8.2
Facsimile Reliability	8.2	<b>8.8</b>	8.3	<b>8.5</b>	7.6	8.7	8.4	7.0	8.6
Printer Reliability	8.2	8.5	8.0	<b>9.0</b>	7.7	8.3	8.5	7.7	8.5
Network Compatibility	8.2	8.3	7.9	<b>8.9</b>	7.9	8.1	8.1	8.2	8.4
Scanning Reliability	8.1	<b>8.6</b>	7.8	8.3	8.1	8.2	7.9	8.1	8.2
General Ease of Maintenance	8.2	8.5	8.1	<b>8.9</b>	8.6	8.2	8.3	7.6	8.1
Ease of Operator Maintenance	8.1	8.3	8.0	<b>8.8</b>	8.0	8.2	7.8	7.8	7.8
Color Reliability	7.9	8.5	7.3	<b>8.6</b>	8.5	7.6	7.3	7.8	8.0
Internet Printing	8.1	7.9	8.4	<b>8.6</b>	8.5	8.3	8.4	7.7	7.9
General Application Compatibility	8.1	8.1	8.2	<b>8.6</b>	7.8	8.0	7.7	7.5	8.4
Cost of Service	7.4	7.2	6.6	8.2	8.0	7.5	6.9	6.9	<b>8.3</b>
Image Quality for Prints	8.4	8.6	8.1	<b>8.9</b>	8.3	8.3	8.1	8.2	8.5
Image Quality for Copies	8.5	8.7	8.2	<b>8.9</b>	8.5	8.4	8.0	8.3	8.6
Function Contention	8.0	8.3	7.8	<b>8.4</b>	8.2	8.3	7.7	8.1	8.1
<b>OVERALL AVG.</b>	<b>8.1</b>	<b>8.3</b>	<b>8.0</b>	<b>8.7</b>	<b>8.1</b>	<b>8.2</b>	<b>8.0</b>	<b>7.7</b>	<b>8.3</b>

Source: OPA