

Leading a big parade of iPhone apps

by Jefferson Graham

USA Today
feature story



Technology



Talking Tech:
Stanford University professor Ge Wang turns his iPhone into an instrument at tech.usatoday.com.

Sound off: Ge Wang plays the Ocarina, an iPhone application that turns the device into a virtual flute. He has speakers attached to his hands.

Photos by
Martin E. Klimek
for USA TODAY

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Ocarina, Leaf Trombone
whistle a happy tune for Smule

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PALO ALTO, Calif. — At Stanford University, Ge Wang teaches computer music: how to make sounds from digits and turn them into melodies and rhythm.

So when the iPhone came out — a portable computer with a built-in microphone (for voice calls), and a graphic screen — a doctoral student with entrepreneurial experience suggested they start a



Orchestral instruments: iPhones with apps.

company to bring their research in digital audio to the masses.

Their Ocarina, a 99-cent application that turns the iPhone into a virtual flute, has become one of the iPhone's best-selling apps — to the tune of nearly \$800,000. Now out is the sequel, the Leaf Trombone World Stage.

"We believe in the potential of interactive sound; we believe that everyone is inherently creative; and we want to unlock that creativity in everyone," says Wang, 31. "We want to find new types of ways to connect people, using the technol-

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Cover story

Apps blend music, technology: 'Anybody can play'

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ogy we have before us."

Apple launched the iPhone in June 2007. Its popularity surged even further in July 2008, when Apple introduced a new, faster model and an online App Store, offering software applications.

The apps — an array of fun, handy or just plain practical little programs — range from games and simulated aquariums to subway maps and more. Many are free; others are priced from 99 cents to \$10 and up. The App Store — stocked with 15,000 titles — is on tap to move its 1 billionth application any day now.

Most of the developers are small outfits such as Smule, the company that Wang and Jeff Smith started to launch the Ocarina and several other apps. Smith, 35, is CEO.

"One of the biggest hurdles for game developers is getting published. But with the iPhone, you develop it, and Apple starts sending you money," says Bill Trost, who created the No. 2 best-seller Koi Pond (900,000 apps sold) with four friends.

The challenge for developers such as Trost and Wang, says Gartner analyst Van Baker, is building upon the initial success. "It was easier when there wasn't as much competition," he says.

Anything's an instrument

It's not hard to get attention with Ocarina and Leaf Trombone. Using the same iPhone microphone that's intended for voice calls, you blow into it, and through Wang's computer programming, music is created. Twist and turn the phone to add vibrato.

The App Store is crowded with virtual instruments such as Band, Pocket Guitar and Finger Piano. But unlike Ocarina, they didn't crack the top 20 best-selling apps chart.

Wang's marketing strategy focused on working the social Web via YouTube, Twitter and Facebook. He shared many videos of Ocarina in use by students and other performers on YouTube.



By Martin E. Klimek for USA TODAY

Tempo, please: Ge Wang, right, leads the Stanford Mobile Phone Orchestra. Members include, from left, Diana Siwiak, Michael Berger, Jieun Oh and Rob Hamilton.

bleweed), then quit to focus on music, serves as CEO to Wang's chief technology officer.

Smith raised \$5.5 million from local investors and says his target was to do \$100,000 in the first six months.

Instead, Smule did \$500,000. The sales target for the first year was \$1.6 million, and Smith says that will be exceeded, too.

A musical connection

Stanford student Rob Hamilton (a teaching assistant who, like many in the CCRMA program, also works at Smule) helps out with the mobile phone and laptop orchestras.

Students use Chuck on Apple MacBooks to make sounds and tones, tilting and twisting them to alter

the pitch.

"People come and listen to the crazy music we do, and come out of the concerts shaking their heads," says Hamilton.

Hamilton says that as a professor, Wang "brings a lot of energy to the classroom. He's really bubbly and gets students excited about their work. He shows them how to use technology to create whatever musical fantasies they have."

For Ocarina and Leaf Trombone, Wang's wildest dream has come true: He wanted to see the world latch onto an instrument and share the love of it in a social setting.

Within the iPhone app, you can listen to other folks playing the Ocarina and see where in the globe the music is coming from.

Fans have posted sheet music, showing how to play popular songs on the instrument.

"This is a new type of social fabric," says Wang.

Leaf Trombone takes it a step further. Wang has added *American Idol*-like competition — you can judge performances on the phone, or just watch others playing songs such as *Battle Hymn of the Republic* or *The Blue Danube* waltz.

"Here's an opportunity to combine music with technology, where anybody can play," says Smith. "You don't have to spend 10 hours in a practice room learning how to play. With the iPhone, anyone can do it."

And for Wang, this is only the beginning of music on mobile phones. He won't commit to a complete digital instrument portfolio, but says there is much more to come.

"The phone is such an intimate piece of technology that, for better or worse, it has become a natural extension of ourselves."