

EIGHTH ANNUAL BSA GLOBAL SOFTWARE

2010 PIRACY STUDY

MAY 2011



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EXECUTIVE SUMMARY

In the global market for personal computers, 2010 was a watershed year. For the first time, PC shipments to emerging economies outpaced those to mature markets, 174 million to 173 million. On that score, at least, 2010 might fairly be considered the year in which the world's emerging economies stopped merely emerging: They have fully arrived.

But this turning point also underscores how emerging economies have become the driving force behind PC software piracy.

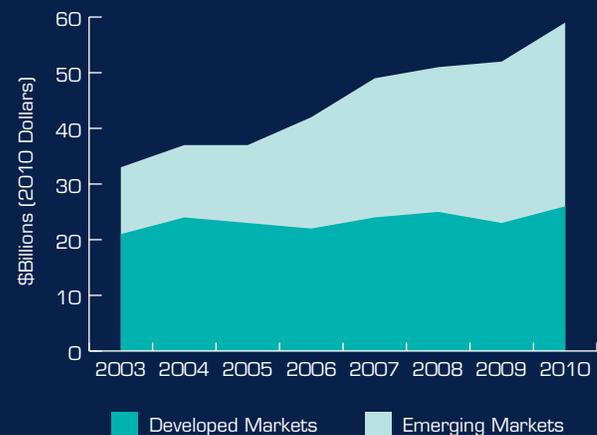
- The commercial value of software piracy grew 14 percent globally last year to a record total of \$58.8 billion, according to the 2010 BSA Global Software Piracy Study.
- Just six years ago, the commercial value of the PC software that was being pirated in emerging economies accounted for less than a third of the world total. Last year, it accounted for more than half — \$31.9 billion.

This year's study of PC software piracy is the eighth to be conducted by the Business Software Alliance in partnership with IDC, the IT industry's leading market research and forecasting firm. The 2010 study covers 116 countries and regions using a robust methodology that incorporates 182 discrete data inputs for each. But this year's study also adds a new dimension: Deeper and richer surveys of PC users in 32 countries, conducted by Ipsos Public Affairs, one of the world's leading public-opinion research firms.

A striking finding is that world opinion comes down firmly in favor of intellectual property (IP) rights. Seven PC users in 10 support paying innovators for their creations to promote more technology advances, while just three in 10 say no company or individual should control

technologies that could benefit the rest of society. This is true even in markets with high piracy rates — especially there, in fact. Moreover, there is widespread recognition that licensed software is better than pirated software, because it is understood to be more secure and more reliable. The problem is that people often do not realize the software they are using is illegal. Again, this is especially true in developing markets.

Commercial Value of Pirated PC Software



Developed markets include: AU, CA, JP, NZ, SG, SK, TW, US and Western Europe. Emerging markets include all others studied.

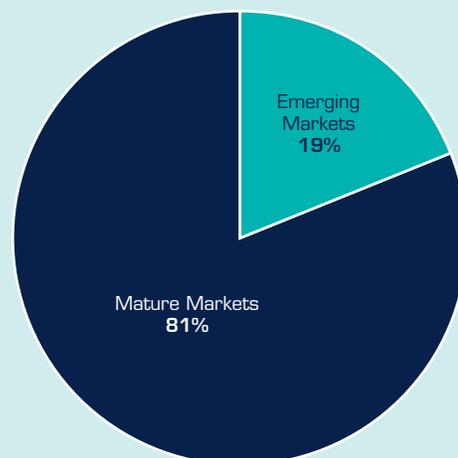
Among the other key findings of the 2010 BSA Global Software Piracy Study:

- At \$58.8 billion, the commercial value of PC software piracy has nearly doubled in real terms since 2003.
- While the number of PCs shipped to emerging economies accounted for 50 percent of the world total in 2010, the value of paid software licenses in emerging economies accounted for less than 20 percent of the world total.
- The most common way people in developing economies engage in piracy is to buy a single copy of software and install it on multiple computers — including in offices. Fifty-one percent of PC users surveyed in emerging markets (including the same percentage of business decision-makers) mistakenly believe this is legal to do.
- Half of the 116 geographies studied in 2010 had piracy rates of 62 percent or higher, and two-thirds saw at least one software program pirated for every one that was installed legally.
- The piracy rate dropped in 51 of the 116 geographies studied in 2010 and went up in only 15. But, crucially, regional average rates rose by 1 point in both Asia-Pacific and Latin America — two economic hotbeds of the developing world.
- The global piracy rate for PC software dropped by a single percentage point in 2010 to 42 percent — 3.6 points higher than the previous five-year average.

Global PC Shipments in 2010



Global PC Software Sales in 2010



GLOBAL PIRACY TRENDS IN 2010

Sales of personal computers surged 14 percent globally in 2010, compared with just 4 percent in the previous year, as the computer industry rebounded from the recent recession. On the strength of that robust growth, businesses and consumers bought nearly \$95 billion worth of PC software — but illegally installed another \$59 billion worth. This means that for every dollar spent on legitimate software in 2010, an additional 63 cents worth of unlicensed software also made its way into the market.

An analogy can be drawn between global software piracy and the problem many governments face in confronting structural budget deficits and burdensome public debts: A year of marginal improvements or mixed results will not rectify long-term imbalances. Indeed, at the current pace, it would take until 2049 for the average piracy rate among today's emerging economies (69 percent) to fall in line with that of today's developed economies (26 percent).

THE SURGING PC MARKET IN EMERGING ECONOMIES

How significant an impact do emerging economies have on global software piracy? Consider that the average piracy rate in emerging economies is two and a half times higher than it is in developed economies — while PC shipments to emerging markets are growing three times faster, 21 percent to 7 percent.

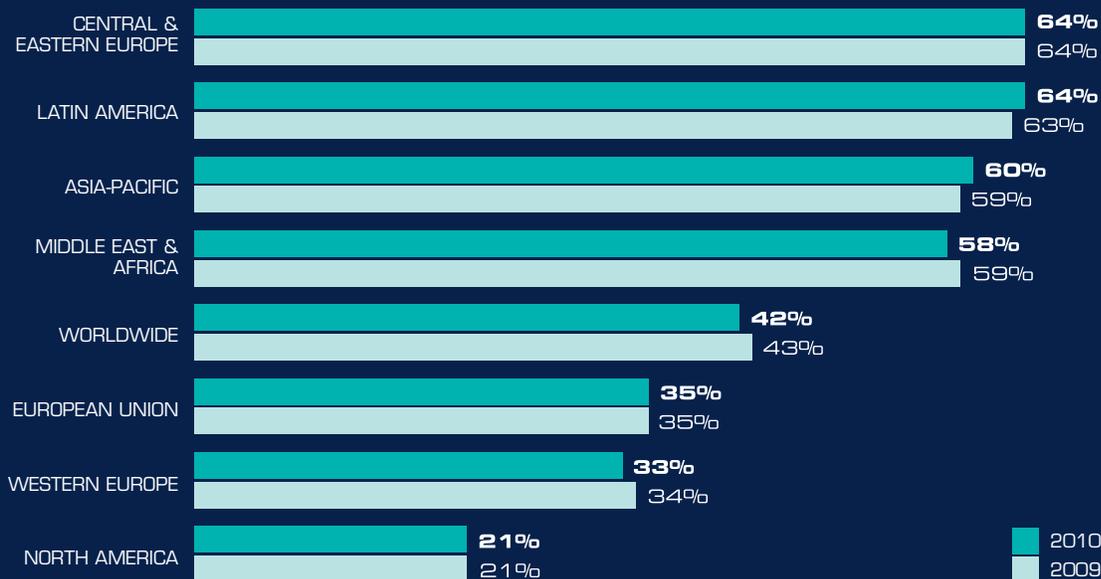
Of the 1.4 billion PCs now installed worldwide, nearly half sit in emerging markets with high piracy rates. Because these high-piracy markets account for a rapidly increasing share of the world's PC users, they are driving up the global piracy rate even as they marginally improve their own rates. This will continue for years to come, until more is done to bring their rates down closer to the global average.

The most common way people in developing economies engage in software piracy is to buy a single, legal copy of a program and then install it on multiple computers — including in enterprises,

Highest and Lowest Piracy Rates in 2010

| HIGHEST PIRACY | | LOWEST PIRACY | |
|----------------|-----|----------------|-----|
| Georgia | 93% | United States | 20% |
| Zimbabwe | 91% | Japan | 20% |
| Bangladesh | 90% | Luxembourg | 20% |
| Moldova | 90% | New Zealand | 22% |
| Yemen | 90% | Australia | 24% |
| Armenia | 89% | Austria | 24% |
| Venezuela | 88% | Sweden | 25% |
| Belarus | 88% | Belgium | 25% |
| Libya | 88% | Finland | 25% |
| Azerbaijan | 88% | Switzerland | 26% |
| Indonesia | 87% | Denmark | 26% |
| Ukraine | 86% | Germany | 27% |
| Sri Lanka | 86% | United Kingdom | 27% |
| Iraq | 85% | Canada | 28% |
| Pakistan | 84% | Netherlands | 28% |
| Vietnam | 83% | Norway | 29% |
| Algeria | 83% | Israel | 31% |
| Paraguay | 83% | Singapore | 34% |
| Nigeria | 82% | South Africa | 35% |
| Cameroon | 82% | Ireland | 35% |
| Zambia | 82% | Czech Republic | 36% |
| Guatemala | 80% | UAE | 36% |
| El Salvador | 80% | Taiwan | 37% |
| Bolivia | 80% | France | 39% |
| Kenya | 79% | South Korea | 40% |
| Botswana | 79% | Portugal | 40% |
| Ivory Coast | 79% | Reunion | 40% |
| Nicaragua | 79% | Hungary | 41% |
| Montenegro | 79% | Slovakia | 42% |
| China | 78% | Puerto Rico | 42% |

PC Software Piracy Rates by Region



where software has the greatest value. In fact, this year's surveys found that 51 percent of business decision-makers in developing markets erroneously believe this is legal to do. This has broad implications beyond just the software industry, because software is a tool of production in every sector of the economy. Companies that do not pay for the programs they use to run their operations have an unfair cost advantage over companies that do, which skews competition.

Consumers, meanwhile, have been buying an increasing share of the world's PCs in recent years. Just three years ago, they accounted for 43 percent of the world's installed base of PCs. In 2010, that rose to 52 percent. This growth is significant because consumers tend to install more software per computer than do enterprises.

A SHIFTING MARKET LANDSCAPE

Countering the piracy-inflating effect of growth in emerging markets in 2010 were forces that aligned to pull piracy rates down by a net margin of 1 percent. For example:

- Laptops tend to have more legitimate software bundled with them at the point of sale than do desktops, and they account for an increasing share of the PC market. Laptops represented 46 percent of PCs in use around the world in 2010, up sharply from 35 percent in 2008.
- So-called "white-box" suppliers — companies that assemble PCs from parts and often load them with unlicensed software — hold a declining share of the PC market. At one time they were everywhere in emerging markets, accounting for nearly a third of all PC shipments to those regions as recently as 2008, but that slipped to about one-fifth in 2010.

Economies with Highest Commercial Value of Pirated PC Software in 2010

| COUNTRY | COMMERCIAL VALUE \$M |
|----------------|----------------------|
| United States | \$9,515 |
| China | \$7,779 |
| Russia | \$2,842 |
| India | \$2,739 |
| Brazil | \$2,619 |
| France | \$2,579 |
| Germany | \$2,096 |
| Italy | \$1,879 |
| United Kingdom | \$1,846 |
| Japan | \$1,624 |
| Indonesia | \$1,322 |
| Mexico | \$1,199 |
| Spain | \$1,105 |
| Canada | \$1,066 |
| Thailand | \$777 |

| COUNTRY | COMMERCIAL VALUE \$M |
|--------------|----------------------|
| South Korea | \$722 |
| Argentina | \$681 |
| Venezuela | \$662 |
| Australia | \$658 |
| Malaysia | \$606 |
| Netherlands | \$591 |
| Ukraine | \$571 |
| Poland | \$553 |
| Turkey | \$516 |
| South Africa | \$513 |
| Switzerland | \$424 |
| Saudi Arabia | \$414 |
| Vietnam | \$412 |
| Sweden | \$411 |
| Chile | \$349 |

Commercial Value of Unlicensed PC Software by Region (\$M)



- Software made available without an upfront fee, such as shareware, along with open-source applications that often rely on service agreements to generate revenues, accounted for between 20 percent and 30 percent of all software deployed in 2010. This was up from between 12 percent and 22 percent in 2009. Contributing to the growth of free software was a spate of deals between software vendors and PC manufacturers that made freely available some common commercial applications, such as security software.
- Whereas the PC market in emerging economies started to rebound from the global recession in 2009, it wasn't until 2010 that enterprises in mature, low-piracy countries such as the United

States and Japan began buying again. This late-stage growth in the enterprise segment resulted in the installation of more legitimate software in 2010, countering the piracy-inflating factors seen elsewhere.

- On top of these market influences was the equity accumulated from years of anti-piracy activities in markets around the world. These have included legalization efforts by software makers, licensing agreements with computer manufacturers, industry partnerships with governments and law-enforcement authorities, education campaigns, and software asset management (SAM) programs.

ANTI-PIRACY "EQUITY" AND THE NEED FOR SUSTAINED EFFORTS

Reductions in software piracy produce widespread economic benefits. For example, the BSA-IDC Piracy Impact Study found in 2010 that reducing the global piracy rate for PC software by 10 percentage points — 2.5 points per year for four years — would create \$142 billion in new economic activity globally by 2013 while adding nearly 500,000 new high-tech jobs and generating \$32 billion in new tax revenues for governments. On average, more than 80 percent of these benefits would accrue to local economies.

Clearly, concerted action to ensure strong protection for intellectual property and to reduce software piracy should be a priority. Indeed, the fact that many countries succeeded in lowering their piracy rates in 2010 shows the value of sustained anti-piracy efforts that build equity over time. These efforts take many forms, including:

- Legalization efforts by vendors that provide governments with software at a low cost in bulk to replace unlicensed software. Vendors continued these programs in 2010, turning users of illegal software into customers, and allowing governments to set a good example for their citizens.

- Agreements with computer manufacturers to preload software onto hardware systems before they ship. As the number of non-branded "white-box" vendors continues to fall, more of these agreements will take place.
- Employing technical advances such as digital rights management that encourage customer self-audits, and offering exclusive, value-added services that are not available to users of unlicensed software.
- Promulgating software asset management (SAM) practices, as BSA does with its SAM Advantage program, to deliver savings to users even as they spend money to legalize previously unlicensed software.
- Encouraging governments to conduct public-education campaigns and undertake enforcement activities that promote respect for IP laws and deter piracy.

If efforts such as these are sustained, they can continue to build equity over time.

GLOBAL OPINION: DECIDEDLY PRO-IPR, YET CONFUSED ABOUT WHAT IS LEGAL

Around the world, overwhelming majorities of PC users, in developed and emerging markets alike, express a healthy appreciation for the role intellectual property rights play in driving technological innovation and economic progress. Moreover, they exhibit strong preferences for legal software over pirated software. But, especially in developing markets, PC users are not fully aware of which means of acquiring software are likely to be illegal.

Ipsos surveyed a globally representative sample of PC users in 32 countries, asking about the software they installed in 2010, where they acquired it, what they value about it, and how they view the IP rights and protections covering technologies such as software.

Globally, 81 percent of PC users say they value legal software over pirated software because it is more reliable and offers better protection against computer viruses and hackers. Yet a surprising number of respondents — in developing markets, in particular — are unaware that common ways of acquiring pirated software are often illegal. For example, nearly half of PC users in developing economies (46 percent) believe software downloaded through peer-to-peer networks is “probably legal.” In mature economies, that figure drops to 21 percent. Likewise, nearly half of PC users in developing markets (45 percent) assume it is legal to install software lent to them by a friend or co-worker, compared with 29 percent in mature markets.

The survey found overwhelming support for IP and innovation, both in principle and in practice. For example, 71 percent of respondents agree that innovators should be paid for their creations, because it provides incentives for more technology advances. Respondents also see clear economic benefits from IP rights and protections. For example, a 59 percent majority of respondents globally (including 62 percent in developing markets) say they believe IP rights and protections benefit their local economies. Similarly, a 61 percent majority of respondents globally (including 64 percent in developing markets) say they believe IP rights and protections

create jobs rather than make the products they need too expensive.

The most common way people in developing economies engage in piracy is to buy a single copy of software and install it on multiple computers — including in offices. Most PC users believe this practice is legal at home (57 percent in developing economies and 63 percent in mature economies), and about half believe it is legal at work (51 percent in developing economies, 47 percent overall).

Confusion Over Software Acquisition Channels

In surveys of approximately 15,000 PC users in 32 countries, Ipsos asked people whether they thought common ways of acquiring software are legal or not.



Emerging markets include: AR, BR, CN, CL, CO, CZ, IN, ID, KR, MY, MX, NG, PL, RU, SA, ZA, TH, TR, UA, VN.

Mature markets include: AU, CA, FR, DE, IT, JP, NL, ES, SE, CH, GB, US.

PC SOFTWARE PIRACY RATES AND COMMERCIAL VALUE OF UNLICENSED SOFTWARE

| | Piracy Rates | | | | | Commercial Value of Unlicensed Software (\$M) | | | | |
|-----------------------------------|--------------|------------|------------|------------|------------|---|-----------------|-----------------|-----------------|-----------------|
| | 2010 | 2009 | 2008 | 2007 | 2006 | 2010 | 2009 | 2008 | 2007 | 2006 |
| Asia Pacific | | | | | | | | | | |
| Australia | 24% | 25% | 26% | 28% | 29% | \$658 | \$550 | \$613 | \$492 | \$515 |
| Bangladesh | 90% | 91% | 92% | 92% | 92% | \$137 | \$127 | \$102 | \$92 | \$90 |
| Brunei | 66% | 67% | 68% | 67% | — | \$19 | \$14 | \$15 | \$13 | — |
| China | 78% | 79% | 80% | 82% | 82% | \$7,779 | \$7,583 | \$6,677 | \$6,664 | \$5,429 |
| Hong Kong | 45% | 47% | 48% | 51% | 53% | \$227 | \$218 | \$225 | \$224 | \$180 |
| India | 64% | 65% | 68% | 69% | 71% | \$2,739 | \$2,003 | \$2,768 | \$2,025 | \$1,275 |
| Indonesia | 87% | 86% | 85% | 84% | 85% | \$1,322 | \$886 | \$544 | \$411 | \$350 |
| Japan | 20% | 21% | 21% | 23% | 25% | \$1,624 | \$1,838 | \$1,495 | \$1,791 | \$1,781 |
| Malaysia | 56% | 58% | 59% | 59% | 60% | \$606 | \$453 | \$368 | \$311 | \$289 |
| New Zealand | 22% | 22% | 22% | 22% | 22% | \$85 | \$63 | \$75 | \$55 | \$49 |
| Pakistan | 84% | 84% | 86% | 84% | 86% | \$217 | \$166 | \$159 | \$125 | \$143 |
| Philippines | 69% | 69% | 69% | 69% | 71% | \$278 | \$217 | \$202 | \$147 | \$119 |
| Singapore | 34% | 35% | 36% | 37% | 39% | \$233 | \$197 | \$163 | \$159 | \$125 |
| South Korea | 40% | 41% | 43% | 43% | 45% | \$722 | \$575 | \$622 | \$549 | \$440 |
| Sri Lanka | 86% | 89% | 90% | 90% | 90% | \$83 | \$77 | \$97 | \$93 | \$86 |
| Taiwan | 37% | 38% | 39% | 40% | 41% | \$252 | \$227 | \$201 | \$215 | \$182 |
| Thailand | 73% | 75% | 76% | 78% | 80% | \$777 | \$694 | \$609 | \$468 | \$421 |
| Vietnam | 83% | 85% | 85% | 85% | 88% | \$412 | \$353 | \$257 | \$200 | \$96 |
| Other AP | 91% | 90% | 91% | 91% | 86% | \$576 | \$303 | \$69 | \$56 | \$148 |
| TOTAL AP | 60% | 59% | 61% | 59% | 55% | \$18,746 | \$16,544 | \$15,261 | \$14,090 | \$11,718 |
| Central and Eastern Europe | | | | | | | | | | |
| Albania | 75% | 75% | 77% | 78% | 77% | \$6 | \$8 | \$9 | \$11 | \$11 |
| Armenia | 89% | 90% | 92% | 93% | 95% | \$23 | \$14 | \$7 | \$8 | \$8 |
| Azerbaijan | 88% | 88% | 90% | 92% | 94% | \$57 | \$52 | \$55 | \$50 | \$51 |
| Belarus | 88% | 87% | — | — | — | \$126 | \$55 | — | — | — |
| Bosnia | 66% | 66% | 67% | 68% | 68% | \$13 | \$14 | \$15 | \$13 | \$14 |
| Bulgaria | 65% | 67% | 68% | 68% | 69% | \$113 | \$115 | \$139 | \$63 | \$50 |
| Croatia | 54% | 54% | 54% | 54% | 55% | \$70 | \$71 | \$77 | \$68 | \$62 |
| Czech Republic | 36% | 37% | 38% | 39% | 39% | \$195 | \$174 | \$168 | \$161 | \$147 |
| Estonia | 50% | 50% | 50% | 51% | 52% | \$23 | \$19 | \$21 | \$20 | \$16 |
| FYROM | 66% | 67% | 68% | 68% | 69% | \$19 | \$15 | \$14 | \$11 | \$10 |
| Georgia | 93% | 95% | 95% | — | — | \$46 | \$54 | \$59 | — | — |
| Hungary | 41% | 41% | 42% | 42% | 42% | \$131 | \$113 | \$146 | \$125 | \$111 |
| Kazakhstan | 76% | 78% | 78% | 79% | 81% | \$89 | \$74 | \$125 | \$110 | \$85 |
| Latvia | 56% | 56% | 56% | 56% | 56% | \$30 | \$24 | \$31 | \$29 | \$26 |
| Lithuania | 54% | 54% | 54% | 56% | 57% | \$38 | \$31 | \$40 | \$37 | \$31 |
| Moldova | 90% | 91% | 90% | 92% | 94% | \$36 | \$28 | \$40 | \$43 | \$56 |
| Montenegro | 79% | 81% | 83% | 83% | 82% | \$7 | \$11 | \$8 | \$7 | \$6 |
| Poland | 54% | 54% | 56% | 57% | 57% | \$553 | \$506 | \$648 | \$580 | \$484 |
| Romania | 64% | 65% | 66% | 68% | 69% | \$195 | \$183 | \$249 | \$151 | \$114 |
| Russia | 65% | 67% | 68% | 73% | 80% | \$2,842 | \$2,613 | \$4,215 | \$4,123 | \$2,197 |
| Serbia | 74% | 74% | 74% | 76% | 78% | \$95 | \$67 | \$99 | \$72 | \$59 |
| Slovakia | 42% | 43% | 43% | 45% | 45% | \$63 | \$65 | \$62 | \$54 | \$47 |
| Slovenia | 47% | 46% | 47% | 48% | 48% | \$47 | \$39 | \$51 | \$39 | \$36 |
| Ukraine | 86% | 85% | 84% | 83% | 84% | \$571 | \$272 | \$534 | \$403 | \$337 |
| Rest of CEE | 89% | 88% | 88% | 88% | 90% | \$118 | \$56 | \$191 | \$173 | \$166 |
| TOTAL CEE | 64% | 64% | 66% | 68% | 68% | \$5,506 | \$4,673 | \$7,003 | \$6,351 | \$4,124 |
| Latin America | | | | | | | | | | |
| Argentina | 70% | 71% | 73% | 74% | 75% | \$681 | \$645 | \$339 | \$370 | \$303 |
| Bolivia | 80% | 80% | 81% | 82% | 82% | \$54 | \$40 | \$20 | \$19 | \$15 |
| Brazil | 54% | 56% | 58% | 59% | 60% | \$2,619 | \$2,254 | \$1,645 | \$1,617 | \$1,148 |
| Chile | 62% | 64% | 67% | 66% | 68% | \$349 | \$315 | \$202 | \$187 | \$163 |
| Colombia | 54% | 55% | 56% | 58% | 59% | \$272 | \$244 | \$136 | \$127 | \$111 |
| Costa Rica | 58% | 59% | 60% | 61% | 64% | \$55 | \$33 | \$24 | \$22 | \$27 |
| Dominican Republic | 76% | 77% | 79% | 79% | 79% | \$87 | \$66 | \$43 | \$39 | \$19 |
| Ecuador | 67% | 67% | 66% | 66% | 67% | \$79 | \$65 | \$37 | \$33 | \$30 |
| El Salvador | 80% | 80% | 80% | 81% | 82% | \$55 | \$46 | \$28 | \$28 | \$18 |
| Guatemala | 80% | 80% | 81% | 80% | 81% | \$106 | \$74 | \$49 | \$41 | \$26 |
| Honduras | 73% | 74% | 74% | 74% | 75% | \$22 | \$17 | \$9 | \$8 | \$7 |
| Mexico | 58% | 60% | 59% | 61% | 63% | \$1,199 | \$1,056 | \$823 | \$836 | \$748 |
| Nicaragua | 79% | 79% | 79% | 80% | 80% | \$8 | \$5 | \$4 | \$4 | \$4 |
| Panama | 72% | 73% | 73% | 74% | 74% | \$68 | \$42 | \$24 | \$22 | \$18 |
| Paraguay | 83% | 82% | 83% | 82% | 82% | \$55 | \$29 | \$16 | \$13 | \$10 |
| Peru | 68% | 70% | 71% | 71% | 71% | \$176 | \$124 | \$84 | \$75 | \$59 |
| Uruguay | 69% | 68% | 69% | 69% | 70% | \$78 | \$40 | \$25 | \$23 | \$16 |
| Venezuela | 88% | 87% | 86% | 87% | 86% | \$662 | \$685 | \$484 | \$464 | \$307 |
| Other LA | 84% | 83% | 84% | 83% | 83% | \$405 | \$430 | \$319 | \$195 | \$96 |
| TOTAL LA | 64% | 63% | 65% | 65% | 66% | \$7,030 | \$6,210 | \$4,311 | \$4,123 | \$3,125 |

| | Piracy Rates | | | | | Commercial Value of Unlicensed Software (\$M) | | | | |
|-------------------------------|--------------|------------|------------|------------|------------|---|-----------------|-----------------|-----------------|-----------------|
| | 2010 | 2009 | 2008 | 2007 | 2006 | 2010 | 2009 | 2008 | 2007 | 2006 |
| Middle East and Africa | | | | | | | | | | |
| Algeria | 83% | 84% | 84% | 84% | 84% | \$69 | \$55 | \$96 | \$86 | \$62 |
| Bahrain | 54% | 54% | 55% | 57% | 60% | \$22 | \$21 | \$27 | \$27 | \$23 |
| Botswana | 79% | 79% | 80% | 82% | 81% | \$15 | \$11 | \$14 | \$14 | \$12 |
| Cameroon | 82% | 83% | 83% | 84% | 84% | \$7 | \$7 | \$6 | \$5 | \$5 |
| Egypt | 60% | 59% | 59% | 60% | 63% | \$196 | \$146 | \$158 | \$131 | \$88 |
| Iraq | 85% | 85% | 85% | 85% | — | \$147 | \$129 | \$205 | \$124 | — |
| Israel | 31% | 33% | 32% | 32% | 32% | \$170 | \$148 | \$172 | \$121 | \$102 |
| Ivory Coast | 79% | 79% | 80% | 81% | 82% | \$13 | \$14 | \$15 | \$15 | \$16 |
| Jordan | 57% | 57% | 58% | 60% | 61% | \$28 | \$26 | \$22 | \$20 | \$19 |
| Kenya | 79% | 79% | 80% | 81% | 80% | \$85 | \$66 | \$31 | \$28 | \$22 |
| Kuwait | 60% | 60% | 61% | 62% | 64% | \$68 | \$62 | \$69 | \$61 | \$60 |
| Lebanon | 72% | 72% | 74% | 73% | 73% | \$49 | \$46 | \$49 | \$44 | \$39 |
| Libya | 88% | 88% | 87% | 88% | — | \$74 | \$25 | \$22 | \$22 | — |
| Mauritius | 56% | 56% | 57% | 57% | 59% | \$5 | \$4 | \$5 | \$4 | \$3 |
| Morocco | 65% | 66% | 66% | 67% | 66% | \$75 | \$64 | \$70 | \$66 | \$53 |
| Nigeria | 82% | 83% | 83% | 82% | 82% | \$225 | \$156 | \$132 | \$114 | \$100 |
| Oman | 62% | 63% | 62% | 61% | 62% | \$33 | \$39 | \$26 | \$23 | \$25 |
| Qatar | 49% | 51% | 51% | 54% | 58% | \$52 | \$50 | \$26 | \$25 | \$23 |
| Reunion | 40% | 40% | 40% | 40% | 40% | \$1 | \$1 | \$1 | \$1 | \$0 |
| Saudi Arabia | 52% | 51% | 52% | 51% | 52% | \$414 | \$304 | \$272 | \$170 | \$195 |
| Senegal | 78% | 78% | 79% | 80% | 81% | \$7 | \$5 | \$7 | \$6 | \$6 |
| South Africa | 35% | 35% | 35% | 34% | 35% | \$513 | \$324 | \$335 | \$284 | \$225 |
| Tunisia | 72% | 72% | 73% | 76% | 79% | \$52 | \$44 | \$48 | \$54 | \$55 |
| Turkey | 62% | 63% | 64% | 65% | 64% | \$516 | \$415 | \$468 | \$365 | \$314 |
| UAE | 36% | 36% | 36% | 35% | 35% | \$173 | \$155 | \$170 | \$94 | \$62 |
| Yemen | 90% | 90% | 89% | 89% | — | \$12 | \$10 | \$14 | \$13 | — |
| Zambia | 82% | 82% | 82% | 82% | 82% | \$3 | \$2 | \$2 | \$2 | \$2 |
| Zimbabwe | 91% | 92% | 92% | 91% | 91% | \$6 | \$4 | \$4 | \$3 | \$2 |
| Other Africa | 87% | 86% | 86% | 85% | 85% | \$418 | \$260 | \$95 | \$76 | \$49 |
| Other ME | 88% | 88% | 87% | 87% | 89% | \$630 | \$294 | \$438 | \$448 | \$423 |
| TOTAL MEA | 58% | 59% | 59% | 60% | 60% | \$4,078 | \$2,887 | \$2,999 | \$2,446 | \$1,985 |
| North America | | | | | | | | | | |
| Canada | 28% | 29% | 32% | 33% | 34% | \$1,066 | \$943 | \$1,222 | \$1,071 | \$784 |
| Puerto Rico | 42% | 46% | 44% | 44% | 45% | \$42 | \$46 | \$36 | \$33 | \$31 |
| United States | 20% | 20% | 20% | 20% | 21% | \$9,515 | \$8,390 | \$9,143 | \$8,040 | \$7,289 |
| TOTAL NA | 21% | 21% | 21% | 21% | 22% | \$10,623 | \$9,379 | \$10,401 | \$9,144 | \$8,104 |
| Western Europe | | | | | | | | | | |
| Austria | 24% | 25% | 24% | 25% | 26% | \$209 | \$212 | \$184 | \$157 | \$147 |
| Belgium | 25% | 25% | 25% | 25% | 27% | \$233 | \$239 | \$269 | \$223 | \$222 |
| Cyprus | 48% | 48% | 50% | 50% | 52% | \$17 | \$16 | \$15 | \$14 | \$12 |
| Denmark | 26% | 26% | 25% | 25% | 25% | \$208 | \$203 | \$215 | \$193 | \$183 |
| Finland | 25% | 25% | 26% | 25% | 27% | \$193 | \$175 | \$194 | \$160 | \$149 |
| France | 39% | 40% | 41% | 42% | 45% | \$2,579 | \$2,544 | \$2,760 | \$2,601 | \$2,676 |
| Germany | 27% | 28% | 27% | 27% | 28% | \$2,096 | \$2,023 | \$2,152 | \$1,937 | \$1,642 |
| Greece | 59% | 58% | 57% | 58% | 61% | \$301 | \$248 | \$238 | \$198 | \$165 |
| Iceland | 49% | 49% | 46% | 48% | 53% | \$16 | \$11 | \$23 | \$33 | \$32 |
| Ireland | 35% | 35% | 34% | 34% | 36% | \$137 | \$125 | \$118 | \$106 | \$92 |
| Italy | 49% | 49% | 48% | 49% | 51% | \$1,879 | \$1,733 | \$1,895 | \$1,779 | \$1,403 |
| Luxembourg | 20% | 21% | 21% | 21% | — | \$31 | \$30 | \$21 | \$16 | — |
| Malta | 43% | 45% | 45% | 46% | 45% | \$6 | \$7 | \$8 | \$7 | \$7 |
| Netherlands | 28% | 28% | 28% | 28% | 29% | \$591 | \$525 | \$563 | \$502 | \$419 |
| Norway | 29% | 29% | 28% | 29% | 29% | \$261 | \$195 | \$229 | \$195 | \$181 |
| Portugal | 40% | 40% | 42% | 43% | 43% | \$228 | \$221 | \$212 | \$167 | \$140 |
| Spain | 43% | 42% | 42% | 43% | 46% | \$1,105 | \$1,014 | \$1,029 | \$903 | \$865 |
| Sweden | 25% | 25% | 25% | 25% | 26% | \$411 | \$304 | \$372 | \$324 | \$313 |
| Switzerland | 26% | 25% | 25% | 25% | 26% | \$424 | \$344 | \$345 | \$303 | \$324 |
| United Kingdom | 27% | 27% | 27% | 26% | 27% | \$1,846 | \$1,581 | \$2,181 | \$1,837 | \$1,670 |
| TOTAL WE | 33% | 34% | 33% | 33% | 34% | \$12,771 | \$11,750 | \$13,023 | \$11,655 | \$10,642 |
| TOTAL WORLDWIDE | 42% | 43% | 41% | 38% | 35% | \$58,754 | \$51,443 | \$52,998 | \$47,809 | \$39,698 |
| European Union | 35% | 35% | 35% | 35% | 36% | \$13,458 | \$12,469 | \$13,981 | \$12,383 | \$11,009 |
| BRIC Countries* | 71% | 71% | 73% | 75% | 77% | \$15,979 | \$14,453 | \$15,305 | \$14,429 | \$10,049 |

*BRIC Countries are Brazil, Russia, India, and China.

POLL RESULTS

SUPPORT FOR INTELLECTUAL PROPERTY RIGHTS & INNOVATION

Question: "The laws that give someone who invents a new product or technology the right to decide how it is sold are called intellectual property rights. Which comes closer to your view..."

■ STATEMENT A

"Intellectual property rights benefit people like me by creating jobs and improving the economy."

■ STATEMENT B

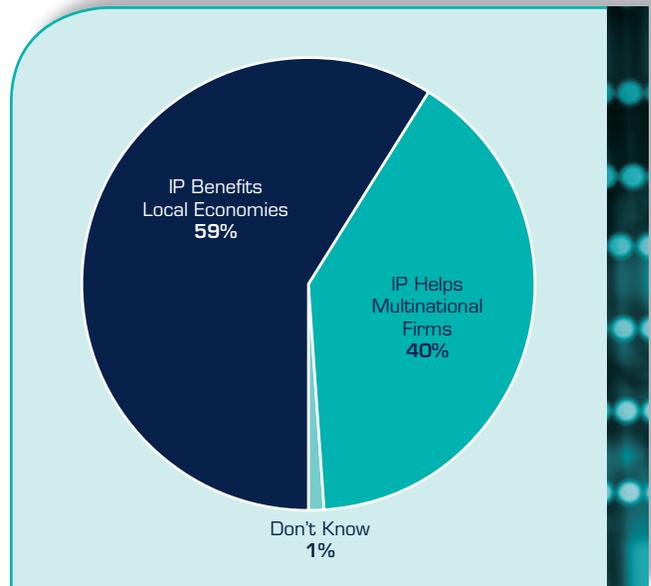
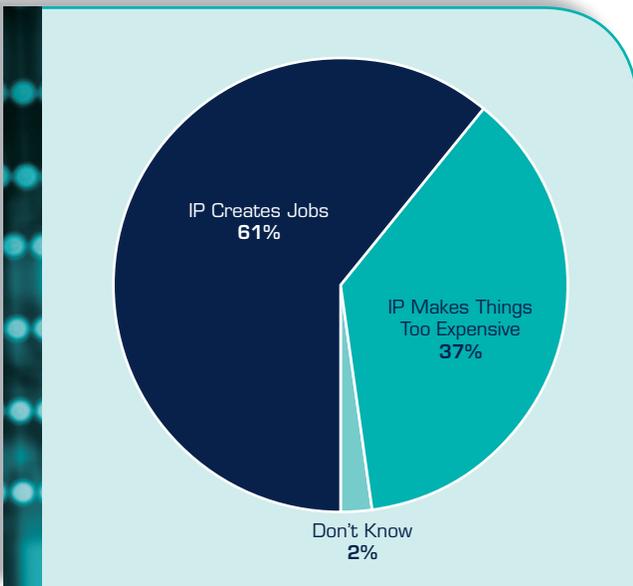
"Intellectual property rights hurt people like me by making products I need too expensive."

■ STATEMENT A

"Intellectual property rights allow companies to generate profits which in turn benefit local economies."

■ STATEMENT B

"Intellectual property rights concentrate wealth in the hands of multinational companies that do not deliver significant local economic benefits."





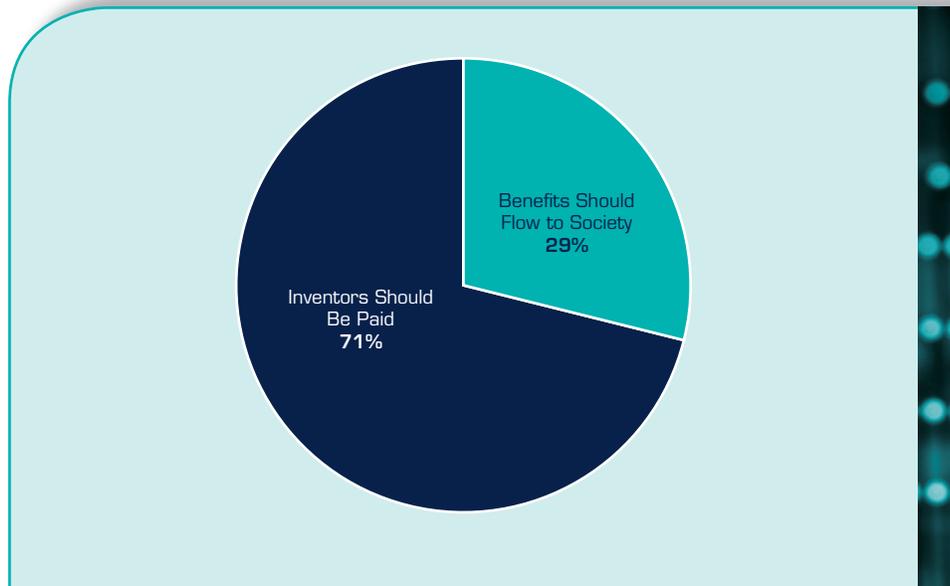
Question: "Overall, please indicate which of the following two statements you agree with more..."

■ **STATEMENT A**

"It is important for people who invent new products or technologies to be paid for them, because it creates an incentive for people to produce more innovations. That is good for society because it drives technological progress and economic growth."

■ **STATEMENT B**

"No company or individual should be allowed to control a product or technology that could benefit the rest of society. Laws like that limit the free flow of ideas, stifle innovation, and give too much power to too few people."



METHODOLOGY

The BSA Global Software Piracy Study quantifies the volume and value of unlicensed software installed in the previous year — in this case, 2010. To compile the report, BSA works closely with two of the world’s leading independent research firms — IDC and Ipsos Public Affairs — to measure, understand, and evaluate global software piracy. Every year, BSA and its partners look for new ways to collect reliable data and further improve the report.

GLOBAL SURVEY OF SOFTWARE USERS

This year, BSA retained the highly regarded research firm Ipsos Public Affairs to survey more than 15,000 business and consumer PC users. The surveys were conducted, online or in-person, in 32 markets that make up a globally representative sample of geographies, levels of IT sophistication, and geographic and cultural diversity.

The surveys are used, in part, to determine the “software load” for each country — that is, a picture of the number of software programs installed per PC, including commercial, open-source and mixed-source programs. Respondents are asked how many software packages, and of what type, were installed on their PC in the previous year; what percentage were new or upgrades; whether they came with the computers or not; and whether they were installed on a new computer or one acquired prior to 2010.

In addition, BSA expanded the surveys this year to provide more insight into key social attitudes and behaviors related to intellectual property and the use of licensed versus unlicensed software. This insight provides new and fresh perspective on the dynamics underlying software piracy around the world.

CALCULATING SOFTWARE PIRACY RATES

Since 2003, BSA has worked with IDC, the leading provider of market statistics and forecasts to the IT industry, to determine PC software piracy rates and the commercial value of pirated software. The process involves collecting 182 discrete data inputs and evaluating PC and software trends in each of 116 markets. A detailed video presentation of the IDC methodology can be found at www.bsa.org/globalstudy.

The basic method for coming up with the piracy rate and commercial value of unlicensed software in a country is as follows:

1. Determine how much PC software was deployed during the year.
2. Determine how much was paid for or otherwise legally acquired during the year.
3. Subtract one from the other to get the amount of unlicensed software.

Once the amount of unlicensed software is known, the PC software piracy rate is computed as a percentage of total software installed.

$$\text{Piracy Rate} = \frac{\text{Unlicensed Software Units}}{\text{Total Software Units Installed}}$$

To calculate the total number of software units installed — the denominator — IDC determines how many computers there are in a country and how many of those received software during the year. IDC tracks this information quarterly in 105 countries, either in products called “PC Trackers” or as part of custom assignments. The remaining few countries are researched annually for this study.

Once IDC has determined how many computers there are, and using the software load data collected in the survey, it can determine the total software units installed — licensed and unlicensed — in each country.

$$\begin{array}{c}
 \text{\# PCs Getting Software} \\
 \times \\
 \text{Software Units per PC} \\
 = \\
 \text{Total Software Units Installed}
 \end{array}$$

To estimate the software load in countries not surveyed, IDC uses a series of correlations between the known software loads from survey countries and their scores on an emerging market measure published by the International Telecommunications Union, called the ICT Development Index. IDC also considers other correlations such as gross domestic product per capita, PC penetration and various measures of institutional strength. From these, IDC estimates the software load for non-surveyed countries.

To get the number of unlicensed software units — the numerator of the piracy equation — IDC comes up with a value measure of the software market. IDC routinely publishes software market data from about 80 countries and studies roughly 20 more on a custom basis. For the few remaining countries, IDC conducts annual research for the purposes of this study. This research provides the value of the legally acquired software market.

To convert the software market value to number of units, IDC determines an average price per software unit for all of the PC software in the country. This is done by developing a country-specific matrix of software prices — such as retail, volume-license, OEM, free, and open-source — across a matrix of products, including security, office automation, operating systems, and more. IDC’s pricing information comes from its pricing trackers and from local analysts’ research. The weightings — OEM versus retail, consumer versus business — are taken from IDC surveys.

IDC multiplies the two matrices to get a final, blended-average software unit price.

To arrive at the total number of legitimate software units, IDC applies this formula:

$$\begin{array}{c}
 \text{Software Market Value} \\
 \hline
 \text{Average Software Unit Price} \\
 = \\
 \text{Legitimate Software Units}
 \end{array}$$

Subtracting the number of legitimate software units from the total software units reveals the number of unlicensed software units installed during the year.

$$\begin{array}{c}
 \text{Total Software Units Installed} \\
 - \\
 \text{Legitimate Software Units} \\
 = \\
 \text{Unlicensed Software Units}
 \end{array}$$

This process provides the underlying data for the basic piracy rate equation.

CALCULATING THE COMMERCIAL VALUE OF PIRATED SOFTWARE

The commercial value of pirated software is the value of unlicensed software installed in a given year, as if it had been sold in the market. It provides another measure of the scale of software piracy and allows for important year-over-year comparisons of changes in the software piracy landscape.

It is calculated using the same blend of prices by which we determine the average software unit price, including: retail, volume license, OEM, free, open-source, etc. The average software unit price is lower than retail prices one would find in stores.

Having calculated the total units of software installed, as well as the number of legitimate and unlicensed software units installed and the average price per software unit, IDC is able to calculate the commercial value of unlicensed software:

$$\begin{array}{r} \# \text{ Unlicensed Software Units} \\ \times \\ \text{Average Software Unit Price} \\ = \\ \text{Commercial Value} \end{array}$$

WHAT SOFTWARE IS INCLUDED

The BSA Global Software Piracy Study calculates piracy of all software that runs on personal computers — including desktops, laptops, and ultra-portables, including netbooks.

It includes operating systems, systems software such as databases and security packages, business applications, and consumer applications such as games, personal finance, and reference software. The study also takes into account the availability of legitimate, free software and open-source software, which is software that is licensed

in a way that puts it into the public domain for common use. It is typically free but can also be used in commercial products.

The study excludes software that runs on servers or mainframes and routine device drivers, as well as free downloadable utilities, such as screen savers, that would not displace paid-for software or normally be recognized by a user as a software program.

It includes software as a service if it is paid for, but excludes free, Web-based services that might supplant the need for a paid-for package to be installed on a PC. Software sold as part of a legalization program — such as a bulk sale to a government to distribute to schools — is included in the study.

THE IMPACT OF EXCHANGE RATES

From 2003 through 2008, dollar figures in the value tables were in current dollars from the year before. For example, the 2006 value of unlicensed software was stated in 2005 dollars; the value of 2007 unlicensed software was stated in 2006 dollars, and so on. In 2009 BSA and IDC decided to publish value figures in the current dollars of the year being studied. 2009 values are in 2009 dollars, 2010 values in 2010 dollars.

This is important when evaluating changes in the values over time. Some of the changes will be based on real market dynamics, some on exchange rate fluctuations from year to year.

For instance, this year's global commercial value of pirated software is 14 percent higher than last year's published value. But convert last year's values to 2010 dollars, and the difference is 13 percent. This doesn't seem like much, but for individual countries the difference between nominal growth and constant-dollar growth can be significant.

BSA BLUEPRINT FOR REDUCING SOFTWARE PIRACY

PUBLIC EDUCATION

Reducing software piracy can require a fundamental shift in public attitudes toward software and IP. Public education is critical, therefore, to increase awareness of the importance of managing software assets and respecting creative works through compliance with software licensing. Experience has shown that public-private awareness campaigns about piracy and the value of IP can be extremely effective. In addition, support for industry-led initiatives to promote the business practice of managing and optimizing software purchases, utilization and maintenance — a process known as software asset management (SAM) — can reduce piracy while helping organizations derive greater value from software assets. For example, BSA offers a framework called SAM Advantage (www.bsa.org/samadvantage).

WIPO COPYRIGHT TREATY

In 1996, in direct response to the growing threat of Internet piracy, members of the World Intellectual Property Organization (WIPO) concluded new copyright treaties to enable better enforcement against digital and online piracy. Since then, nearly 90 countries have joined the WIPO treaties. Close to 2 billion people around the world now have Internet access — increasing the power and potential of software, but also opening new doors for pirates to distribute their wares. To ensure protection of copyrighted works in the digital age, countries need to update copyright laws to implement their WIPO obligations. These measures ensure that protected works are not made available online without the author's permission and that copy protection tools are not hacked or circumvented.

ENFORCEMENT MECHANISMS

Strong copyright laws are essential — but meaningless without effective enforcement that crosses international borders and extends

to all computing platforms. Governments must fulfill their obligations under the World Trade Organization's Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement by adopting and implementing laws that meet international norms for IP rights protection. IP laws should also provide for clear protection against misappropriation and infringement of new software innovations, such as cloud computing technologies.

DEDICATED RESOURCES

Too often, software thieves are not treated as seriously as other criminals and the punishment is too insignificant to be an effective deterrent. Countries can elevate their enforcement of intellectual property by:

- Creating specialized IP enforcement units at the national and local level and providing dedicated resources to investigate and prosecute IP theft;
- Increasing cross-border cooperation among police and other enforcement agencies to improve coordination for law enforcement in multiple countries; and
- Supporting the training of law enforcement and judiciary officials (including establishment of specialized IP courts where appropriate) and providing better technical assistance to ensure that the people on the front lines of piracy enforcement are equipped with the tools they need to deal with the changing nature of IP theft.

LEAD BY EXAMPLE

Governments are the largest users of software in the world. They can set an example for the private sector to follow by implementing SAM policies, requiring the use of legal software by all government agencies, and promoting the use of legal software by state-owned enterprises, contractors, and suppliers.

ABOUT BSA

The Business Software Alliance (BSA) is the leading advocate for the global software industry before governments and in the international marketplace. It is an association of nearly 100 world-class companies that invest billions of dollars annually to create software solutions that spark the economy and improve modern life.

BSA serves as the world's premier anti-piracy organization and as a respected leader in shaping public policies that promote technology innovation and drive economic growth.

Through government relations, intellectual property enforcement and educational activities in approximately 90 markets around the world, BSA protects intellectual property and fosters innovation; works to open markets and ensure fair competition; and builds trust and confidence in information technology for consumers, businesses and governments alike.

PROTECTING INTELLECTUAL PROPERTY & FOSTERING INNOVATION

Intellectual property rights (IPR) — copyrights, patents and trademarks — provide the legal framework for creative enterprise, the bedrock of growing economies. They are also essential to commercial software development, which is the world's largest copyright industry.

By working with policymakers, leading enforcement actions and conducting public-education initiatives around the world, BSA ensures that respect for IPR pervades the global economy and society.

- **Championing Intellectual Property Rights:** BSA works with governments around the world to ensure intellectual property protections keep pace with new innovations in technology, such as cloud computing.

- **Curbing Software Theft:** BSA conducts vigorous enforcement programs in approximately 50 countries, helping its members guard against software theft by taking legal action against commercial, end-user license infringement, counterfeiting operations and Internet piracy.
- **Leading Industry Research:** BSA publishes the most authoritative global studies on piracy and its economic impact, illuminating the scope of the problem and helping shape national and international policy responses.
- **Educating the Public:** BSA educates consumers about harms associated with software piracy and offers a groundbreaking training program to help organizations more effectively manage their software assets.

OPENING MARKETS & ENSURING FAIR COMPETITION

Open markets are essential to economic growth and prosperity. BSA expands market opportunities for the software industry by working with governments to break down trade barriers and eliminate discriminatory procurement preferences that stifle innovation by skewing competition.

- **Breaking Down Barriers to Growth:** BSA provides policymakers with information, expert analysis and industry insights to promote an open-markets agenda. These efforts include a special focus on the so-called 'BRIC' economies of Brazil, Russia, India and China, which are the world's fastest-growing technology markets but also home to rampant piracy.

- **Promoting Technology Neutrality:** BSA encourages fair competition among technologies by promoting internationally recognized standards and unbiased IT-procurement policies for governments.
- **Supporting New Innovations:** BSA works with policymakers around the world to create conditions for new technologies, such as cloud computing, to flourish. In addition to collaborating on technology standards, this work involves elevating intellectual property protections, harmonizing international legal principles and addressing other challenges that are beyond the capability or jurisdiction of any one company or government.
- **Protecting Consumers:** As new technologies emerge, such as cloud computing, BSA and its members develop appropriate privacy and security standards and share their insights with policymakers and regulators.
- **Mapping Policy Solutions:** BSA has developed a global cybersecurity framework to guide governments in crafting policies that effectively deter and punish cyber crime, mitigate threats, inform and protect consumers, and respond to cyber incidents. 

BUILDING TRUST & CONFIDENCE IN TECHNOLOGY

Security and privacy undergird trust and confidence in information technology for consumers, businesses and governments. BSA promotes responsible data stewardship and facilitates acceptance and adoption of each new wave of innovation that transforms the technology marketplace and creates value for society.

- **Driving Public-Private Collaboration:** Drawing on the expertise of its members and productive working relationships with public officials, BSA serves as a knowledge center and catalyst to encourage cooperation and forge consensus among industry and governments.

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