J.D. Power and Associates Reports:
Smartphone Battery Life has Become a Significant Drain on Customer Satisfaction and Loyalty

Apple Ranks Highest in Customer Satisfaction among Smartphone Manufacturers,
While LG and Sanyo Rank Highest in a Tie among Traditional Mobile Phone Manufacturers

WESTLAKE VILLAGE, Calif.: 15 March 2012 — As smartphone users place increasingly complex demands on the functionality of their devices, satisfaction with battery performance is becoming a critical factor in overall satisfaction as well as brand loyalty, according to the J.D. Power and Associates 2012 U.S. Wireless Smartphone Customer Satisfaction StudySM — Volume 1 and the J.D. Power and Associates 2012 U.S. Wireless Traditional Mobile Phone Satisfaction StudySM — Volume 1, both released today.

Satisfaction with smartphones is greatly impacted by battery performance, particularly the length of battery life before recharging is required. In addition, the study finds that satisfaction with battery performance is by far the least satisfying aspect of smartphones, and satisfaction in this area is one of only a few attributes that have declined significantly, compared with Volume 2 of the 2011 study (6.7 in 2012, compared with 6.9 in September 2011).

Satisfaction levels with battery performance differ widely between owners of 3G- and 4G-enabled smartphones. Among owners of 4G-enabled smartphones, battery performance ratings average 6.1 on a 10-point scale—considerably lower than satisfaction among owners of 3G smartphones (6.7). Part of this difference stems from the fact that new 4G smartphones use substantial battery life searching for next-generation network signals, which tend to be scarcer than 3G signals. In addition, owners of 4G-enabled smartphones use their device more extensively—they talk, text, email, and surf the Web more often than do customers with 3G smartphones or traditional handsets—which puts a significantly higher demand on the battery.

“Both carriers and manufacturers recognize the fact that battery life needs to be improved,” said Kirk Parsons, senior director of wireless services at J.D. Power and Associates. “However, the study uncovers the need for a greater sense of urgency—short battery life can result in perceived phone problems, higher rates of merchandise returns and customer defections.”

According to Parsons, smartphone owners who are highly satisfied with their device’s battery life are more likely to repurchase the same brand of smartphone, compared with owners who are less satisfied. Approximately 25 percent of 4G-enabled smartphone owners are highly satisfied with their battery (ratings of 10 on a 10-point scale) and say they “definitely will” repurchase a device from the same manufacturer. In comparison, among owners who are less satisfied with their battery (ratings of 7-9 on a 10-point scale), only 13 percent say the same.

The two studies measure customer satisfaction with traditional wireless handsets and smartphones among owners who have used their current mobile device for less than one year. Satisfaction is measured in several key factors. In order of importance, the key factors of overall satisfaction with traditional wireless handsets are: performance (31%); ease of operation (24%); physical design (24%); and features (20%). For smartphones, the key factors are: performance (35%); ease of operation (24%); features (21%); and physical design (20%).
For a seventh consecutive time, Apple ranks highest among manufacturers of smartphones in customer satisfaction. Apple achieves a score of 839 on a 1,000-point scale and performs well in all factors, particularly in ease of operation and features. HTC (798) follows Apple in the smartphone rankings.

LG and Sanyo rank highest in overall customer satisfaction with traditional handsets, in a tie (716 each). LG performs well in all four factors, while Sanyo performs particularly well in ease of operation. Sony Ericsson (712) and Samsung (703) follow in the traditional handset rankings.

The studies also find the following key wireless handset usage patterns:

- The price of a traditional wireless mobile phone continues to decline and averaged $66 between July and December 2011, compared with an average of $81 during the same time period in 2010. The decline is primarily due to discounts provided by handset providers and wireless service carriers to incentivize sales. Currently, 44 percent of owners report having received a free mobile phone when subscribing to a wireless service.

- Mobile applications continue to enhance the smartphone user experience. Seventy percent of smartphone owners say they have accessed social networking sites using their device. Nearly three in four (72%) say they have the ability to download and/or view video and movies, while 59 percent indicate having voice recognition and/or command dialing applications. This indicates that smartphone owners are continuing to integrate their device usage into both their business and personal lives.

- Two in 10 current smartphone owners report experiencing a software or device malfunction (21%). These problems have an impact on overall satisfaction, as there is a satisfaction gap of 77 points between customers who experience software malfunctions and those who do not. Satisfaction among customers who indicate their device’s software crashes at least once a week averages only 691.

The 2012 U.S. Wireless Smartphone Customer Satisfaction Study—Volume 1 and the 2012 U.S. Wireless Traditional Mobile Phone Satisfaction Study—Volume 1 are based on experiences reported by 7,080 smartphone owners and 8,335 traditional mobile phone owners. Both studies were fielded between July and December 2011.

For more information on customer satisfaction with wireless service, wireless retail sales, cell phone handsets, customer care, prepaid wireless service and business wireless service, please visit JDPower.com.

About J.D. Power and Associates
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NOTE: Two charts follow.
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2012 Wireless Smartphone Satisfaction Study SM – Volume 1

Overall Wireless Smartphone Index Rankings
(Based on a 1,000-point scale)

Source: J.D. Power and Associates 2012 Wireless Smartphone Satisfaction Study SM – Volume 1

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J.D. Power and Associates
2012 Wireless Traditional Mobile Phone Satisfaction Study™ – Volume 1

Overall Wireless Traditional Handset Index Rankings
(Based on a 1,000-point scale)

<table>
<thead>
<tr>
<th>Brand</th>
<th>Score</th>
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<tbody>
<tr>
<td>LG</td>
<td>716</td>
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<tr>
<td>Sanyo</td>
<td>716</td>
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<tr>
<td>Sony Ericsson</td>
<td>712</td>
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<td>Samsung</td>
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<td>Kyocera</td>
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Source: J.D. Power and Associates 2012 Wireless Traditional Mobile Phone Satisfaction Study™ – Volume 1

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