



## *AntennaGate: Apple's Loss of Signal (B)*

### **Apple's Initial Reactions to AntennaGate**

Once the news of the iPhone 4's antenna problems started to trickle from the tech blogs into the mainstream press, Apple knew it had a bona-fide crisis on its hands. On July 2, 2010, Apple released an open letter on its website to all iPhone 4 owners. It focused on two main messages: 1

#### **Message 1: Everyone Else Has Problems, Too**

In the second paragraph of the letter (see attachment), Apple insists that other major smartphones, if held in certain ways, also have antenna problems. Specifically referenced are "Droid, Nokia, and RIM phones," to show that many phones will lose signal strength if held incorrectly. This attitude mimics a short e-mail Jobs sent to one inquiring user the day after the iPhone release, stating: "just avoid holding it that way." 2

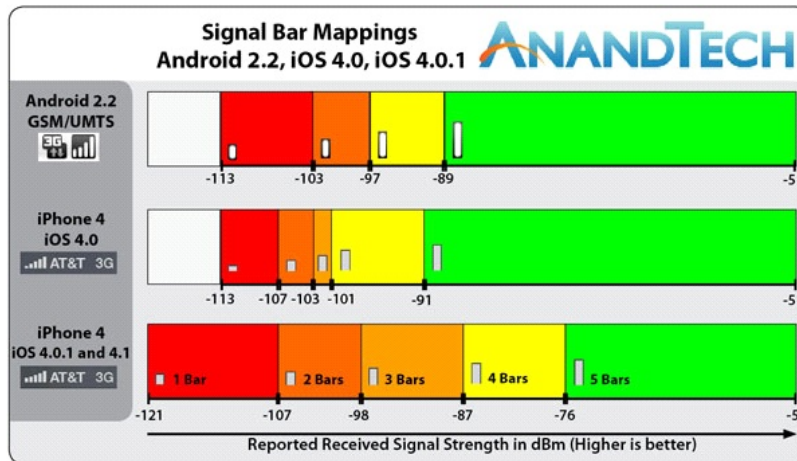
#### **Message 2: Nothing's Wrong, It's Just a Software Issue**

Apple also insisted that the problem was not as bad as everyone assumed. "We have gone back to our labs and retested everything, and the results are the same - the iPhone 4's wireless performance is the best we have ever shipped."<sup>3</sup> Instead, Apple focused on how the iPhone has interpreted signal strength into displaying the on-screen bars that indicate to the user how strong the cell signal is. Historically, the iPhone had used a sliding scale to allow the phone to display the maximum number of service bars in most usage cases. The downside of this method, aside from accusations that it was dishonest, is that when service is low, the phone loses bars quickly, dropping from three bars to one with only a small loss of signal.<sup>4</sup>

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This case was prepared by Research Assistants Jonathan Retartha, Brian Riordan, Joseph Tingey and Kevin Vega under the direction of James S. O'Rourke, Teaching Professor of Management, as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation. Information was gathered from corporate as well as public sources.

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Source: AnandTech, July 14, 2010. < <http://www.anandtech.com/show/3821/iphone-4-redux-analyzing-apples-ios-41-signal-fix>>

Apple announced an upgrade to the iPhone OS that would normalize the way signal bars were displayed. The inferred message was “don’t worry; your phone was always working as intended.”

### Consumer Reports

The most harmful report surrounding the iPhone 4’s antenna problem was released on July 12, 2010, when the highly respected *Consumer Reports* stated in its iPhone 4 review that they can’t recommend it until Apple comes up with “a permanent – and free – fix for a signal-reception problem” confirmed during *Consumer Reports* testing.

The engineers at *Consumer Reports* specifically challenged, as had other tech blogs, Apple’s claim that actual signal levels were not being affected, only the display of such.<sup>5</sup>

The *Consumer Reports* blog post did mention, as Apple and other users had confirmed, that a silicone phone case (available in Apple stores or online for \$29) would alleviate the problem by preventing direct contact with the troublesome area. This is offered as a possible solution for plagued owners. Spontaneously generated rumors of a product recall were also circling online forums as consumers became more and more concerned with the iPhone antenna issues.

### Decision Point

In one week’s time, news of the iPhone 4’s antenna issues had left the echo chamber of specialty tech blogs and entered the mainstream consumer media. Further coverage in mainstream media is sure to follow.

## Discussion Questions

1. How did Apple's initial response affect the situation? Evaluate its success.
2. What can Apple do from this point to respond to *Consumer Reports*?
3. What are the potential long-term effects on the Apple brand?

## References

<sup>1</sup> Buchanan, Matt, "Apple, Antennagate, and Why It's Time to Move On," *Gizmodo*, July 19, 2010, <<http://gizmodo.com/5589336/apple-antennagate-and-why-its-time-to-move-on>>

<sup>2</sup> "Apple issues advice to avoid iPhone flaw," *BBC News*, June 25, 2010, <<http://news.bbc.co.uk/2/hi/technology/8761240.stm>>

<sup>3</sup> "Letter from Apple Regarding iPhone 4," *www.apple.com*, July 2, 2010, <<http://www.apple.com/pr/library/2010/07/02appleletter.html>>

<sup>4</sup> Klug, Brian and Shimpi, Anand Lal, "The iPhone 4 Redux: Analyzing Apple's iOS 4.0.1 Signal Fix & Antenna Issue," *AnandTech*, July 15, 2010 <<http://www.anandtech.com/show/3821/iphone-4-redux-analyzing-apples-ios-41-signal-fix>>

<sup>5</sup> Gikas, Mike, "Lab tests: "Why consumer Reports can't recommend the iPhone 4," *Consumer Reports Electronics Blog*, Last Updated July 16, 2010 <<http://blogs.consumerreports.org/electronics/2010/07/apple-iphone-4-antenna-issue-iphone4-problems-dropped-calls-lab-test-confirmed-problem-issues-signal-strength-att-network-gsm.html>>

**July 2, 2010**

**Letter from Apple Regarding iPhone 4**

Dear iPhone 4 Users,

The iPhone 4 has been the most successful product launch in Apple's history. It has been judged by reviewers around the world to be the best smartphone ever, and users have told us that they love it. So we were surprised when we read reports of reception problems, and we immediately began investigating them. Here is what we have learned.

To start with, gripping almost any mobile phone in certain ways will reduce its reception by 1 or more bars. This is true of iPhone 4, iPhone 3GS, as well as many Droid, Nokia and RIM phones. But some users have reported that iPhone 4 can drop 4 or 5 bars when tightly held in a way which covers the black strip in the lower left corner of the metal band. This is a far bigger drop than normal, and as a result some have accused the iPhone 4 of having a faulty antenna design. At the same time, we continue to read articles and receive hundreds of emails from users saying that iPhone 4 reception is better than the iPhone 3GS. They are delighted. This matches our own experience and testing. What can explain all of this?

We have discovered the cause of this dramatic drop in bars, and it is both simple and surprising. Upon investigation, we were stunned to find that the formula we use to calculate how many bars of signal strength to display is totally wrong. Our formula, in many instances, mistakenly displays 2 more bars than it should for a given signal strength. For example, we sometimes display 4 bars when we should be displaying as few as 2 bars. Users observing a drop of several bars when they grip their iPhone in a certain way are most likely in an area with very weak signal strength, but they don't know it because we are erroneously displaying 4 or 5 bars. Their big drop in bars is because their high bars were never real in the first place.

To fix this, we are adopting AT&T's recently recommended formula for calculating how many bars to display for a given signal strength. The real signal strength remains the same, but the iPhone's bars will report it far more accurately, providing users a much better indication of the reception they will get in a given area. We are also making bars 1, 2 and 3 a bit taller so they will be easier to see.

We will issue a free software update within a few weeks that incorporates the corrected formula. Since this mistake has been present since the original iPhone, this software update will also be available for the iPhone 3GS and iPhone 3G.

We have gone back to our labs and retested everything, and the results are the same—the iPhone 4's wireless performance is the best we have ever shipped. For the vast majority of users who have not been troubled by this issue, this software update will only make your bars more accurate. For those who have had concerns, we apologize for any anxiety we may have caused.

As a reminder, if you are not fully satisfied, you can return your undamaged iPhone to any Apple Retail Store or the online Apple Store within 30 days of purchase for a full refund.

We hope you love the iPhone 4 as much as we do.

Thank you for your patience and support.

Apple

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