New musical resonance, via your cell phone

By Alan J. Heavens

It is the 21st century and, apparently, a telepathic telegraph is the future. The tools are at hand, the performance is next week, and the device is already in use.

The Philadelphia Orchestra is not quite ready to let this innovation come to the masses. At least not in the kiosks, or even in the Kimmel Center's Verizon Hall. But it has been making its way to the homes of select concertgoers.

It all began two years ago when Youngmoo Kim, a Drexel assistant professor of electrical and computer engineering, and Michael Steinbacher, a Drexel assistant professor of music, put their heads together over microphones, measuring devices and computer programs.

It was the 11th commandment for concertgoers, especially in an age of shrinking audiences, could there be a better way to resonate with the masses who don't buy a season ticket? In an age of shrinking audiences, could there be a better way to resonate with the masses who don't buy a season ticket?

"It's very difficult to get the masses interested in music," Steinbacher said. "It's a very exciting technology." "You have to make the idea a reality," Kim said that it was primarily an academic exercise so far, but that he would be interested in exploring commercial possibilities.

The idea began as part of a research project to exploit smart phones, which have cameras, microphones and data processing power. Selected concertgoers were given iPhones and asked to download apps that would allow them to listen to the orchestra.

Participants watch and listen to a broadcast of an orchestra performance of Mozart's "Jupiter" Symphony No. 41, which includes speech-like audio. The device works by taking snapshots of the music every third of a second. Each segment of the audio signal is matched to the reference version with a process called dynamic time-warping.

The device into the Kimmel Center's Verizon Hall, but it has not yet been deployed in a concert setting. It was tested by a small group of select concertgoers.

It is the 11th commandment for concertgoers, especially in an age of shrinking audiences, could there be a better way to resonate with the masses who don't buy a season ticket? In an age of shrinking audiences, could there be a better way to resonate with the masses who don't buy a season ticket?

Kim, who has a classical-music background, told his lab members to attend a high-definition broadcast of an orchestra performance of Mozart's "Jupiter" Symphony No. 41, which includes speech-like audio. A former member of the Boston Symphony Orchestra's Tanglewood Festival Chorus, Kim knew that the orchestra includes his former colleagues.

The device is a financial windfall for the orchestra, which is in a financial crisis. "It's a nice, nice little additional source of income," Steinbacher said.

Once the broadcast was over, the device provided a running narrative of the hero's journey. The hero is D.C..gov's "How to Manage Your Money." The devices pointed out the relevant information and the reference version.

The device can also match the new performance to the reference version. The software had used to "learn" the pieces.

It is the 11th commandment for concertgoers, especially in an age of shrinking audiences, could there be a better way to resonate with the masses who don't buy a season ticket? In an age of shrinking audiences, could there be a better way to resonate with the masses who don't buy a season ticket?

It is the 11th commandment for concertgoers, especially in an age of shrinking audiences, could there be a better way to resonate with the masses who don't buy a season ticket? In an age of shrinking audiences, could there be a better way to resonate with the masses who don't buy a season ticket?