

Phil Carter - Proponent Testimony
Ohio House hearing for HB 357
April 24, 2024

Good morning, Chairman Hall, Vice Chair Claggett, Ranking Member Abdullahi, and members of the House Technology & Innovation Committee, My name is Phil Carter and I'm a technical program manager at Google. I have spent my career in the telecommunications industry:

- 20 years in a large global operator spanning multiple roles including mobile satellite here in the US, R&D, product and services development, network planning and procurement.
- And for the past 8 years working at Google to help carriers globally evolve their current SMS service to a more modern and secure messaging standard called RCS, which stands for Rich Communications Service.
- I am one of the original authors of the RCS standard, have been involved in its productization for the past 16 years, and I am currently the Vice Chair of the RCS standardization group within the GSMA.

I'm sharing this with you because I find the prospect of making texting better and safer for all mobile users to be a unique opportunity in the history of this industry. This is a moment we've collectively been working toward for decades and we're closer than we've ever been.

As you're all aware by now, texting is central to the way Ohioans, and Americans more broadly, communicate. Americans send 2 trillion texts every year. We text more than we call. It's remarkable, therefore, how little default carrier texting service has changed over the years.

The majority of text messages are sent via a messaging standard called SMS, which stands for Short Message Service. I remember when SMS was first launched in the early 1990s.

The popularity of the service exploded and on New Year's Eve around the world traffic peaked as everyone scrolled through their address books to reconnect and sent well wishes to their families, friends and associates, knowing that regardless of the handset, network or country, messages would always be delivered..... eventually.

On a normal day messages would be delivered instantly, but on NYE it was often the case that these messages would not arrive for days on account of the sheer volume of messaging traffic sent in a short space of time. And users became adept at typing messages using a numbered keypad to draft messages, giving rise to predictive text (a first generation AI) and text based emoticons to communicate expression.

Unfortunately, SMS has barely evolved since it was first introduced more than thirty years ago in 1992. I'm a huge sports fan, but I'm from Wales, so I had to do some homework about what was going on in the sports scene in Columbus in 1992.

It turns out Kirk Herbstreit (herb-street) was the Senior quarterback for your Buckeyes that year. Texting hasn't changed since the year he graduated.

When you think about the innovations in tech that we've seen since then: the growth of the internet itself, the advent of the smartphone, faster networks with better coverage serving both city and rural communities, and emerging technologies like AI and cloud computing, it's hard to believe that we're all still using a technology that isn't just old -- it's still in essentially its original form.

- Now, would we ever consider buying a car that had not changed in 30 years?
- Or would we consider flying in a plane which was beyond its 30 year serviceable lifetime?

That's why I'm excited to see how you've taken up this issue in HB 357.

The motivation behind this bill is simple: make texting safer and better for everyone, no matter what kind of smartphone they use or what network they are on.

The bill specifically outlines key features that should be available in any default carrier messaging service, but aren't today:

- Encryption -- SMS texts are incapable of encryption of any kind. As Representative Ghanbari said in his testimony, an SMS text is about as safe and private as a postcard.
- Photo and video failures. They are often blurry and pixelated because SMS can't support higher quality media files.
- And what we call 'typing indicators' and 'read receipts' - the features which instill confidence in a messaging service - are not available with SMS.

These problems aren't just annoying. They are a security risk for all Ohioans. If a message is intercepted by a hacker, its contents can be read. A 2021 investigation from the [news outlet Vice](#) found that an entire device's texts could be hacked for sixteen dollars. Additionally, if it's not safe to speak, for example in an active shooter situation, Ohioans need to know that the information they are sending is being received and read. Their lives depend on those texts working.

They have also prevented users from making fully informed decisions about their digital habits due to a lack of transparency. Your average user would not know that their texts aren't encrypted, for example. This is both a security failure, and a market failure.

You've probably experienced this when you send messages between a device that uses Android, like Samsung, and an iPhone. For years, Apple has forced texts between the two platforms to be exchanged via SMS, and made virtually all smartphone users in Ohio, including its own, equally unsafe by forcing everyone to use SMS - these are the green bubble messages.

However RCS, now a well-established industry standard, would solve many of these problems. But, we all need to pay close attention to the details. While more secure than SMS today, RCS will need to go further to ensure Ohians have the same protections enjoyed by iMessage - the blue bubble messages exclusive to Apple users. To achieve this there needs to be an obligation on all stakeholders to support end-to-end encryption when the standard is updated later this year. Security improvements need to be sustained to address emerging threats - it is not a fire and forget action.

To close, I want to acknowledge an important fact: change is hard. But, a major improvement is the only way forward, and there is more momentum than ever to make it happen.

US carriers are on board: The top 3 wireless carriers in the US -- Verizon, AT&T, T-Mobile -- and two of the tech industry's largest players, Google, and most recently, Apple have all invested in RCS in some fashion.

A new texting standard will also better serve users in rural areas. Carriers are RCS ready with 5G and 4G data available across the state. With this shift, RCS messaging will always be available where carrier voice and SMS is available today which also operate on the same 5G and 4G network.

And above all else, it will make us all substantially safer. Thank you again for your time today, and your investment in this issue. I'd be happy to take your questions.