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PRESS INFORMATION

The Japan Recording-Media Industries Association

Global Recordable DVD Demand Approaches Level of CD-R
— Forecasts for Recording Media Global Demand and Production in 2006 —

Tokyo, Japan, November 25, 2005 — The Japan Recording-Media Industries Association, chaired by Shigetaka Komori, announced its forecasts for global demand and production of recording media products in 2006 based on its estimates for 2005. The product categories addressed in the survey are audio tape, audio MiniDisks (MDs), video tape, floppy disks, MOs, CD-R/RWs, recordable DVDs, and small-sized memory cards. In addition to the 12-cm recordable DVDs forecasts, this year's survey also forecasts global demand for the new 8-cm DVDs. Demand for recordable DVDs, mainly write-once disks, will continue to grow rapidly, with global demand approaching the level of the CD-R market, giving rise to a high-volume sales boom.

Optical and Magneto-Optical Disks

◆ **CD-R/RW Disks**

Data CD-Rs — Global demand for data CD-Rs is expected to decline 3% to 6,911 million units, falling slightly from a peak in 2005. In North America and Europe, which have large media markets, prices for high-capacity recordable DVDs are declining and DVD drives are becoming standard on PCs, and as applications expand, recordable DVDs offer greater convenience to consumers. As a result, these markets are likely to follow Japan in making a rapid shift from CD-Rs to recordable DVDs, resulting in a decline in demand for CD-Rs.

Audio CD-Rs — Global demand for audio CD-Rs will fall 5% to 275 million units, and domestic demand will decline 4% to 27 million units. With the global proliferation of portable digital audio devices equipped with HDDs and small-sized memory cards, global demand will continue to fall from the 2004 peak.

CD-Rs — Global production of CD-Rs is forecast to decrease by 3% to 7,905 million units. This will be the first decrease in production. As global demand for CD-Rs is declining and global demand for recordable DVD \pm Rs is expanding, manufacturers in Japan and other countries are accelerating the shift of production from CD-Rs to recordable DVD \pm Rs.

Data and Audio CD-RWs — Global demand for data and audio CD-RWs will continue to decline, falling 6% to 273 million units. The main use for CD-RWs is for backing up data, but competition from higher-capacity recordable DVDs is having an impact on demand.

◆ **Recordable DVDs**

Recordable DVDs — Global demand for recordable DVDs will surge 41% to 5,541 million units, including **write-once disks**, which will grow 42% to 5,159 million units, and **re-writable disks**, which will expand 32% to 382 million units. Write-once DVDs accounts for 93% of total DVD demand. As DVD drives are becoming standard on PCs and prices for media fall, global demand for CD-Rs is declining and demand for recordable DVDs is approaching the level of the CD-R market.

In Japan, in the video DVD sector, demand for write-once DVDs will grow 40% to 376 million units and demand for rewritable disks will increase 27% to 103 million units for overall growth of 37% to 479 million units. **In the data DVD sector**, demand for write-once DVDs is expected to increase 40% to 334 million units, while demand for rewritable disks will be up 33% to 12 million units for an overall increase of 40% to 346 million units. Write-once disks account for 78% of the demand for video DVDs, while rewritable disks account for 22% of the total. In the data sector, write-once disks account for 97% of the demand and rewritable disks account for 3%. Rewritable DVDs are claiming a significant portion of the video sector, a trend not seen in other regions.

Global write-once DVD production is forecasted to increase 42% to 5,674 million units and that of rewritable DVDs will grow 32% to 420 million units. Japanese manufacturers produce 40% of write-once DVDs, the production volume of which is large, but this is down significantly from the 56% in 2004 and 54% in 2005, and thus the weight of production by overseas manufacturers is growing rapidly. The growth of production of rewritable DVDs by overseas manufacturers is also becoming more prominent.

8-cm DVD Media — Demand for write-once 8-cm DVD media is expected to soar 94% to 26.6 million units, and demand for rewritable media will surge 94% to 16.5

million units. The use of DVD camcorders, the primary application for 8-cm DVD media, is expanding, primarily in the United States. The ease of cueing, which facilitates editing, and the excellent playback compatibility are spurring demand to replace analog camcorders. Users can select from write-once and rewritable disks as well as single-sided and double-sided disks according to the application, and rewritable media and double-sided disks (60 minutes) account for high percentages of the total demand compared to 12-cm recordable DVDs.

◆ **Magneto-Optical Disks**

3.5” MO Disks — Global demand for 3.5” MO disks is expected to plunge 23% to 8.95 million units. Demand in the Japan, the leading market for 3.5” MO disks, is falling rapidly as it is pushed down by competition from CD-Rs and recordable DVDs as these drives become standard equipment on PCs. Global demand for 5.25” MO disks will fall 6% to 1.272 million units and market conditions remain severe. Demand remain deep-rooted in North America and Europe, but the primary application is for backup use and storage capacity is low compared to magnetic tape, and consequently demand is declining. Japanese manufacturers produce all 3.5” MO disks, and overseas manufacturers will terminate production of 5.25” MO disks this year, and as a result Japanese manufacturers will account for all production in 2006.

Magnetic Media

◆ **Audio Media**

Blank Audio Cassettes — Global demand for audio cassette tapes (blank tapes) is expected to drop 21% to 310 million units and domestic demand will fall 18% to 53 million units. In conjunction with the shift from cassette tapes to digital media including MDs and CD-Rs, the accelerating shift to temporary storage media such as audio devices with HDDs and small-sized memory cards, and the digitalization of car audio devices, the use environment for blank audio cassette tapes is shrinking. Global production of **audio tapes (including “duplication use”)** will fall 19% to 932 million units, falling below the 10 billion unit level. There are still large markets for audio tapes including music and educational software in the Middle East and Central and South America, however, and even as the overall market for blank audio cassettes declines rapidly, the duplication business is expected to remain strong.

Audio MDs Global demand for audio MDs is expected to decline 26% to 107 million units, an unprecedented decrease. The fall is the result of an accelerating decline

in the Japanese market, the central market for demand. In addition to the proliferation of digital audio devices equipped with recordable media such as HDDs and flash memory, the expected appearance of cell phones and other devices that use small-sized memory cards and other recordable media will impose harsh conditions in the environment for audio MDs. In reflection of the decline in demand, global production of audio MDs will tumble 29% to 110 million units. All production by Japanese manufacturers takes place in Japan and accounts for some 86% of global production.

◆ Video Tape

Full-Size Blank Video Cassettes — Global demand for full-size video cassettes (blank tapes) is forecast to fall 17% to 481 million units. The 2006 winter Olympics and the soccer World Cup are expected to spur a temporary increase in demand for video cassettes, but the global proliferation of DVD recorders will lead to a large decrease in overall demand. Global production of **full-size video cassettes (including “duplication use”)** will decrease 25% to 605 million units as a result of the decline in demand for blank cassettes and the rapid shift to software on DVDs. Japanese manufacturers are expected to experience a 45% fall in production to 95 million units, accounting for about half of the total decline.

Camcorder Cassettes Global demand for camcorder cassettes (VHS-C, 8-mm, and Mini DVC) will fall 2% to 252 million units. Demand for Mini DV cassettes is strong, but demand for VHS-C and 8-mm cassettes will fall sharply, and with the appearance of 8-cm DVD disks, overall demand is expected to decline. Global demand for Mini DV cassettes is expected to grow steadily, rising 6% to 191 million units, but domestic demand is forecast to drop 5% to 40 million units. Sales of camcorders with internal HDDs or small-sized memory cards are strong, and consequently competition is expected to intensify. Global production of camcorder cassettes will remain flat at 290 million units, with production of Mini DV cassettes increasing 7% to 227 million units. Mini DV cassettes will account for a full 78% of total camcorder cassette production. All VHS-C, 8-mm, and Mini DV cassettes are produced by Japanese manufacturers, but some production of Mini DV cassettes is being moved offshore.

Floppy Disks — Global demand for floppy disks will decrease 17% to 712 million units and global production will fall 16% to 1,246 million units. The decline is largely the result of the shift from use of floppy disks in data transfer, which is a major use of them, to CD-Rs and USB memory cards. Japanese manufacturers account for 17% of all production, but production of finished products in Japan ended in 2001.

Semiconductor Memory Cards

◆ **Small-sized Memory Cards**

Small-sized Memory Cards (Domestic Demand) — Demand for small-sized memory cards in 2005 is estimated to have fallen 13% from the previous year to 52.2 million units. The decline is primarily the result of a rapid decrease in bundling of small-sized memory cards with digital cameras and cell phones, which accounted for a substantial portion of total demand. In 2006, with the increasingly enhanced functions of cell phones, which account for nearly 50% of the small-sized memory card market, an increase in purchases of individual units can be expected. In addition, with the expansion of use of small-sized memory cards as “multi-use cards” that can be employed in a variety of applications including game devices, car navigation devices, portable music players, and digital home appliances, demand will shift upwards and is expected to grow 7% in 2006 to 55.7 million units.

Forecasts for Global Demand and Production

(1) Optical Disk

[CD-R/RW]

Global Demand for Data CD-R

	Units in millions	
	2005 Estimates	2006 Forecasts
Japan	350(97%)	326(93%)
North America	2,490(99%)	2,391(96%)
Europe	2,888(101%)	2,749(95%)
Other areas	1,416(101%)	1,445(102%)
Global Total	7,144(100%)	6,911(97%)

Percentage in parenthesis shows comparison with previous year.

Actual figures.

Global Demand for Audio CD-R

	Units in millions	
	2005 Estimates	2006 Forecasts
Japan	28(100%)	27(96%)
North America	193(99%)	187(97%)
Europe	49(88%)	44(90%)
Other areas	19(90%)	17(89%)
Global Total	289(96%)	275(95%)

Percentage in parenthesis shows comparison with previous year.

Actual figures.

Global Production of CD-R

	Units in millions	
	2005 Estimates	2006 Forecasts
Japanese makers	2,336(97%)	2,218(95%)
Overseas makers	5,840(101%)	5,687(97%)
Global Total	8,176(100%)	7,905(97%)

Percentage in parenthesis shows comparison with previous year.

Production includes CD-R for data and audio.

Production includes ODM. Actual figures.

Global Demand for CD-RW

	Units in millions	
	2005 Estimates	2006 Forecasts
Japan	24(96%)	22(92%)
North America	114(97%)	107(94%)
Europe	114(97%)	108(95%)
Other areas	38(97%)	36(95%)
Global Total	290(97%)	273(94%)

Percentage in parenthesis shows comparison with previous year.

Actual figures.

[Recordable DVD]

Global Demand for Write-Once DVD

	Units in millions	
	2005 Estimates	2006 Forecasts
Japan	507(183%)	710(140%)
North America	1,467(300%)	2,010(137%)
Europe	1,342(298%)	1,906(142%)
Other areas	327(287%)	533(163%)
Global Total	3,643(274%)	5,159(142%)

Percentage in parenthesis shows comparison with previous year.

Actual figures.

Global Demand for Re-writable DVD

	Units in millions	
	2005 Estimates	2006 Forecasts
Japan	90(153%)	115(128%)
North America	75(156%)	100(133%)
Europe	106(163%)	143(135%)
Other areas	18(164%)	24(133%)
Global Total	289(158%)	382(132%)

Percentage in parenthesis shows comparison with previous year.

Actual figures.

Japanese Demand for Video Use DVD

	Units in millions	
	2005 Estimates	2006 Forecasts
Write-Once DVD	268(182%)	376(140%)
Percentage of total	77%	78%
Re-writable DVD	81(153%)	103(127%)
Percentage of total	23%	22%
Total	349(175%)	479(137%)

Percentage in parenthesis shows comparison with previous year.

Actual figures.

Japanese Demand for Data Use DVD

	Units in millions	
	2005 Estimates	2006 Forecasts
Write-Once DVD	239(184%)	334(140%)
Percentage of total	96%	97%
Re-writable DVD	9(150%)	12(133%)
Percentage of total	4%	3%
Total	248(182%)	346(140%)

Percentage in parenthesis shows comparison with previous year.

Actual figures.

Global Production of Write-Once DVD

Units in millions

	2005 Estimates	2006 Forecasts
Japanese makers	1,568(207%)	2,270(145%)
Overseas makers	2,440(346%)	3,404(140%)
Global Total	4,008(274%)	5,674(142%)

Percentage in parenthesis shows comparison with previous year.
Production includes ODM. Actual figures.

Global Production of Re-writable DVD

Units in millions

	2005 Estimates	2006 Forecasts
Japanese makers	113(131%)	154(136%)
Overseas makers	205(178%)	266(130%)
Global Total	318(158%)	420(132%)

Percentage in parenthesis shows comparison with previous year.
Actual figures.

Global Demand for Write-Once 8-cm DVD

Units in millions

	2005 Estimates	2006 Forecasts
Japan	1.2(200%)	2.3(192%)
North America	9.7(231%)	18.1(187%)
Europe	2.0(200%)	4.3(215%)
Other areas	0.8(267%)	1.9(238%)
Global Total	13.7(225%)	26.6(194%)

Percentage in parenthesis shows comparison with previous year.
Actual figures.

Global Demand for Re-writable 8-cm DVD

Units in millions

	2005 Estimates	2006 Forecasts
Japan	2.2(220%)	4.1(186%)
North America	3.4(213%)	6.3(185%)
Europe	2.1(233%)	4.3(205%)
Other areas	0.8(267%)	1.8(225%)
Global Total	8.5(224%)	16.5(194%)

Percentage in parenthesis shows comparison with previous year.
Actual figures.

[Magneto-Optical Disk]

Global Demand for 3.5" MO

Units in thousands

	2005 Estimates	2006 Forecasts
Japan	10,890(77%)	8,300(76%)
North America	162(85%)	129(80%)
Europe	324(90%)	275(85%)
Other areas	289(66%)	246(85%)
Global Total	11,665(77%)	8,950(77%)

Percentage in parenthesis shows comparison with previous year.
Actual figures.

Global Production of 3.5" MO

Units in thousands

	2005 Estimates	2006 Forecasts
Japanese makers	12,350(74%)	9,130(74%)
Overseas makers	0	0
Global Total	12,350(74%)	9,130(74%)

Percentage in parenthesis shows comparison with previous year.
Actual figures.

Global Demand for 5.25" MO

Units in thousands

	2005 Estimates	2006 Forecasts
Japan	98(85%)	83(85%)
North America	624(95%)	593(95%)
Europe	523(95%)	497(95%)
Other areas	105(95%)	99(95%)
Global Total	1,350(94%)	1,272(94%)

Percentage in parenthesis shows comparison with previous year.
Actual figures.

Global Production of 5.25" MO

Units in thousands

	2005 Estimates	2006 Forecasts
Japanese makers	1,498(94%)	1,170(78%)
Overseas makers	150(100%)	0
Global Total	1,648(94%)	1,170(71%)

Percentage in parenthesis shows comparison with previous year.
Actual figures.

(2) Magnetic Media

[Audio Media]

Global Demand for Blank Audio Cassette

	Units in millions	
	2005 Estimates	2006 Forecasts
Japan	65(82%)	53(82%)
North America	82(81%)	66(80%)
Europe	62(71%)	45(73%)
Other areas	181(82%)	146(81%)
Global Total	390(80%)	310(79%)

Percentage in parenthesis shows comparison with previous year.
Blank tape only. Actual figures.

Global Demand for Audio MD

	Units in millions	
	2005 Estimates	2006 Forecasts
Japan	120(76%)	90(75%)
North America	4(80%)	3(75%)
Europe	15(75%)	10(67%)
Other areas	5(63%)	4(80)
Global Total	144(75%)	107(74%)

Percentage in parenthesis shows comparison with previous year.
Actual figures.

[Video Tape]

Global Demand for Full-size Blank Video Cassette

	Units in millions	
	2005 Estimates	2006 Forecasts
Japan	156(85%)	138(88%)
North America	196(83%)	157(80%)
Europe	135(77%)	106(79%)
Other areas	93(85%)	80(86%)
Global Total	580(82%)	481(83%)

Percentage in parenthesis shows comparison with previous year.
Blank tape only. Actual figures.

Global Demand for Camcorder Cassette

	Units in millions	
	2005 Estimates	2006 Forecasts
Japan	45(98%)	43(96%)
North America	94(97%)	86(91%)
Europe	76(104%)	77(101%)
Other areas	42(108%)	46(110%)
Global Total	257(101%)	252(98%)

Percentage in parenthesis shows comparison with previous year.
Includes VHS-C, 8mm and Mini DV.
Actual figures.

Global Production of Audio Tape

	Units in millions	
	2005 Estimates	2006 Forecasts
Japanese makers	246(85%)	132(54%)
Overseas makers	900(90%)	800(89%)
Global Total	1,146(89%)	932(81%)

Percentage in parenthesis shows comparison with previous year.
Figures include demand for software. Converted to quantity of C-60.

Global Production of Audio MD

	Units in millions	
	2005 Estimates	2006 Forecasts
Japanese makers	134(79%)	95(71%)
Overseas makers	20(71%)	15(75%)
Global Total	154(78%)	110(71%)

Percentage in parenthesis shows comparison with previous year.
Actual figures.

Global Production of Video Tape

	Units in millions	
	2005 Estimates	2006 Forecasts
Japanese makers	172(69%)	95(55%)
Overseas makers	640(79%)	510(80%)
Global Total	812(76%)	605(75%)

Percentage in parenthesis shows comparison with previous year.
Production includes demand for software. Converted to quantity of T-120.

Global Production of Camcorder Cassette

	Units in millions	
	2005 Estimates	2006 Forecasts
Japanese makers	293(107%)	290(99%)
Overseas makers	0	0
Global Total	293(107%)	290(99%)

Percentage in parenthesis shows comparison with previous year.
Actual figures.

Global Demand for Mini DV

Units in millions

	2005 Estimates	2006 Forecasts
Japan	42(100%)	40(95%)
North America	47(118%)	50(106%)
Europe	57(116%)	62(109%)
Other areas	34(121%)	39(115%)
Global Total	180(113%)	191(106%)

Percentage in parenthesis shows comparison with previous year.

Actual figures.

Global Production of Mini DV

Units in millions

	2005 Estimates	2006 Forecasts
Japanese makers	214(116%)	227(106%)
Overseas makers	0	0
Global Total	212(116%)	227(106%)

Percentage in parenthesis shows comparison with previous year.

Actual figures.

[Floppy Disk]

Global Demand for Floppy Disk

Units in millions

	2005 Estimates	2006 Forecasts
Japan	66(79%)	50(76%)
North America	236(82%)	189(80%)
Europe	274(84%)	225(82%)
Other areas	282(90%)	248(88%)
Global Total	858(85%)	712(83%)

Percentage in parenthesis shows comparison with previous year.

Actual figures.

Global Production of Floppy Disk

Units in millions

	2005 Estimates	2006 Forecasts
Japanese makers	265(84%)	217(82%)
Overseas makers	1,225(86%)	1,029(84%)
Global Total	1,490(86%)	1,246(84%)

Percentage in parenthesis shows comparison with previous year.

Based on completed products. Actual figures.

(3) Semiconductor Memory Cards

[Small-sized Memory Cards]

Units in thousands

	2005 Estimates	2006 Forecasts
SD Memory Card	29,200(98%)	32,300(111%)
Memory Stick	12,500(88%)	12,800(102%)
Compact Flash	4,000(57%)	4,000(100%)
xD-Picture Card	5,100(84%)	5,200(102%)
Other Cards	1,400(52%)	1,400(100%)
Total Japan	52,200(87%)	55,700(107%)

Percentage in parenthesis shows comparison with previous year.

Actual figures.

Other Cards include SmartMedia, MMC, T-Flash and ATA.

For more information, please fax to:
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