

Worldwide PBX/KTS and PCX Market Share and Forecast, 2001

Market Statistics

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GARTNER WORLDWIDE HEADQUARTERS

NORTH AMERICA

Corporate Headquarters

56 Top Gallant Road
Stamford, CT 06904-2212
U.S.A.
Tel: +1-203-316-1111
Fax: +1-203-316-6300

West Coast Headquarters

251 River Oaks Parkway
San Jose, CA 95134-1913
U.S.A.
Tel: +1-408-468-8000
Fax: +1-408-954-1780

EUROPE

European Headquarters

Tamesis
The Glanty
Egham
Surrey, TW20 9AW
United Kingdom
Tel: +44-1784-431611
Fax: +44-1784-268980

ASIA/PACIFIC

Asia/Pacific Headquarters

Level 7
40 Miller St.
North Sydney, NSW 2060
Australia
Tel: +61-2-9459-4600
Fax: +61-2-9459-4601

JAPAN

Japan Headquarters

Aobadai Hills 6F
7-7, Aobadai, 4-chome
Meguro-ku
Tokyo 153-0042
Japan
Tel: +81-3-3481-3670
Fax: +81-3-3481-3644

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Author Megan Fernandez

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For More Information...

In North America and Latin America:

+1-203-316-1111

In Europe, the Middle East and Africa:

+44-1784-268819

In Asia/Pacific:

+61-7-3405-2582

In Japan:

+81-3-3481-3670

Worldwide via gartner.com:

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Chapter 1

Introduction

This document contains detailed information on Gartner Dataquest's view of the worldwide premises switching system (PSS) market. Information is broken out as follows:

- Historical data — 1996 through 2000
- Forecast data — 2001 through 2005
- Market share estimates for premises switching equipment (PSE)

Some historical data have been restated to more accurately reflect the market segmentation.

Analysis of the PSS market by company provides insight into high-technology markets and reinforces estimates of consumption, production and company revenue.

More detailed data on this market may be requested through Gartner Dataquest's client inquiry service.

Data columns in the tables in this book may not add to totals shown because of rounding.

PSE Segmentation

Gartner Dataquest measures the PSE market by the number of activated lines for the system that was shipped, according to the following segmentation scheme:

- All PSE
- PBX systems
- Key telephone systems (KTSs)
- Key hybrid systems (KHSs)
- PCX (converged PSE)

PSE systems are further classified by the number of lines per system, as follows:

- 1 to 8 lines
- 9 to 24 lines
- 25 to 48 lines
- 49 to 100 lines
- 101 to 400 lines
- 401 to 1,000 lines
- More than 1,000 lines
- Add-on lines

PSE Definitions

The following definitions are provided for the PSE market:

- **PBX system** — A telephone switching system on the customer's premises that allows telephones to interface with the public telephone central exchange or office when the user dials an access code. A special-purpose attendant/operator console can be provided on a standard or optional basis.
- **KTS** — A customer-premises telephone switching system that allows telephones to interface to the public telephone central exchange or office only via key access without using an access code. This category includes electromechanical IA2 and electronic segments; KTS requires the use of line equipment designed for the system.
- **KHS** — A customer-premises telephone system that allows telephones to interface to the public telephone central exchange or office, with or without an access code, based on configuration program parameters. It also supports the use of standard analog telephones.
- **PCX (converged PSE)** — A customer-premises-based communications system that employs a high-bandwidth backbone to connect switching nodes and applications. Nodes and applications can be based on proprietary or standard protocols. Converged PSE is sometimes referred to as PC-based, LAN-based, server-based or un-PBX equipment. The next-generation PBX architecture forms the basis for converged PSE, while a special case of this architecture, PCX-Lite, represents the next-generation KTS. Typically, PCX-Lite systems feature both logical and physical layer convergence across a narrow set of applications. PCX-Lite systems are also referred to as server-based or PC-based voice switches in the industry.
- **PSE** — Voice equipment that provides switching or call routing functions. This includes equipment such as PBX telephone systems, KTSs, KHSs and converged PSE.

The following term relates to PSE:

- **Lines** — A unique physical address in a telephone system used for outside lines, internal stations and ancillary services.

Worldwide Geographic Regional Definitions

The following regional hierarchy and definitions are used for all of Gartner Dataquest's geographic segmentation. Not all product categories and Gartner Dataquest services have the entire segmentation. Some may have a greater level, and some may have less.

Asia/Pacific

The Asia/Pacific region includes Australia, China, Hong Kong, India, Indonesia, Malaysia, Singapore, South Korea, Taiwan and Thailand.

Rest of Asia/Pacific

The Rest of Asia/Pacific region includes American Samoa, Ashmore and Cartier Islands, Baker Island, Bangladesh, Bhutan, Bouvet Island, Brunei, Cambodia, Christmas Island, Cocos (Keeling) Islands, Cook Islands, Coral Sea Islands, Federated States of Micronesia, Fiji, French Polynesia, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Kiribati, Laos, Macau, Maldives, Marshall Islands, Midway Islands, Mongolia, Myanmar (Burma), Nauru, Nepal, New Caledonia, New Zealand, Niue, Norfolk Island, Northern Mariana Islands, North Korea, Pakistan, Palau, Palmyra Atoll, Papua New Guinea, Paracel Islands, Philippines, Pitcairn Islands, Solomon Islands, Spratly Islands, Sri Lanka, Tokelau, Tonga, Tuvalu, Vanuatu, Vietnam, Wake Island, Wallis and Futuna, and Western Samoa.

Western Europe

The Western Europe region comprises Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Rest of Western Europe

The Rest of Western Europe region includes Andorra, Cyprus, Faroe Islands, Gibraltar, Greenland, Guernsey, Iceland, Isle of Man, Jersey, Liechtenstein, Luxembourg, Malta, Monaco, San Marino and Svalbard.

Eastern Europe

The Eastern Europe region comprises Belarus, Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Russia, Slovakia and Ukraine.

Rest of Eastern Europe

The Rest of Eastern Europe region includes Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Croatia, Georgia, Kazakhstan, Kyrgyzstan, Macedonia, Moldova, Romania, Slovenia, Tajikistan, Turkmenistan, Uzbekistan, and Yugoslavia (Serbia and Montenegro).

Japan

Japan is a single-country region.

Note: The voice communications programs include Japan within the Asia/Pacific region.

Latin America

The Latin America region comprises Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela.

Rest of Latin America

The Rest of Latin America region includes Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, Bolivia, Cayman Islands, Clipperton Island, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Falkland Islands (Islas Malvinas), French Guiana, Grenada, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Jamaica, Martinique, Montserrat, Navassa Island, Netherlands Antilles, Nicaragua, Panama, Paraguay, Puerto Rico, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Tortola (British Virgin Islands), Trinidad and Tobago, Turks and Caicos Islands, Uruguay, and Virgin Islands (St. John, St. Croix, and St. Thomas).

Middle East/Africa

Gartner Dataquest research does not cover specific countries in the Middle East and Africa.

Rest of Middle East/Africa

The Rest of Middle East/Africa region includes Afghanistan, Algeria, Angola, Bahrain, Bassas da India, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, Cote d'Ivoire, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Europa Island, Gabon, Gambia, Ghana, Glorioso Islands, Guinea, Guinea-Bissau, Iran, Iraq, Israel, Jordan, Juan de Nova Island, Kenya, Kuwait, Lebanon, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mayotte, Morocco, Mozambique, Namibia, Niger, Nigeria, Oman, Qatar, Reunion, Rwanda, Saint Helena, Sao Tome and Principe, Saudi Arabia, Senegal, Seychelles,

Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Syria, Tanzania, Togo, Tromelin Island, Tunisia, Turkey, Uganda, United Arab Emirates, Western Sahara, Yemen, Zaire, Zambia and Zimbabwe.

North America

The North America region comprises the United States and Canada.

Exchange Rate Definitions

When converting a company's local currency sales into U.S. dollars, or vice versa, it is important to use the exchange rates provided in Table 1-1. To convert foreign-currency denominated data into dollars, divide the data by the exchange rate reported for the appropriate country and time period (for example, divide quarterly data by appropriate quarterly rates, annual data by appropriate annual rates and so on). Historical monthly, quarterly and annual rates may be requested as needed.

Table 1-1
Prevailing Historical Exchange Rates (Foreign Currency per U.S. Dollar)

Country	1999	2000	2001	Foreign Currency Appreciation vs. U.S. Dollar (%) 2000-2001
North America				
Canada (Dollar)	1.49	1.49	1.53	-2.88
Latin America				
Argentina (Peso)	1.00	1.00	1.00	-0.01
Brazil (Real)	1.82	1.83	2.27	-19.21
Chile (Peso)	509.03	539.56	603.56	-10.60
Colombia (Peso)	1,757.47	2,090.06	2,297.98	-9.05
Mexico (Peso)	9.56	9.46	9.26	2.10
Peru (New Sole)	3.38	3.49	3.54	-1.37
Venezuela (Bolivar)	606.43	680.47	712.97	-4.56
Western Europe				
Austria (Schilling)	12.92	14.94	15.74	-5.04
Belgium (Franc)	37.87	43.81	46.13	-5.04
Denmark (Krone)	6.98	8.09	8.53	-5.12
Economic and Monetary Union (ECU/Euro)	0.94	1.09	1.14	-5.04
Finland (Markka)	5.58	6.46	6.80	-5.04
France (Franc)	6.16	7.12	7.50	-5.04
Germany (Mark)	1.84	2.12	2.24	-5.04
Greece (Drachma)	305.88	365.86	389.68	-6.11
Iceland (Krona)	72.43	78.88	98.85	-20.21
Ireland (Punt)	0.74	0.86	0.90	-5.04
Italy (Lira)	1,817.55	2,102.77	2,214.31	-5.04
Netherlands (Guilder)	2.07	2.39	2.52	-5.04
Norway (Krone)	7.80	8.81	9.17	-3.90
Portugal (Escudo)	188.19	217.72	229.27	-5.04
Spain (Peseta)	156.18	180.69	190.28	-5.04
Sweden (Krona)	8.27	9.18	10.45	-12.20
Switzerland (Franc)	1.50	1.69	1.75	-3.23
United Kingdom (Pound)	0.62	0.66	0.70	-6.12

Table 1-1 (Continued)
Prevailing Historical Exchange Rates (Foreign Currency per U.S. Dollar)

Country	1999	2000	2001	Foreign Currency Appreciation vs. U.S. Dollar (%) 2000-2001
Central and Eastern Europe				
Bulgaria (Lev)	894.86	2.10	2.23	-5.64
Czech Republic (Koruna)	34.61	38.63	39.14	-1.31
Hungary (Forint)	236.89	282.16	290.53	-2.88
Poland (Zloty)	3.95	4.34	4.00	8.47
Romania (Lev)	14,865.21	21,422.64	28,186.13	-24.00
Russia (Ruble)	24.58	27.97	28.80	-2.88
Slovakia (Koruna)	41.36	46.21	49.20	-6.09
Ukraine (Hryvna)	4.29	5.48	5.41	1.46
Japan				
Japan (Yen)	113.71	107.82	121.37	-11.16
Asia/Pacific				
Australia (Dollar)	1.55	1.73	1.92	-10.26
China (Yuan)	8.28	8.28	8.28	0.02
Hong Kong (Dollar)	7.76	7.79	7.80	-0.09
India (Rupee)	43.12	45.00	46.90	-4.06
Indonesia (Rupiah)	7,812.30	8,373.70	10,828.77	-22.67
Malaysia (Ringgit)	3.80	3.80	3.80	0.00
New Zealand (Dollar)	1.89	2.20	2.39	-7.77
Philippines (Peso)	39.10	44.26	50.79	-12.87
Singapore (Dollar)	1.69	1.72	1.80	-4.17
South Korea (Won)	1,189.83	1,131.38	1,292.41	-12.46
Sri Lanka (Rupee)	70.85	76.98	89.20	-13.69
Taiwan (Dollar)	32.32	31.27	33.68	-7.15
Thailand (Baht)	37.88	40.22	44.81	-10.23
Rest of World				
Egypt (Pound)	3.40	3.53	3.86	-8.57
Israel (New Shekel)	4.14	4.08	4.16	-1.87
South Africa (Rand)	6.12	6.95	8.00	-13.14
Turkey (Lira)	420,306.03	624,177.48	1,079,468.15	-42.18

Notes: ECU converted to euro on 1 January 1999 at parity. Exchange rates for reported euro participants fixed as follows: Austria, 13.7603 schillings/euro; Belgium, 40.3399 francs/euro; Finland, 5.94573 markka/euro; France, 6.55957 francs/euro; Germany, 1.95583 marks/euro; Ireland, 0.787564 punts/euro; Italy, 1,936.27 lire/euro; Netherlands, 2.20371 guilders/euro; Portugal, 200.482 escudos/euro; and Spain, 166.386 pesetas/euro. Russian ruble revalued in December 1997; 1 revalued ruble equal to 1,000 original rubles. Bulgarian lev revalued in July 1999; 1 revalued lev equal to 1,000 original leva.

Source: Gartner Dataquest (January 2002)

Data Sources

Gartner Dataquest utilizes primary and secondary sources to produce market share data. In addition to the annual market share survey, Gartner Dataquest uses the following sources to accurately quantify market activity:

- Information published by major industry participants
- Estimates made by knowledgeable and reliable industry spokespersons
- Government data or trade association data
- Published product literature and price lists

- Interviews with knowledgeable manufacturers, distributors and users
- Relevant economic data
- Information and data from online or CD-ROM data banks
- Articles in both the general and trade press
- Reports from financial analysts

Gartner Dataquest believes that the estimates presented here represent the most accurate and meaningful statistics generally available today.

Despite the care taken in gathering, analyzing and categorizing the data in a meaningful way, careful attention must be paid to the definitions and assumptions used herein when interpreting the estimates presented in this document. Various companies, government agencies and trade associations may use slightly different definitions of product categories and regional groupings, or they may include different companies in their summaries. These differences should be kept in mind when making comparisons between data provided by Gartner Dataquest and data provided by other suppliers.

Forecast Methodology

Gartner Dataquest uses a variety of forecasting techniques (qualitative and quantitative) that vary by technology area. An overview of Gartner Dataquest forecasting techniques can be found in the *Dataquest Research Methodology* document.

Gartner Dataquest follows a three-step process to forecast PSS shipments. First, current and expected future worldwide macroeconomic conditions are assessed and forecast. Dun & Bradstreet information is used to develop the macroeconomic forecasts for the world's major economies. This forecast identifies trends in the economic health of the world's leading consumers and producers of electronic equipment. Using the forecast in conjunction with input from Gartner Dataquest's regional offices, Gartner Dataquest estimates the overall business climate in which the PSS market will operate.

Second, Gartner Dataquest analyzes and forecasts the significant long-range trends and outlook in the various PSS groups. This establishes a five-year trend growth path or "envelope" for PSSs.

The final step in the forecast process is to reconcile expected fluctuations about the market trends so that the two do not inexplicably diverge. Gartner Dataquest anticipates that, in the absence of shocks to the market, market fluctuations converge toward a long-term trend.

Because the time series data contained in this document are in general comprised of annual observations, and are sparse in terms of the number of observations, the data generally do not satisfy the requirements of quantitative empirical techniques such as econometric or statistical time-series models. Therefore, in most cases we have used judgmental models (that is, intuitive judgments, expert opinions and subjective probabilities) or technological models (that is, curve fitting and the use of analogous data).

Economic Outlook

DRI-WEFA, Gartner Dataquest's preferred third-party source for global macro-economic forecasts and data, released its latest global economic outlook at the beginning of November. Within days, DRI-WEFA followed this with a revised economic outlook for the United States, which is notably more pessimistic than the one first incorporated in its global economic outlook. Taken together, DRI-WEFA's two forecasts anticipate significantly weaker worldwide economic activity in the months ahead. It is somewhat distressing to note that this darker outlook is even dimmer than the unfavorable one DRI-WEFA issued shortly after Sept. 11, especially for 2002.

All told, DRI-WEFA expects global GDP to grow 1.4 percent in 2001 and 1.5 percent in 2002. In its last economic outlook published before Sept. 11, DRI-WEFA anticipated 2.0 percent global GDP growth during 2001 and 2.8 percent growth during 2002. These figures were lowered to 1.4 percent and 2.0 percent, respectively, in the wake of the Sept. 11 terrorist attacks.

DRI-WEFA's newly revised global outlook reflects across-the-board reductions in the short-term prospects for both the United States and most other economies. Domestically, DRI-WEFA expects the United States to experience a three-quarter-long recession spanning the third quarter of 2001 through the first quarter of 2002. DRI-WEFA is predicting this will be followed by a gathering recovery beginning in the second quarter of 2002. Shortly after Sept. 11, DRI-WEFA had expected a two-quarter contraction lasting through the end of 2001, followed by a gradual recovery beginning in the first quarter of 2002. Although DRI-WEFA's newer, darker view did little to change its U.S. outlook for 2001, it dramatically changed the outlook for 2002. In sum, DRI-WEFA is forecasting U.S. GDP to grow 1.1 percent during 2001, about the same as just after Sept. 11. Now, however, DRI-WEFA is predicting just 0.4 percent U.S. GDP growth for 2002. This alone accounts for a 0.2 percentage point reduction in the global forecast for 2002.

Internationally, DRI-WEFA's near-term outlooks for all the world's other major economies have been lowered. Indeed, its short-term outlooks for Asia's "Tiger" economies (Singapore, Taiwan, South Korea, Hong Kong, and Malaysia) have been sharply lowered. Overall, DRI-WEFA expects GDP growth for the global economy beyond the United States to run 1.5 percent in 2001 and 1.9 percent in 2002. This compares with forecasts of 1.6 percent and 2.2 percent, respectively, following the events of Sept. 11. It is worth stressing that DRI-WEFA's forecasts for the global economy outside the United States were predicted on the assumption U.S. GDP would grow 1.1 percent in 2001 and 1.3 percent in 2002. As noted above, DRI-WEFA subsequently revised its U.S. outlook, significantly lowering prospects for U.S. growth in 2002. DRI-WEFA's lowered 2002 U.S. outlook means the rest of the world may have a difficult time managing 1.9 percent growth in 2002. As a consequence, overall worldwide GDP growth could fall substantially below 1.5 percent in 2002.

Fortunately, DRI-WEFA's near-term gloom is counterbalanced by predictions of a brighter long term. DRI-WEFA is forecasting stronger growth for the United States and most other economies beyond 2002 than before. Indeed, DRI-WEFA's reckons 2003 and 2004 are shaping up to be especially strong years for the global economy. All told, DRI-WEFA is predicting the global economy will average 3.6 percent annual GDP growth between 2003 and 2005. The United States is expected to average slightly faster 3.8 percent annual GDP growth over the same period.

Table 1 presents DRI-WEFA's latest GDP forecasts for the world's major economies.

Table 1-2
Real GDP Growth, 2000-2005

	GDP (US\$B)		GDP Change (%)			
	2000	2001	2002	2003	2004	2005
Worldwide	27,793.2	1.4	1.5	3.8	3.6	3.4
Americas	10,154.2	1.1	0.7	4.2	3.8	3.3
United States	7,980.0	1.1	0.4	4.4	3.8	3.2
Canada	767.9	1.6	1.4	3.5	3.1	2.8
Mexico	370.5	0.0	3.5	5.1	5.4	5.6
Brazil	605.0	1.5	1.9	3.6	3.7	3.7
Argentina	189.2	-2.5	-4.9	-1.0	3.4	3.5
Other Latin America	241.5	2.4	3.0	4.1	4.6	4.7
Europe, Middle East and Africa	10,632.2	1.8	2.1	3.4	3.1	2.9
Germany	2,007.0	0.8	1.3	3.2	2.6	2.6
France	1,401.4	1.9	1.6	3.5	3.3	2.6
Italy	1,289.6	1.7	1.4	3.2	2.6	2.2
United Kingdom	1,228.5	1.9	2.2	3.2	2.7	2.3
Other Western Europe (Except Turkey)	2,816.5	2.0	2.1	3.0	2.7	2.6
Central and Eastern Europe	653.0	4.4	3.7	4.7	5.1	5.3
Middle East and Africa (Including Turkey)	1,236.1	1.3	3.2	4.4	4.5	4.6
Japan and Asia/Pacific	7,006.8	1.1	1.8	3.9	4.2	4.4
Japan	3,490.7	-1.2	-0.9	1.7	2.0	2.3
China	1,019.2	7.2	7.0	7.5	8.1	7.9
Hong Kong	114.7	-0.3	2.1	4.1	4.2	4.3
Singapore	77.2	-2.7	2.5	6.2	5.9	5.4
South Korea	456.3	2.0	2.9	6.8	6.6	6.1
Taiwan	298.3	-2.1	1.5	4.0	4.6	5.0
Other Asia/Pacific	1,550.5	2.9	3.7	5.0	5.0	5.0

Note: Figures for 2000 column are in billions of 1990 U.S. dollars.

Source: WEFA

Worldwide PBX, KTS and PCX Market Analysis

Regional Highlights

In 2000, premises switching shipments remained flat year over year. On a regional level, however, system and line shipments fluctuated. The Asia/Pacific region experienced the most substantial growth, fueled by spirited demand from the Japanese market, the largest market in the region, and South Korea, which grew at a lively 20 percent. Besides South Korea and Japan, most other country markets in the region experienced positive growth with the exceptions of China and Thailand, which experienced moderate declines. Australia and New Zealand also experienced aggressive growth rates to the tune of 31 percent and 28 percent, respectively.

Following two good years in 1998 and 1999, the Central and Eastern European markets had mixed results in 2000. While the sale of new systems grew by 6 percent, the total number of line shipments declined by 3 percent. Purchases of larger systems declined along with add-on shipments. The region experienced significant declines in most of its country markets. However, this was offset by the fact that Russia and Poland, the two largest markets with a combined 56 percent market share, had positive years. Nevertheless, the line shipment declines among some of the smaller markets such as Bulgaria, Slovakia and a large market such as Hungary, combined to provide negative line shipment results.

The Middle East and Africa markets experienced positive growth in terms of both system and line shipments, although the region failed to keep pace with the spectacular results achieved in the two previous years. The overall market grew by 7 percent year over year, with Turkey leading the way with a healthy 28 percent growth in terms of line shipments. Egypt, on the other hand, was the only declining market with line shipments falling 11 percent from the previous year. All other country markets experienced moderate growth.

Despite slight total market gains, many countries within Latin America showed negative market activity in 2000. Among the countries experiencing negative growth during the year were Colombia, Argentina, Venezuela and Peru. While 2000 was rough, in 2001, Colombia's market showed positive signs of recovery. Unlike Colombia, Argentina's PBX market failed to recover in 2001 as a result of an enduring economic recession. Gartner Dataquest expects the market to remain down through 2002 as a result of the complex market dynamics in this country.

Brazil, Chile and Mexico all showed positive year-over-year market gains during 2000. Gartner Dataquest expected Brazil to finish off 2001 with mixed results, although energy and currency problems have somewhat tempered growth in a market otherwise poised for strong success. Chile is expected to remain a stable enterprise market for the region with a relatively strong economy. Gartner Dataquest expects Mexico to regain momentum in mid-2002. With its close ties to the United States, Mexico's enterprise business activity was especially impacted by the U.S. economic recession.

Within North America, PBX and KTS system and line shipments experienced substantial drops from 1999 shipment levels. Throughout all size segments, vendors experienced year-over-year setbacks. Several factors accounted for the reduction in PBX/KTS market activity during the year. First, during the second half of 1998 and first half of 1999, many end users upgraded their communications systems for Y2K compliance-related reasons. Second, with the onset of convergence hype, many end users became confused about the quality and reliability of nontraditional PSE but unclear as to how long traditional PBXs/KTSs would be up-to-date communications solutions. As a result, many end users held off on purchasing any type of PBX, KTS or PCX system until it became clearer about the viability of PCX systems and the longevity of traditional KTSs and PBXs. In the meantime, many end users are taking a wait-and-see approach to their communications systems and deferring system deployments two or three years down the road.

The Western Europe region showed slight 3 percent year-over-year gains in 2000. Performance was mixed throughout the region with solid growth in southern Europe, in particular Spain and Italy with 12.7 percent and 9 percent growth, respectively. Growth was offset by especially troubled results from northern countries, Sweden (with a 21 percent line shipment drop) and the Netherlands (6.3 percent year-over-year decline).

Forecast Assumptions

This forecast makes a number of assumptions about the following:

- Add-on lines
- Revenue data
- General information

Add-On Lines

It is assumed that the value of add-on lines is different from the value of new lines. The value of each add-on line varies greatly by vendor, size category and year of calculation. Usually, add-on lines are valued at between 25 percent and 110 percent of the new-system-per-line price. As a rule, add-on lines on larger systems are typically significantly less costly than new lines on smaller systems.

Revenue Data

Revenue and pricing data usually include the basic management system software and hardware and the initial installation costs. It does not include ongoing service or add-on peripherals. Revenue is revenue from the end user.

General Information

In the market statistics tables throughout this report, line shipment and system data are provided, as well as market share data for the top 10 vendors within the various worldwide regions.

Regional-level market statistic reports (with country-level breakouts) are covered in the Enterprise program on the following regions: North America, Asia/Pacific, Middle East and Africa, Western Europe, Central and Eastern Europe, and Latin America. Market Trends reports are also published on the six different regions. Market Trends reports contain detailed country-level analysis of PSS markets. For more information about these programs, contact a Gartner Dataquest sales representative or call us at 1-408-468-8000 in the United States.

Chapter 2

Market Share and Forecast Tables

Table 2-1
Shipments of Premises Switching Systems to the World, 1996-2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total System Shipments	1,820,707	1,903,778	1,792,581	1,799,078	1,794,607	1,673,441	1,759,195	1,845,908	1,934,110	2,015,156
Growth (%)	-	5	-6	0	-0.2	-7	5	5	5	4
Total Line Shipments	40,592,153	41,485,278	42,624,502	47,705,435	47,699,305	44,915,789	47,249,915	50,381,779	53,158,291	55,541,891
Growth (%)	-	2	3	12	0.0	-6	5	7	6	4

Source: Gartner Dataquest (January 2002)

Table 2-2
Shipments of Premises Switching Systems to the Asia/Pacific Region, 1996-2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total System Shipments	265,155	217,348	86,271	133,308	159,455	149,420	154,454	168,355	180,295	191,470
Growth (%)	-	-18	-60	55	20	-6	3	9	7	6
Total Line Shipments	9,464,928	8,750,679	5,642,555	7,576,657	8,444,515	7,816,092	8,077,591	8,793,910	9,436,468	9,989,882
Growth (%)	-	-8	-36	34	11	-7	3	9	7	6

Source: Gartner Dataquest (January 2002)

Table 2-3
Shipments of Premises Switching Systems to Central and Eastern Europe, 1996-2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total System Shipments	88,894	50,300	50,577	53,314	56,719	53,972	55,958	58,193	61,572	64,488
Growth (%)	-	-43	1	5	6	-5	4	4	6	5
Total Line Shipments	1,930,963	1,794,455	2,128,890	2,509,084	2,440,651	2,379,126	2,487,786	2,589,595	2,698,841	2,784,037
Growth (%)	-	-7	19	18	-3	-3	5	4	4	3

Source: Gartner Dataquest (January 2002)

Table 2-4
Shipments of Premises Switching Systems to Latin America, 1996-2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total System Shipments	56,679	112,421	112,544	100,702	101,967	90,659	95,485	102,272	107,617	114,341
Growth (%)	-	98	0	-11	1	-11	5	7	5	6
Total Line Shipments	2,328,171	2,450,037	2,309,669	2,271,577	2,373,304	2,179,572	2,280,065	2,408,364	2,508,398	2,643,851
Growth (%)	-	5	-6	-2	4	-8	5	6	4	5

Source: Gartner Dataquest (January 2002)

Table 2-5
Shipments of Premises Switching Systems to Middle East and Africa, 1996-2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total System Shipments	46,411	48,198	48,415	54,017	57,375	56,764	58,901	61,644	64,896	68,246
Growth (%)	-	4	0	12	6	-1	4	5	5	5
Total Line Shipments	1,168,604	1,121,194	1,462,264	1,874,763	2,011,410	1,992,854	2,073,870	2,172,989	2,284,550	2,406,588
Growth (%)	-	-4	30	28	7	-1	4	5	5	5

Source: Gartner Dataquest (January 2002)

Table 2-6
Shipments of Premises Switching Systems to North America, 1996-2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total System Shipments	441,915	587,100	583,240	558,178	508,329	462,500	489,138	524,973	562,447	592,951
Growth (%)	-	33	-1	-4	-9	-9	6	7	7	5
Total Line Shipments	12,339,514	13,988,952	15,438,556	16,820,735	15,296,484	13,943,746	14,781,303	16,284,921	17,583,834	18,595,533
Growth (%)	-	13	10	9	-9	-9	6	10	8	6

Source: Gartner Dataquest (January 2002)

Table 2-7
Shipments of Premises Switching Systems to Western Europe, 1996-2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total System Shipments	921,653	888,411	911,533	899,559	910,763	860,126	905,260	930,471	957,284	983,660
Growth (%)	-	-4	3	-1	1	-6	5	3	3	3
Total Line Shipments	13,359,973	13,379,961	15,642,569	16,652,620	17,132,941	16,604,400	17,549,300	18,132,000	18,646,200	19,122,000
Growth (%)	-	0	17	6	3	-3	6	3	3	3

Source: Gartner Dataquest (January 2002)

Table 2-8
Shipments of Premises Switching Systems and Lines in the 1-to-8-Line Segment to the World, 1996-2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total System Shipments	1,133,258	1,193,675	1,044,343	1,005,005	1,035,634	945,832	986,916	1,026,757	1,070,957	1,112,559
Growth (%)	-	5.3	-12.5	-3.8	3.0	-8.7	4.3	4.0	4.3	3.9
Total Line Shipments	4,864,416	4,870,555	4,374,893	4,488,949	4,961,810	4,601,105	4,844,493	5,112,628	5,431,632	5,768,245
Growth (%)	-	0.1	-10.2	2.6	10.5	-7.3	5.3	5.5	6.2	6.2

Source: Gartner Dataquest (January 2002)

Table 2-9
Shipments of Premises Switching Systems and Lines in the 9-to-24-Line Segment to the World, 1996-2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total System Shipments	405,295	405,927	432,565	442,459	408,475	401,720	427,503	449,793	471,373	490,521
Growth (%)	-	0.2	6.6	2.3	-7.7	-1.7	6.4	5.2	4.8	4.1
Total Line Shipments	5,713,374	5,791,968	6,146,663	6,401,373	6,234,946	6,105,135	6,534,741	6,919,198	7,275,669	7,599,611
Growth (%)	-	1.4	6.1	4.1	-2.6	-2.1	7.0	5.9	5.2	4.5

Source: Gartner Dataquest (January 2002)

Table 2-10
Shipments of Premises Switching Systems and Lines in the 25-to-48-Line Segment to the World, 1996-2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total System Shipments	143,387	150,275	164,199	186,087	183,599	173,309	184,923	197,114	207,887	218,382
Growth (%)	-	4.8	9.3	13.3	-1.3	-5.6	6.7	6.6	5.5	5.0
Total Line Shipments	5,5050,271	5,084,892	5,411,504	6,404,167	6,432,035	6,142,444	6,614,943	7,106,108	7,534,840	7,977,170
Growth (%)	-	0.7	6.4	18.3	0.4	-4.5	7.7	7.4	6.0	5.9

Source: Gartner Dataquest (January 2002)

Table 2-11
Shipments of Premises Switching Systems and Lines in the 49-to-100-Line Segment to the World, 1996-2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total System Shipments	97,213	107,751	98,215	106,908	103,434	96,001	101,037	108,985	116,655	123,420
Growth (%)	-	10.8	-8.8	8.9	-3.2	-7.2	5.2	7.9	7.0	5.8
Total Line Shipments	7,602,20	8,082,964	7,364,378	8,150,893	7,820,412	7,372,659	7,780,105	8,370,016	8,863,686	9,326,500
Growth (%)	-	6.3	-8.9	10.7	-4.1	-5.7	5.5	7.6	5.9	5.2

Source: Gartner Dataquest (January 2002)

Table 2-12
Shipments of Premises Switching Systems and Lines in the 101-to-400-Line Segment to the World, 1996-2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total System Shipments	32,507	37,061	43,834	45,928	51,362	45,200	46,945	50,459	53,498	55,819
Growth (%)	-	14.0	18.3	4.8	11.8	-12.0	3.9	7.5	6.0	4.3
Total Line Shipments	8,512,640	8,730,862	9,511,323	10,667,378	11,886,585	10,686,085	10,992,431	11,499,377	11,754,811	11,855,455
Growth (%)	-	2.6	8.9	12.2	11.4	-10.1	2.9	4.6	2.2	0.9

Source: Gartner Dataquest (January 2002)

Table 2-13
Shipments of Premises Switching Systems and Lines in the 401-to-1,000-Line Segment to the World, 1996-2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total System Shipments	7,378	7,487	7,512	10,319	9,991	9,353	9,748	10,490	11,249	11,826
Growth (%)	-	1.5	0.3	37.4	-3.2	-6.4	4.2	7.6	7.2	5.1
Total Line Shipments	5,043,270	4,913,089	4,974,884	6,294,339	6,183,218	5,927,441	6,221,744	6,719,920	7,279,279	7,720,025
Growth (%)	-	-2.6	1.3	26.5	-1.8	-4.1	5.0	8.0	8.3	6.1

Source: Gartner Dataquest (January 2002)

Table 2-14
Shipments of Premises Switching Systems and Lines in the More-Than-1,000-Line Segment to the World, 1996-2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total System Shipments	1,669	1,602	1,913	2,371	2,112	2,027	2,123	2,311	2,491	2,630
Growth (%)	-	-4.0	19.4	24.0	-10.9	-4.0	4.7	8.9	7.8	5.6
Total Line Shipments	3,805,980	4,010,948	4,840,857	5,298,337	4,180,299	4,080,920	4,261,458	4,654,533	5,018,374	5,294,887
Growth (%)	-	5.4	20.7	9.5	-21.1	-2.4	4.4	9.2	7.8	5.5

Source: Gartner Dataquest (January 2002)

Table 2-15
Top 10 Companies' Shipments of PBX, KTS and PCX Lines to the World, 2000

	Vendor	New and Add-On Lines	Market Share (%)
1	Nortel Networks	6,399,447	13.4
2	Avaya	6,240,669	13.1
3	Siemens	6,055,634	12.7
4	Alcatel	3,819,324	8.0
5	Ericsson	2,393,778	5.0
6	NEC	2,082,504	4.4
7	Panasonic Comm.	1,484,613	3.1
8	Matra	1,145,546	2.4
9	Tenovis	945,100	2.0
10	Fujitsu	927,230	1.9
	Others	16,205,460	34.0
	Total	47,699,305	100.0

Source: Gartner Dataquest (January 2002)

Table 2-16
Top 10 Companies' Shipments of PBX, KTS and PCX Lines to the Asia/Pacific Region, 2000

	Vendor	New and Add-On Lines	Market Share (%)
1	NEC	992,106	11.7
2	Fujitsu	810,323	9.6
3	Avaya	803,342	9.5
4	Nortel Networks	469,515	5.6
5	Oki	433,605	5.1
6	LG (Goldstar)	423,197	5.0
7	Panasonic Comm.	413,779	4.9
8	Siemens	410,439	4.9
9	Alcatel	322,659	3.8
10	Hitachi	296,541	3.5
	Others	3,069,009	36.3
	Total	8,444,514	100.0

Source: Gartner Dataquest (January 2002)

Table 2-17
Top 10 Companies' Shipments of PBX, KTS and PCX Lines to Central and Eastern Europe, 2000

	Vendor	New and Add-On Lines	Market Share (%)
1	Panasonic Comm.	499,615	20.5
2	Siemens	310,898	12.7
3	Alcatel	231,803	9.5
4	Avaya	194,978	8.0
5	Ericsson	189,749	7.8
6	Nortel Networks	103,730	4.3
7	Micratel	68,130	2.8
8	Bosch	57,432	2.4
9	LGIC	57,401	2.4
10	Matra	55,036	2.3
	Others	671,879	27.5
	Total	2,440,651	100.0

Source: Gartner Dataquest (January 2002)

Table 2-18
Top 10 Companies' Shipments of PBX, KTS and PCX Lines to Latin America, 2000

	Vendor	New and Add-On Lines	Market Share (%)
1	Siemens	552,884	23.3
2	Nortel Networks	299,592	12.6
3	Avaya	275,058	11.6
4	Intelbras	191,470	8.1
5	Alcatel	158,846	6.7
6	Panasonic Comm.	116,556	4.9
7	NEC	112,366	4.7
8	Ericsson	82,043	3.5
9	Philips	69,749	2.9
10	Mitel	12,571	0.5
	Others	502,169	21.2
	Total	2,373,304	100.0

Source: Gartner Dataquest (January 2002)

Table 2-19
Top 10 Companies' Shipments of PBX, KTS and PCX Lines to the Middle East and Africa, 2000

	Vendor	New and Add-On Lines	Market Share (%)
1	Karel	264,570	13.2
2	Siemens	260,303	12.9
3	Alcatel	259,904	12.9
4	Nortel Networks	209,917	10.4
5	Ericsson	156,072	7.8
6	Telesis	105,650	5.3
7	Philips	78,355	3.9
8	Telkom	71,980	3.6
9	Panasonic Comm.	62,312	3.1
10	Teleworx	54,950	2.7
	Others	487,397	24.2
	Total	2,011,410	100.0

Source: Gartner Dataquest (January 2002)

Table 2-20
Top 10 Companies' Shipments of PBX, KTS and PCX Lines to North America, 2000

	Vendor	New and Add-On Lines	Market Share (%)
1	Avaya	4,055,457	26.5
2	Nortel Networks	3,950,803	25.8
3	NEC	951,664	6.2
4	Inter-Tel	794,746	5.2
5	Siemens	785,710	5.1
6	Mitel	761,810	5.0
7	Toshiba	567,547	3.7
8	Comdial	386,345	2.5
9	Nitsuko	322,735	2.1
10	Vodavi	313,889	2.1
	Others	2,405,778	15.7
	Total	15,296,484	100.0

Source: Gartner Dataquest (January 2002)

Table 2-21
Top 10 Companies' Shipments of PBX, KTS and PCX Lines to Western Europe, 2000

	Vendor	New and Add-On Lines	Market Share (%)
1	Siemens	3,735,400	21.8
2	Alcatel	3,050,642	17.8
3	Ericsson	1,685,651	9.8
4	Nortel Networks	1,365,890	8.0
5	Matra Communication	1,086,330	6.3
6	Tenovis	945,100	5.5
7	Avaya	866,384	5.1
8	Ascom	601,014	3.5
9	Philips	499,700	2.9
10	DeTeWe	373,010	2.2
	Others	2,923,820	17.1
	Total	17,132,941	100.0

Source: Gartner Dataquest (January 2002)

