THE BROOKINGS INSTITUTION

HOW TO FURTHER THE MOBILE TECHNOLOGY REVOLUTION

A CONVERSATION WITH
AT&T CHAIRMAN AND CEO RANDALL STEPHENSON AND
SILVER LAKE CO-FOUNDER GLENN HUTCHINS

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Introduction and Moderator:

DARRELL WEST
Vice President and Director, Governance Studies
Director, Center for Technology Innovation
The Brookings Institution

Featured Speakers:

RANDALL STEPHENSON
Chairman and Chief Executive Officer
AT&T, Inc.

GLENN HUTCHINS
Co-Founder, Silver Lake
Vice Chairman, The Brookings Institution

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P R O C E E D I N G S

MR. WEST: Good morning. I'm Darrell West, Vice President of Governance Studies and Director of the Center for Technology Innovation at the Brookings Institution and I'd like to welcome you to our forum on mobile technology.

Mobile technology is reshaping the global landscape. I was in Barcelona a few months ago for the World Mobile Congress and their researchers were projecting that within four years, 80 percent of the broadband subscriptions will be through mobile devices.

It is for that reason that Brookings has launched a Mobile Economy Project that looks at the impact of mobile technology on society, the economy, and governance. We're analyzing how smartphones and mobile devices affect education, healthcare, entrepreneurship, and economic development, both in the United States as well as around the world.

And this Friday at 1:30 we will be holding a forum on ways to improve spectrum access, so those of you interested in that topic are welcome to come back.

Over the past few months we put out research papers examining the impact of mobile on our information ecosystem, healthcare, and political campaigns. By 2016 it is estimated that there will be 10

billion mobile devices in use around the world, this is according to Cisco Networking Index. There already are over 40,000 mobile health applications and we're seeing that mobile devices are driving productivity improvements in the overall economy. This is not just a U.S. phenomena; we're seeing rapid growth of mobile technology all around the world.

To discuss the future of mobile technology, we're pleased to welcome two very distinguished guests. Randall Stephenson is chairman, CEO, and president of AT&T. That sounds like three full time jobs there.

MR. STEPHENSON: Feels like it too.

MR. WEST: Maybe more than three on some days. And as you know, AT&T is the world's largest telecommunications company and is a global leader in mobile broadband and business communications. Under his leadership, the company has expanded services into a number of different areas.

Prior to becoming CEO, he served as chief operating officer and senior executive vice-president and chief financial officer at AT&T.

For those of you who follow *The Wall Street Journal* you may also have noticed that yesterday Randall had an op-ed on the demand for spectrum and what we need to do in order to meet that demand, and we'll be talking more about that a little later.

Also with us today is Glenn Hutchins, who is co-founder of

Silver Lake, one of the world's largest firms investing in technology businesses. He's chairman of the board of SunGard and a director of NASDEQ and Mercury Payment Systems. Previously he served in the Clinton White House as special advisor on economics and healthcare. He also is a director of the Federal Reserve Bank of New York and is vice-chairman of the board at the Brookings Institution.

So, we have a unique combination of perspectives here, the CEO of a large carrier and a network provider and the founder of a leading private equity investor. So, what we're going to do today is talk about the opportunities in terms of mobile technology, some of the barriers, and some of the policy changes that we need in order to take full advantage of this technology revolution.

So, the first question that I'd like to throw out to each of you is just, what do you see as the biggest emerging opportunities in mobile technology? Randall, we'll start with you.

MR. STEPHENSON: Oh, my. That's a broad topic, and I think the opportunities are still before us. If you think about what's happened over the last five years, that's really -- all of this mobile internet capability has really evolved and matured in just a five-year period of time. And I reflect back, 2007, about this time in 2007, we launched the first iPhone and we did it here in the U.S.

MR. HUTCHINS: (Applauding) Bravo, well done.

MR. WEST: We remember that.

MR. STEPHENSON: We had no smartphones, really, in our customer base and today we have well over 40 million smartphones. The traffic -- the data traffic on these networks has just exploded, 20,000 percent in that five-year period of time and so what you've seen is just kind of this big base across all of the carriers of just smartphones -- a huge number of smartphones here in the U.S. and we're just now moving into what are the next capabilities that will take advantage of these mobile broadband networks.

And so you're seeing tablets come, that's all good, that's all exciting. I think what is really going to bring the next level of dynamism to the industry is what you're seeing evolve and that is we're all building the next, you know, kind of speed network, we call it fourth generation network, LTE, and so now begin to think about the mobile internet with really, really hyper fast mobile data speeds, low latency meaning, you know, the app is always pervasive, it's always on, combining that with the cloud, and so now all of this content is moving off of the devices into an infrastructure layer in the cloud.

And so, you're going to be accessing your information via these mobile networks for multiple devices, multiple locations, it's always

going to be in sync so it's always the same information you're accessing. So, whether it be a smartphone or a tablet or your television set or your car -- we really believe the car is the next place where you're going to be accessing all this information -- is going to kind of fundamentally change, once again, how we're all living, how we're all working, how we're all interacting and socializing, and so I just think this confluence it's really building very, very quickly, it's building fast, is going to take us to another place entirely from where we've gone over the last five years.

MR. WEST: So, Glenn, you're a big investor in this area. What do you see as the greatest emerging opportunities?

MR. HUTCHINS: So, I want to start by saying, I hope you noticed that the moderator did not ask you to turn off your mobile devices and I want to make sure everybody in the audience has every device you have with you on and working. Please feel free to browse the web, send text messages, email messages. Randall and I like to make money while we're talking.

(Laughter)

Where was I? First of all, I think, Darrell, to think about this question you have to dimensionalize it a bit. And when you think about the dimensions of this opportunity, they're really mind-boggling. I think it's an understatement to say that this is the biggest tech opportunity of our

lifetimes.

Let me give you a sense of this. Today -- and these numbers are probably low now because another day or two has passed, but today there are 4 billion devices that are handheld devices, there are 6 billion subscriptions to devices, the number of subscriptions in the United States exceeds the number of people in the United States, so I've never seen a market in my 30 plus years in business where the addressable market was larger than the population.

Think about that. Right? The amount -- number of smartphones is approaching a billion and growing very, very rapidly. And if you compare this a minute, we are 25 to 30 years in the PC trend and there are barely a billion PCs used in the world and there are 6 billion uses of handheld devices.

There are 1.5 billion television sets. There are only 2 billion bank accounts in the world. This is, by far, the largest addressable market in the history of capitalism. Point one. Point two, it's growing more rapidly. I mean, I come to Washington and people, you know, say, oh, my god, are we going to get 2.5 percent growth this quarter. Maybe we can get it up to 2.75 and (inaudible) revised downward to 1.8 percent or 1.9, oh, the world's falling apart. And I say, well, there is a part of the world that's growing 100 percent, right, and which is the use of all this traffic

going across the network is literally going -- the low estimate is 75 percent per year, all right, that's the pessimistic estimate for the growth in data going across the network, most people think it's about 100 percent.

Now, the question is, this is sort of -- when people come to me with their capital, I say, this is sort of an IQ test, right, where do you want to be? Do you want to be where 2 percent growth or do you want to be where there's the largest addressable market in history growing 100 percent? This is --

MR. STEPHENSON: Think about it.

MR. HUTCHINS: Think hard about that, right. Where do you want to put your time and your capital? Okay, so if you dimensionalize it that way, right, then it's hard to say one opportunity because this is the biggest opportunity in the history of technology and there are -- the ecosystem around -- you know, you've got the networks Randall runs, and all the technology that goes into those networks and all the content that runs over them. You've got the gizmos and gadgets, you know, that all connect in the network and all the supply chains that goes into those, plus the hardware, plus the software, content, services that go over those. And so there are massive opportunities all across the value chain that are growing very, very rapidly.

And if I was to highlight one thing that's going to be driving

the next leg of this, it's video, right, which is we're just at the point where you're creating the opportunity for us to get full motion video wirelessly and in which the devices we have will have the capacity, both processing and storage capacity, to do that. And video is a huge -- since it's full motion video -- is a huge data file, it requires huge increases in capacity everywhere in the network and everywhere in the devices and everywhere in the content and the applications and what not. So, this thing is just -- once we get the capacity of videos -- a place for it to explode again.

It's just -- you know, it's just awesome and an opportunity of first impression for most --

MR. STEPHENSON: I think I'm going to invest more.

MR. HUTCHINS: So, that's how I think about it.

MR. WEST: So, how does this affect, Randall, your investment decisions and the priorities that you have?

MR. STEPHENSON: Well, you just listened to what he just said and what's coming, particularly in the realm of video, to address that type of demand, and I do think this is one of things that, from an industry standpoint, it took us a while to get the pricing model right to ensure that we do have the capital to reinvest back in these networks. We've gotten the pricing model right, and so now that you've got the pricing model right, you go hard and you invest in getting capacity out ahead of these demand

curves. And video being the classic example, today now, a third of all the traffic going across these mobile networks is video. And the video is growing significantly faster than the rest of the traffic on the network.

So, we're investing very, very aggressively in capacity, in capability. Most importantly, we're investing aggressively in spectrum. And you knew this conversation couldn't go long before it ran into that, but this is not an industry that is lacking for capital investment. The investment is here. The investment's being put into this industry. The thing that's going to cause it to slow, and it's what you read in the op-ed yesterday, is just the availability of spectrum, and in this industry, if you don't have sufficient airwaves, then it does bring this thing to a significant slow down.

And so that's why we're being -- I'm being evangelical on this issue. We, as a country, have got to address this. The spectrum situation has got to be addressed, we've got to find ways of getting new spectrum to market, find ways of taking the existing spectrum that's in the market and putting it to its highest and best use, that's where our focus is, is making sure that we're allocating capital to procuring spectrum and investing in the capacity needed to make his world, that he just articulated, a reality.

MR. HUTCHINS: So, let me jump in here and be in politic,

which is sort of something I'd advise my friend Randall not to do. But when I come to Washington, and I've spent a lot of time here, as Darrell said, I'm vice chairman of this great organization which I'm deeply devoted to, I think it's the best of the think tanks by a very wide margin for a whole bunch of reasons -- commercial done.

MR. WEST: Thank you, Glenn.

MR. HUTCHINS: Often we're asked, how can you create jobs? How can government create jobs? I say, government doesn't create jobs, that's the whole point, right, and -- but the point is -- and why I say that is because government should focus on what government can do to enable the private sector to do things like create jobs. So, the question we need to ask here is, what can government do?

So, for instance, in this context, what government can do is to make better use of the spectrum that we have that's within their power to get done. Right? They can't do a lot of the other stuff we've talked about in terms of deploying the networks and creating the content and building the devices and distributing those and advancing the technology -- that's all happening at a pace in the private sector, but it's within their power to do something about spectrum.

And that's something which really, really needs to be focused on because it will soon be the critical pinch point in delivering the

goods and services that can be delivered across the web with all these technologies we're inventing and will be critical to our country retaining its position as, by far, the leader, kind of, in this field.

Now, there's one very good thing that's been done, I think, which is these volunteer incentive auctions, which are moving the spectrum in a way that I think should work for everybody, broadcasters and new users alike, out of old, sort of, cold era -- post cold era where broadcast kind of use is into more efficient broadband kind of uses for the current environment.

I do think, personally, purely from the point of view of technology policy, the government's decision to block his acquisition of T-Mobile was a very bad idea because it kept spectrum in a very inefficient place and didn't allow it to be reallocated to a place where it could be used much more efficiently for our benefit, and I think as we look back on that we'll see -- I think the evidence is already starting -- that it's caused prices to go up for the use of the networks because the spectrum is becoming -- is constrained, and those prices will continue to go up as long as the network -- the use of spectrum is constrained.

And so I think that from a public policy point of view having to do with technology, not having to do with antitrust -- I'm not an antitrust expert -- that was a big mistake and I think we need to increasingly look at

those sort of decisions in a way of, what do we need to promote economic progress and what are the new models -- for instance, in the technology world you use scale to drive your prices down, you don't use scale to drive your prices up. And what are the new models for thinking about these things that enable us to create the means by which Americans can get the goods and services and user experiences they have and throw away some of the older models around, kind of, antitrust policy and technology policy that come to us from prior eras.

All right, speech over.

MR. WEST: Okay. So, Randall, in your op-ed, your *Wall Street Journal* op-ed yesterday, you noted that demand for spectrum will exceed the supply by next year. Glenn just noted that Congress has approved a spectrum auction, but in your op-ed you pointed that it often takes six to eight years to actually do the auctions and get the benefits of the re-purposed spectrum.

What can we do now? We obviously can't wait six to eight years.

MR. STEPHENSON: That's the right question, Darrell. Our industry is unique in that in the long-term, in the long haul, technology will generally address many of these questions and these issues. I always reflect back --

MR. HUTCHINS: Technology and markets.

MR. STEPHENSON: -- and markets, that's right, which kind of one drives the other, and I reflect back always to the year 2000 where we were trying to determine, how do we get a video product to market, and I asked who was then the chief technology officer of what was then SBC, when will we be able to get the compression and the technology right where we can deliver video over copper cables? And he said, not in my lifetime.

Today we're delivering four simultaneous, high definition streams over copper cables in a really high quality video capability. All right, with wireless, I believe over time that we will address a lot of these capacity issues -- technology, small cells, cognitive antennas, and so forth, in the long haul, those things will materialize and I believe will provide the efficiencies that we need to scale these, and I believe, in the long haul, government will identify spectrum that they're holding that can be brought to market and that will address a lot of this.

Our problem is not a long haul problem, our problem is a today problem, and the numbers you quoted are FCC numbers. By 2013, supply will outstrip demand. We are in a situation today --

MR. WEST: For spectrum.

MR. STEPHENSON: For spectrum. We are in a position

today where we see exhaust in some very key markets in 2013. There is not sufficient spectrum that we hold to address the demand. Now, what can you do in the short run? That's what the op-ed was all about. In the short run, there is spectrum in the marketplace that is not being put to its highest, best use. In fact, there's a lot of spectrum not being put to any use in the marketplace.

And so the challenge is, from a policy standpoint, how do we accelerate that? There are a lot of folks who have come in and bought spectrum as a speculative investment and they hold that. We need to be very diligent about ensuring that if you're holding spectrum, those who hold it need to have some very strict build requirements -- put it to use. If you own it, put it to use. If you can't put it to use, sell it or partner with somebody who will. And I think that's a really, really important thing to address.

The other is, just the whole idea, if you think about the infrastructure build of the early part of this century -- mid part of this last century, highways and railroads, it was a government priority to build the infrastructure. A lot of the capacity requirements that we have involve major infrastructure builds. So, you go to San Francisco, or even in this city, and you want to put up a cell site, two and three years to get permitting and to get zoning and just to get permission to build cell sites.

If this truly is a national priority, then we need national policies to help drive some of this and accelerate the builds, and so forth.

So, there's just a number of things we can do that would enhance capacity today, in the short run, and I will tell you, I know I've been very critical of the FCC and their pace over the last few months. I would say over the last three months, and I'm very serious -- over the last three months, the pace of the approval process for moving spectrum from one place to another, where we have bought spectrum in the marketplace -- the approval process, they've gotten some done in 60 to 90 days. Now, that causes guys like me to step back and say, wow, this is good. But I would tell you, what has to happen, this has to become the norm and not the exception.

So, if we put these kind of things in place we can, literally, in the next 24 months, begin to address some of these capacity issues we're facing.

MR. WEST: So, Glenn, what do you see as the key public policy changes that we need in order to be able to take full advantage of mobile technology?

MR. HUTCHINS: By the way, my comments should not be focused -- should not be interpreted as being negative of -- critical of the FCC, because, like Randall, I think they have very able leadership, they

understand the problems, they're moving very rapidly to solve them, they operate in a context of Washington, which has a whole bunch of barriers to getting things done, as we've all seen. But I agree with what you've just said.

So, rather than answer that question directly, let me give you an example of how to think about this. If I had told you two years ago that this device in your pocket would be, for most, the place where you got 25 percent of your video, you would have told me I was nuts, but most of the kids are doing that now.

MR. STEPHENSON: That's right.

MR. HUTCHINS: What you're going to be -- I will guaranty you that two years from now, this will become primarily your wallet, this is primarily how you'll pay for things. You won't be carrying all these credit cards and all this stuff in your wallet, it will all be sort of in here, because -- I'm sure you don't believe me now, but it will happen in two years.

So, the things that we think of -- if I told you you'd be reading *The Wall Street Journal* or *The New York Times* on a device two years ago rather than having to go to the newsstand to get it in the morning, and you get it anywhere in the world, you'd tell me I was nuts because there weren't the devices, and here they are now.

We forget about how rapidly our life changes as a result of

the introduction of new technology because we've begun to experience it as a sort of -- almost a right. I just read that they're going to deploy -- I think this is right -- 500,000 Wi-Fi hotspots in London for the Olympics. The experience, the user experience of broadband wireless in London is going to fundamentally change. It will very quickly become the world's leading wireless city and the nature of what -- and I'm absolutely certain that that will become a huge stimulus too, all sorts of new sort of applications and services that people have because of the ubiquitous capability of that.

Now, that's being done by the private sector, but the impetus is, of course, the Olympics. And so there's a deadline, and all of the sort of roadblocks that would normally be there that Randall's talked about where -- (phone rings) you see, isn't that great? -- if I was Rudy Giuliani I would say, "Hello, dear", right? Remember that?

Oh, so, if you have the Olympics as a forcing event, all of the sudden, you know, the towers go up and the permitting time gets shorter and the people who thought that they kind of had to be very careful about who used what and what spectrum was over -- all of the sudden find ways to solve the problems, you know what I mean, and so what we need is, rather than some legislative change that takes, you know, two years of hearings and another couple of elections to sort their way out, we need

kind of a problem solving mentality that can work at the pace of -- the pace the industry is working at.

So, it's not legislative, regulatory change, it's a change in the way we work, which has happened all across the American workplace to make things happen much more rapidly and hasn't worked in government.

MR. WEST: So, Randall, Glenn has mentioned a bunch of new things coming, mobile payments and so on. When you look ahead over the next five years, what are the trends that you're seeing, what differences, what new apps may be coming online?

MR. STEPHENSON: Well, what Glenn said I'd say a little differently and that is, today, when you leave home, there are three things you make sure you have on you -- your smartphone, your car keys, and your wallet -- and we are quickly obsoleting the car keys and the wallet. And the smartphone becomes the hub for everything that you do. I really believe -- and that's why we have been such zealots on penetrating as deep and as fast as we can the smartphone market because we believe that becomes the platform. It becomes the platform for the tablets. The smartphone becomes, not only how you access your automobile, but how you control your automobile, and think about all the content is now in the cloud, but the smartphone becomes the platform by which all of that happens.

So, you're synced up with all of your contacts and your maps and your music and all of those types of things. The smartphone does become your wallet. It becomes how you keep coupons, it becomes how you get promotions, it becomes how you conduct commerce day in and day out, and so you can just keep going with this. Healthcare, what happens with healthcare? And I believe the smartphone will be a hub for this, but we -- many of us already, embarrassingly, have devices connected to our body that is giving us diagnostic information, and it's happening real time. And so what does that mean to the delivery of healthcare over time? I think it's radical in terms of what it does to delivery of healthcare.

You think about how you monitor your home. So, we're launching a new business and we're investing very aggressively here in many devices that go inside the home to monitor various aspects of your home, and these are all wireless devices, either Wi-Fi or LTE enabled devices, and so you're literally, by your smartphone, controlling all aspects of your home, whether it's the heating and the air conditioning, the lights, the garage door, is it open, is it closed, cameras -- we all have cameras in our homes and we're looking at these smartphones and seeing what's going on at any moment in time and monitoring children, you know, and you just go on and on and this all becomes just a really basic platform that

begins to dictate and change how we're literally living our lives.

And so, I don't think -- in fact, I'm quite confident, I'm not smart enough to tell you over the next five years specifically where this goes. What we're -- what I think we, as an ecosystem, have to be about and what we at AT&T are about is build this infrastructure -- that's the long pole on the tent -- pull the spectrum together, build the infrastructure, and then begin to expose this to the guys who go out and invest in the devices and the software, and so forth, that take advantage of this and let the genius of the market go and really blow this out. That's why we're excited.

MR. HUTCHINS. So, let me give you another example. I was looking the other day at a new iPhone application that's being developed -- it's not available yet in the market -- where you take a trip -- it actually works for more than just trips, just as an example -- and everything you need for that trip is in this iPhone app. It's not only your ticket for the airline but it's also the notification that your flight is late so that you -- and then it changes the pickup for your taxi at either side to be consistent with the change in your flight. It's got all your reservations for your rental cars and for your hotel rooms and all that stuff, and all that is also adjusted if your flight turns out to be late. It's all of your coupons that you might get -- be offered that are specific to where you're going. It's travel information about various places you're going to go, so if you're

going to Alhambra, there's kind of a piece of information there about what that's all about. And it goes on and on and on. There are a few other things I'm not thinking of. It's the contacts, the emergency contacts that you need in that area, so if you're in this area it tells you how to call the U.S. consulate, who the local doctor is, et cetera.

The only thing that's not digitize-able is the passport. There's really no reason it couldn't be, right, and the only part of it that can't keep up is the part the government's responsible for. Right? And this just was an example of -- and so the guy says, the only thing you're going to need is you're going to need the app plus the passport. And I thought, that's interesting, because when I go they have this device where they swipe and, you know, it's like -- why can't -- and so the point is, it's just -- there's a way -- the massive efficiencies that are provided -- and there's two things that are going on in what Randall talked about, which are both, I think, good. One is huge increases in productivity for all of us that come from these devices. You know, being able, if you're in Chicago and -- did I leave the door open for my garage in Austin? You know, just to be able to kind of close it is extraordinary. Instead of having to get on the phone, call the neighbor, neighbor's not home, find the other person, walk over, is it open, you know, the half hour of getting your door closed goes to like 30 seconds, right? And that's a massive productivity increase

both for people and for enterprises.

And also, the huge improvement in the consumer experience and the quality of our lives as a result of accessing what information we have, we need, when we want to have it, is an enormous thing. That mentality -- what we can do in government -- that mentality needs to come to government. Increases in productivity, improvements in experience, reductions in costs, reductions in latencies -- that's some smart -- technology can provide smart government, but government is, by far, especially federal government -- state and local are closer to the people are a little bit better -- is the next step that we need, I think, and that's something government can do, and it doesn't require legislation.

MR. STEPHENSON: It's interesting to listen to you say that because one thing we have seen over the last three or four years during the economic down cycle is businesses, particularly large businesses in the down cycle have actually stepped up investment in the things that you were just referencing and they stepped up investment in this because of the productivity, and so business has used these kind of technologies and these capabilities to make themselves healthier for when you come out of this down cycle taking off.

What I've watched is, we have large, large customers that our governments, across the nation, in the down cycle, they've gone the

other direction.

MR. HUTCHINS: Right, cut back.

MR. STEPHENSON: They've pulled back the investment and so if you watch business, those are the times when they double down and make the investments. You watch governments in down times, that's the time they pull back. And it's just kind of an indication that we have a reverse cycle with government versus business.

MR. WEST: So, you're a Keynesian.

MR. STEPHENSON: I would say I'm very far from it.

(Laughter)

MR. STEPHENSON: But I would say -- no, but I will say that investment in true infrastructure and productivity-type things in government can do nothing but be healthy for economic growth and stimulation. It makes government more efficient.

MR. HUTCHINS: Right, and if you look at the world from this perspective and you go back to sort of what we did in 2009 with the stimulus, if you think about now -- if we'd spent the same amount of money but been left with a renewed infrastructure, better roads, better bridges, better airports, and a broadband network, right, we might not have a different set of economic conditions today, but we would have something that we invested in that we could begin using to create the

platform for growth.

MR. STEPHENSON: Absolutely.

MR. HUTCHINS: So, if you look at the world from this perspective, you do very different kinds of things than we have chosen to do.

MR. WEST: Okay, one last --

MR. HUTCHINS: And that's not a Keynesian versus something else, that's sort of a growth agenda versus sort of a holder historic way of thinking about things.

MR. WEST: One more set of questions and then we'll go to the audience for your views. Now, each of you have kind of traced out a lot of opportunities, great innovations taking place, new things that are popping up on the horizon, what are the things that could derail this? What do you worry the most about?

MR. HUTCHINS: I'll bet you 25 cents I know what he's going to say, I'm going to say the same thing.

MR. STEPHENSON: Go ahead.

MR. WEST: Let's see if you're right.

MR. HUTCHINS: Back to my theme of what government needs to do is what it can do, having a long-term plan for fiscal balance is, by far, the only important thing that government can do.

MR. STEPHENSON: You have expected this from me and not from him, that's why I thought you should go first.

MR. HUTCHINS: Right. And the biggest threat looming out there for American prosperity is our failure to get our fiscal house in order and finding ourselves 10, 15 years from now in the same situation as the Europeans are facing. And, by the way, if it takes 10 or 15 years to get there, in actuality, the markets will price it in far in advance of that and we're going to see another mini version of that, sort of like the prequel, if you follow the *Star Wars* movies, the prequel will be this fiscal cliff we're facing between now and the first of the year. And that is something which is 100 percent in the control of the people in this town. It's something they can do; they have the power and the means to do that. That's the biggest issue.

MR. WEST: Randall, your greatest threat.

MR. STEPHENSON: He nailed it. The fiscal situation in the country is the greatest threat to not only our business model, but just, I believe, vitality and prosperity in America. I cannot overemphasize the importance of that. I would tell you part and parcel to that is the whole taxation system around corporate America and do we have a system of taxation that incentivizes and promotes more investment like we're discussing here or does it actually serve to detract investment and so forth

in this industry.

So, I think, getting the fiscal situation, the tax policy right is absolutely critical. But there's one other element, and I know you'd be disappointed and surprised if I didn't mention this, and that is -- and Glenn has been hitting on this -- the regulatory framework, how we regulate business. I'm not saying business should not be regulated, but the approach to how we regulate businesses has got to be completely rethought, and when you think about all the things that we have discussed here, it's an issue of velocity.

What you're seeing is velocity and the countries and the companies that win are the countries and the companies that have the greatest philosophy in terms of innovation and productivity because absent productivity, you cannot have prosperity. The arithmetic just requires more -- productivity for prosperity.

And the regulatory approach that we have, pervasively across the country, is one that does nothing but slow down velocity in business. And I often caution people, it's not the regulations, it's the regulators, and what is the mindset in terms of how we regulate industry? I spent last week in Silicon Valley and I met with a lot of the West Coast Glenn Hutchins out in Silicon Valley --

MR. HUTCHINS: That's a frightening thought.

MR. STEPHENSON: And a number of them are doing deals, trying to get things done, and I'm hearing the Silicon Valley crowd talk about, we cannot get our deal -- which is a start-up company somebody's buying -- through an FTC review or through an antitrust review, and you're thinking, really? Small start-up-type venture capital investments are now beginning to really experience and bemoan the pace of regulation and what it's doing to the pace of their business.

I think that's a huge variable that we, as a country, need to address. How do we enhance the velocity and the productivity of businesses like ours?

MR. HUTCHINS: Let me add something to it, which is, the way I think about it is consistent with that but a little bit different, which is that, we're in a period, I believe, of long-term sluggish growth and, unfortunately, high unemployment for a very long period of time as we work our way through the debt overhang. I've talked about that -- I don't need to talk about that now, and so during that period I think we have obligation -- opportunity, if not the obligation, to do two things, one is to solve this fiscal problem, that's the big macro issue, but also there are a host of microeconomic problems that are inefficiencies in our economy that we have the opportunity now to work our way through so that we create the conditions for growth once we get the debt overhang behind us

and can grow again. The tax system is one, the regulatory burden is the other, and it's not the -- again, make a point, neither Randall or I are saying that markets and the economy should not be regulated, it's the weight of the regulatory burden and the uncertainty associated with it that's the big problem. And we need to move to smarter regulations just the way that we moved to smarter other things.

Immigration policy, extraordinarily important to kind of address, education, which we're focusing on, and infrastructure. And so we've got a time period in which there are a half dozen things that if we get them right over the coming years, if we get fiscal balance, address underlying economic inefficiencies in our country, then we have the opportunity to do something which I think very few societies have ever done before, which is kind of restore our economic preeminence in a time period when, you know, there's a competitor on the landscape that has a chance of eclipsing us.

MR. HUTCHINS: Yeah.

MR. STEPHENSON: And that's what we need to do. That's the agenda for getting this right, and none of that is about trying to advantage business over the consumer or business over government. It's trying to create the conditions for all of us to prosper.

MR. WEST: Okay. Let's bring the audience into this. So, if

you have questions you can just raise your hand. Over here we have two questions. We have someone with a microphone coming over. So, if you could give us your name and your organization and we would ask you to keep your questions brief just so we can get to as many people as possible.

MS. GRUENWALD: Juliana Gruenwald with National Journal. I just want to ask about spectrum sharing. There seems to be more focus on that these days as opposed to clearing up spectrum. Can you talk about whether you think that's going to address the shortage you see looming?

MR. STEPHENSON: I'll go back to something I said earlier. There are a number of things that will materialize and develop over time. Spectrum sharing is undoubtedly one of those things that -- cognitive antennas and so forth -- that will allow, you know, multiple -- like, agencies of the government and private enterprise to share spectrum. That technology is nowhere near prime time and we don't see that it provides any kind of meaningful relief in the next five years.

Over time, absolutely it will, and I think there are a number of things over time that relieve the shortage. In the short haul, this is just a supply issue and it's putting to work what is presently in the marketplace. If you really want to move the needle on this in the three to five-year time

horizon, you go inventory what is out there in the market in the hands of private industry today and how do we motivate and incentivize getting it to its highest and best use in the short run. You can move the needle on that. And, again, I will say it, the FCC has -- they've really begun to move here, and so a number of transactions where we have tried to buy spectrum from folks in the industry, they're moving those along, they're getting them approved in fast order, and that just has to become a way of life in the industry.

MR. WEST: Okay. There's another question. Brooks, did you have a question?

MR. BOLIEK: Brooks Boliek, Politico. Are you guys going to bid for the 700 megahertz that Verizon wants to give up in the SpectrumCo deal?

MR. STEPHENSON: Of course. And probably any other spectrum that came out we would bid for as well.

MR. HUTCHINS: I have no comment.

MR. STEPHENSON: Yeah, I mean, the spectrum that Verizon has commented on that they would be selling is spectrum that pairs perfectly with ours, and if we were to have access to that spectrum, this gets to the point that I made earlier -- if we were to have access to that spectrum, I'm not exaggerating, we could put it to work in 60 days,

literally, 60 days that spectrum would be up and running and hot.

MR. HUTCHINS: By the way, Politico is a great app and I'm not meaning to give them a commercial, but if two years ago you told me I was going to get most of my political news by touching a little thing on the screen of my handheld device, I would have told you you were nuts. That's just an example of the kind of things which this is all providing us.

MR. WEST: Okay, we have another question right here.

MR. BOLIEK: Subscribe to pro.

MR. HUTCHINS: What's that?

MR. BOLIEK: Subscribe to pro.

(Laughter)

MR. STEPHENSON: You can't get any of the good content if you don't, I've learned.

MR. WEST: Now, that is an ad. We have another question right here.

MS. HIGH: Kristal High, Politic365. Considering that African-Americans and Hispanics tend to over index in the use of mobile technologies, could you speak a little bit to the potential detriment to these communities if we don't get spectrum policy allocation and use right?

MR. STEPHENSON: I'll start. This is the issue for us. And think about what's materialized over the last five years and how we've

gone from zero smartphones to, in our case, 47 million, but billions worldwide. What that has allowed is the broadband revolution to move down into lower demographic profile customers, poorer folks in the population, and why is that the case? The issue has never been access to broadband. The reason we could not get penetration into the African-American and Hispanic populations was because they didn't have access to a $2,000 computer. All the sudden, you have a smartphone and we're selling really great smartphones for $50, some were given away free if you signed a two-year contract. And so now all of the sudden you have, as Glenn keeps pointing out, in the palm of your hand you have a computer and the African-American community, Hispanic community, are over indexing in how they access the internet by virtue of these devices. That's a very important development that's transpired.

In fact, they're accessing the Internet higher than other populations by virtue of this device.

Now, spectrum shortage. And you are in a capacity-constrained environment. So, what do you do? When you're in a capacity-constrained environment you begin to move price, and you heard Glenn talk about it. Since the beginning of the year prices have moved up on data, prices to upgrade to these have gone up just because we're running out of soap and so prices move up. As prices move up, what are

you doing to the access of folks in the lower demographic profiles? Their access goes down.

And so, if we don't address this, if we don't address getting more capacity of spectrum to the market, then we're going to begin to defeat the very thing -- this bridge we've begun to build on the digital divide. We're going to recreate a bridge. And so we really have to address this. This, for the first time, is giving us a way to access those markets with broadband.

MR. HUTCHINS: I mean, it's terrific. I'm very interested in these issues. I'm chairman of the board of the African-American Studies Center of Harvard, so I'm very interested kind of the things you're raising, and I was meeting yesterday with the head of one of the largest libraries in the world and he said, you know, we used to have to have these computers in libraries because our inner city populations couldn't afford computers. He said, now almost all of them have smartphones. That is democratizing information in a way -- and now what we're trying to do is figure out how we can provide them with services in our library environment that allows them to use those smartphones to find the information they need for educational purposes. I hadn't thought about that before. It is a huge -- this was just yesterday -- it was a huge insight for me about the democratization capability of the price point for these

devices and the capabilities they have. So, you're making a really good, important point because I think we need to think about, as we think about things like education and access and all sorts of other things that we're working on.

MR. STEPHENSON: And even going back to your point on how government does business, government needs to figure out how to allow its citizens to interact by virtue of these devices.

MR. HUTCHINS: Absolutely.

MR. STEPHENSON: So, business -- you know, one of our biggest initiatives is we want to make sure you do business with AT&T by virtue of this. You want to upgrade, you want to buy something, you want to change your rate plan -- do it here. Don't -- you don't have to come to the store, go online, use this. Government needs to begin to move that way aggressively because that's how the population is accessing information now.

MR. WEST: Okay, on the aisle in the middle. Right there. There's a microphone coming up. Yes, right there.

MR. GOLDSTEIN: Hi. Phil Goldstein from FierceWireless. I know we're not at an investor conference. I have two questions, if I may. You mentioned early --

MR. HUTCHINS: Can we pick which one to answer?

MR. GOLDSTEIN: You mentioned earlier that we're coming up on the five-year anniversary of the commercial launch of the iPhone. How, holistically, do you think the iPhone and the smartphone wave that followed has changed your business and the way that you think about your business, Randall? And then also we're here talking about innovation. This morning Verizon Wireless announced their shared data plans. You guys have talked about your philosophy on shared data plans. Their model is basically a big bucket of data that you can have ten devices connected to it, smartphones, tablets, and there's a monthly access charge -- $40 for smartphones, $10 for tablets. You guys have talked about how with shared data plans you want to bring more devices onto the network. Can you -- in light of Verizon's plans, can you talk through how your philosophy, you know, sits?

MR. STEPHENSON: So, the Verizon announcement this morning, it's really not a surprise, right, I mean, think about what that pricing approach they put in place looks like, and that is, the value is in the data and the voice and the texting are commoditized. And that's where this is going. At the end of the day you ask, how has it changed our business? We've become a mobile data business. I mean, the networks are designed and engineered to accommodate data and video now, and voice and texting are just apps that ride on top of it.

And so the pricing, you know, obviously, needs to begin to reflect that and Verizon's pricing that they announced this morning is exactly what we have been kind of signaling in the marketplace for the last couple of weeks and that is, it becomes a data-centric world, data-centric pricing, and then voice and messaging just right on top.

And so, that's one of the key ways it has changed our business and the smartphone revolution has changed our business. We think, we engineer, we design all around mobile data, the mobile Internet. And when you think about not only how we engineer and design, how we allocate capital. Mobility is consuming the lion's share of the capital we invest in this business, and even where we're investing in fixed line infrastructure, it's still things like fiber to cell sites, backhaul, and so forth, right, so it's all about delivering this mobile experience that's consuming the lion's share of the capital in our business.

MR. WEST: Okay, right here is another question. There's a microphone -- the microphone's coming over here.

SPEAKER: Randall and Glenn, isn't part of the answer here carrier grade Wi-Fi? I mean, Glenn, you talked about a half a million Wi-Fi cell sites in London, and when we think about the spectrum shortage and we look back even, you know, 25 years or 30 years to satellites and then cellular, I mean, we just keep pushing down where the access point

is, right, from a big bird in the sky to terrestrial cellular to - -so, aren't we headed to Wi-Fi? So, how is that going to impact your business?

MR. STEPHENSON: Want me to go first? We, four years ago, five years ago, said this was going to be hugely important, the Wi-Fi infrastructure, and so we went out, we bought a couple of companies now to really enhance our Wi-Fi coverage. So, we've gone hard at this, we've been investing in Wi-Fi. We own Wi-Fi connections in hotels. The hotel I was in last night, you know, I'm just offloading my traffic onto the Wi-Fi network --

SPEAKER: Or on loading it, from the Wi-Fi network to the cellular.

MR. STEPHENSON: Would be another example or another approach, right, and all of this is going to be required. So, New York is where we have done the most with this and we've gone all out in deploying Wi-Fi in New York, and I think we are probably as far along as anybody in doing things like auto-authentication.

So, the Wi-Fi hotspots that are, you know, ours, when I go in and out of them, I don't even know I'm going in and out of them, it's just automatically authenticating and I'm moving to Wi-Fi without even knowing it or consciously doing it.

In New York, where we have done the most and I think

having really good success, it's carrying 1 percent of our traffic. Now, can that continue to grow? Absolutely it will grow. What he mentioned in London is hugely important. So, Cowboy Stadium is a place I'm very familiar with, intimately familiar with, and they had the Super Bowl there two years ago.

MR. HUTCHINS: The Cowboys weren't in it, by the way.

MR. STEPHENSON: That is a fact.

MR. HUTCHINS: As a Redskin fan I just want to point that out.

MR. STEPHENSON: You're killing me, please.

MR. WEST: My condolences to you as well.

MR. STEPHENSON: Yeah, they were in the same place the Celtics will be next week, right?

MR. WEST: It's becoming a tough forum up here.

MR. STEPHENSON: So, we go into Cowboy Stadium and we light this place up with Wi-Fi and it is a very elegant and robust Wi-Fi infrastructure and it does terrific. But you said carrier grade, you know, having quality of service type guaranties where it can handle voice and where it can handle truly high fidelity, quality stream video, those things are a ways off, but I would tell you over the next five to seven years, they become hugely important.

And I think best case though -- I oftentimes understate this, but if we can get 20 percent of the traffic on there, I'd be really impressed.

MR. HUTCHINS: So, I think every complex problem -- very few complex problems are susceptible to one large solution. Right? And you have to cobble together a number of different solutions to create the whole and so obviously that's an important piece of it.

But just to go back -- so, I'm not contending that spectrum is the only thing that we need to get right in order to get all this right, but it is an important pinch point which is an extraordinarily important bottleneck, which is very much in the control of government and government can do something about. Government can do something with the Wi-Fi by permitting the deployments, but they can do something big, kind of, in the spectrum. And I think sometimes I see a clash between the way one's trained in law school to think about business, which is, you know, the more market share somebody gets, the higher the prices go up and the less they become an efficient actor. And the logic of this new industry called technology, in which we drive down prices in order to force adoption to create more use in order, then, to bring prices further down and which the mantra is better, faster, cheaper.

And so we get up every day in my business and we try to figure out how we can get this device to you next year at half the price with

twice the functionality. Right? And a lot of that comes from the more business we can do, the lower we can drive the prices for everything in the value chain. And that's what we try to do. And that logic, when we get to Washington, clashes with the classic antitrust logic from sort of people's -- antitrust courses 25 years ago, which is, that gives you too much market power and then we have to stop that.

And we have to find sort of compromises, because if we're going to drive the sort of benefits that we can by getting widespread use of this technology, we have to find a different way to think about what we allow our economic actors to do and what sort of constraints, regulatory constraints, we put around that.

That's how I think about that.

MR. WEST: This gentleman right here in the bowtie.

SPEAKER: Thank you. I spent a few years at Defense Department --

MR. HUTCHINS: Did you say the Defense Department?

SPEAKER: Yes.

MR. HUTCHINS: Oh, good. God bless you.

SPEAKER: Spent a huge amount of money on securing the information that we had. The question is in terms of the private sector, in terms of the individuals here in the room, how are we protecting our

privacy now in terms of the information that goes over these systems?

MR. STEPHENSON: You want me to go first?

MR. HUTCHINS: Yeah, go ahead.

MR. STEPHENSON: I'm going to start by talking about this environment again, because this environment, security becomes the area -- one of the things that keeps me awake at night probably more than anything. And so you think about our fix line networks and so forth. I think we do a pretty good job, and we've developed great capability over many years, of securing information in our fix line environments here when all of this information is -- I mean, just think of the information you have resident on these devices. Think of the information you have resident on your table, all wirelessly connected. What separates you from the bad guys when you have these devices?

No longer do you have firewalls and all the protections that we erect around all of our fix line infrastructuring capabilities. You are fully exposed to the bad guys with the information that's on these devices.

You ask me what is the most exciting thing coming our way, and I mentioned LTE and the cloud, and it's going to take both of these, but the reason I think that is so important, when you get these superfast networks that allows you to begin to take the critical and important information on these devices, move into an infrastructure layer, move into

a data center -- let's just say it really simplistically -- into a data center, you can control at a different level the information in that data center than you can distribute it among all of the Defense Department employees and all the AT&T employees out there carrying these devices.

And so it's a high, high priority for us to really begin to scale, leverage, and develop LTE because the speed will allow you to have a good experience when you take the content and move it off the device, get the content somewhere else other than on these devices, where you can protect and safeguard that information. Hugely important issue for us.

And I believe if we don't get that right, and if we don't really get really robust and good at these capabilities, it will inhibit what all of us are willing to do with these capabilities in these devices, because if we don't protect your privacy and your information, you're going to be apprehensive about using it for his mobile wallet that he was talking about.

MR. HUTCHINS: So, let me make a couple points. This is a really, really important point. I'm glad you've raised it. We're not going to have enough time to do it justice because you could have a session like this and barely scratch the surface of it, right, but there is a -- and I know you're not making this point, but there is a sort of an interesting thing I see which is people assume that if it's on the electronic device versus the way they did it before it's now less secure.

So, every time I go to a -- talking about payments -- I go to a restaurant, you remember, they do the thing with the credit card and then you've got the copy and the copy goes in the trashcan and that's got all your information on it, and somehow that's safer than -- that trashcan with the waiter making minimum wage is somehow safer than it being on my device sitting in a data center behind all sorts of security processes.

I'm not sure that we can make the assumption that somehow this is less secure just because it's, you know, different. That's kind of point one.

Point two is that it is that our generation of kids has a very different notion of what their privacy is, their privacy interests are, than we do. And we have something to learn from each other. The kids on Facebook and other things share a lot more than we ever shared and they know it's going to be out there forever and that's just part of the way they relate to other people, and so we have to understand that their behavior changes the way our behavior is different in our case.

On the other hand, we also need to train our kids a little bit from a social perspective, there are certain things you've got to be careful about and you're going to learn the hard way from, and that's something that just has to happen at the social level, at the family level.

Third point -- and these are each big discussions, right, and

there's all sorts of questions there about do you opt in, do you opt out, and kind of ages, and all that kind of stuff, right? Got to get all that right. We should not, by the way, turn that over to some UN body to decide for us, heaven forbid.

And then third, we have to understand that the world is full of bad guys, right, and they either want our money or they're in some sort of geopolitical kind of competition with us, and just the way -- I used to do our retail investing in the '80s and there was something called "shrink", which basically means that some percent, usually about 5 percent of the goods in your store just disappeared every year because people stole, and that was just part of the business of being in retailing was shoplifting. That was, sort of, this ongoing kind of nuisance you had to manage down as much as you could.

Today, every single major enterprise of any importance, for profit or profit has been intruded upon. Every single one that I know of. And next time you meet -- for the next couple weeks, next time you meet someone running a large organization say, don't give me the details, but just say, have you been intruded upon? A hundred percent of them will say yes.

So, that's just a fact of life that we have right now and we're going to have to -- just like we defend ourselves against shoplifting in the

stores, we're going to have to be in a constant battle with the bad guys to protect our privacy, to protect our value, to protect our information, and that's just a fact of life that's expressed in a technological form, where it was expressed in an analogue or physical form before, it's the same people doing the same kind of things with new technology. It's not that the technology has enabled it; it's kind of who we are as a society that creates that.

MR. WEST: Okay, question here on the aisle.

MR. MONTGOMERY: Thank you for joining us this morning.

MR. HUTCHINS: Thank you for being here.

MR. MONTGOMERY: Learned a lot. Sure, sure.

MR. WEST: And your name and organization, please.

MR. MONTGOMERY: Ben Montgomery, Blue Skies Communication. And I heard your answer to the gentleman regarding Wi-Fi based data offload, very encouraging, and I'm wondering, as you think about that and look at that, what are you liking right now about 4G, Wi-Fi data offload and outside locations? What are you seeing that you like, perhaps, in terms of price or speed of deployment? And then, relatedly, what are you seeing that's not quite there yet for you to further adopt and expand that solution? Thank you.

MR. STEPHENSON: We kind of have a philosophy within

our engineering organization, that is, the more wireless we become, the more fix line we become, right, and so -- meaning that Wi-Fi, distributed antenna systems, and so forth, there are more and more access points to access the radio from this device, right, the more of those access networks you have, the more fiber there is feeding those, and so what you're getting is just smaller and smaller wireless cell sites, if you will, with more and more fiber infrastructure feeding all of it. And that's really an important variable because that also enhances the speed and the pace and so forth.

The down side to this is, it is painful, it's like a bad trip to the doctor to go get zoning and permitting for a cell site. It is no less painful in places like Palo Alto, if I could use an example, to get zoning and permitting for a smaller cell site. So, think about going from big cell sites, you know, one every X number of miles, to multiple cell sites within the same municipality, the permitting and the zoning -- that's where the cost and the delay and the pace for all of this comes to a grinding halt.

I think, we know these technological cycles are very predictable. We know what the cost curves are going to do on distributed antenna systems, we know what the cost curves are going to do on Wi-Fi, we even are pretty accurate at knowing how the technology will mature and how the debugging and so forth will transpire and what pace that will

happen in.

What you can't control are the things I just said, and so I fundamentally believe the cost curves on small cells, and so forth, over the next five to seven years, they'll ride the typical technology curve and we'll be deploying those en masse. It is not going to accelerate the pace of what we're trying to do if we don't get the regulatory process right.

MR. WEST: And if I could piggyback on back of that, what about developments in cognitive radio designed to make the use of spectrum more efficient? How optimistic are you that those types of technologies will make a difference?

MR. STEPHENSON: So, this is all software, right? Cognitive radios are really as much software as anything. There's obviously hardware implications, but these things will develop, they will mature. The policies that will accommodate them and allow them to occur will develop. It's just -- Glenn said it, there is no silver bullet to any of this. It is going to take cognitive radios, it's going to take spectrum sharing, it's going to take Wi-Fi, distributed antenna. I could just go on and on. It's going to be all of the above to address the capacity issues we're talking about here. But that will develop; I have absolutely no doubt that will develop.

MR. WEST: Okay, right here on the aisle there's another

question.

MR. BUSKIRK: Howard Buskirk, Communications Daily. My question was, you've mentioned incentive auctions already today and my question was, is it clear at this point that there's going to be a lot of broadcaster buy-in and incentive auctions? Aren't there still a lot of unknowns? And is it possible that that's not going to provide, you know, a substantial amount of spectrum that could help carriers in a meaningful way?

MR. STEPHENSON: Great -- it's the question, okay, and it's why I am harping so much on no silver bullet and that is not a short-term solution to anybody's problem for a number of reasons.

You mentioned one, we have got to go identify a lot of broadcasters who are willing to sell their spectrum through this approach and this process that's been defined. You've got to find enough of them that provide a meaningful footprint of spectrum that makes it valuable to any of us to want to come and bid on it. Once you've identified that, you have to put the auction process in place. Now, we're talking years to accomplish just to where I've gotten to now, all right? Now, let's talk about we have an auction. It's 50 megahertz of spectrum that's been identified to be auctioned off to six, seven different competitors? I mean, 50 megahertz -- we're going through 10 megahertz every ten months right

now. So, the whole industry is going to get 50 megahertz in four, five years? By the time we develop equipment, by the time we do engineering around this, by the time we have handsets that will be able to access and utilize that spectrum -- this is why we said, we're talking six, probably closer to eight years before that spectrum gets put to active use if you can provide -- can find willing sellers, bring together an auction that is meaningful to the marketplace.

So, it's got to be done. I applaud Congress. I applaud the FCC for moving this forward. We have got to keep pushing this, as hard and as fast as we can, because we've just got to keep bringing new spectrum to market, but that is not a silver bullet to any of this. That's got its own issues surrounding it over the next few years.

MR. HUTCHINS: Something I would add -- and this is not at all to contradict, but just to amplify what Randall said, and I'm sure if -- he's looking at kind of what he needs to get done today because he's got to go to the office this afternoon and kind of deliver you service, right, which is a really important thing, but if you think about it for a minute, there was a market failure associated with regulation, which was that spectrum could not be allocated to its highest and best use using a price mechanism. And that's what markets do, right?

And so what we're doing is introducing -- it will take some

time to get going -- but we're introducing a market mechanism that will enable this very, very valuable resources to get reallocated via price, not via government fiat, via price to its highest and best use. So, it will take some time to get going, but once it gets going, it will be a very valuable tool that we'll have and we'll be able to do that kind of over time.

And so it's the sort of thing that government is supposed to do, right, government can't -- there's some things you can do in terms of speeding up the -- a year to 90 days --

MR. STEPHENSON: I don't want to suggest I'm critical of --

MR. HUTCHINS: You're not at all. You're not at all. I'm just saying I think we agree entirely on this. This is precisely the sort of thing government should be doing which is to say, there's a problem today that we can fix, right, and it might take some time to get it fixed, (inaudible 1:03:05.8), but once we get it fixed, it's become a key piece of the market infrastructure of this important industry of the future and we're going to go do that.

So, while it might take some time, while it might (inaudible) solutions, it is -- the FCC should be applauded for doing it and I have no doubt that, you know, there will be some issues along the way in getting it right, but once we get it right, no doubt it will become a very, very important part of the marketplace for this industry. And I think it's going to

be -- it should be used as an example of other things government can do and should be doing.

MR. STEPHENSON: I kind of approach this, in our organization, once we release a quarter, the earnings results for a quarter, and we have a good quarter, I get the executive team together and say, we're looking a little short for this quarter, right, no time for celebration, and I guess that's what I'm saying with the FCC and Congress, great job, I mean, I love the work and it's important, but, all right, now what's next? This has just got to become a mechanical process, constantly bringing new spectrum and capability to market. MR. WEST: Okay, other questions. In the very back, in the corner over there.

SPEAKER: Hi. I was just wondering what you see the impact of the mobile banking, I guess, on developing markets and financial inclusion.

MR. STEPHENSON: Why don't you speak to that, Glenn?

MR. HUTCHINS: Look, it's going to be enormous, right, because, I mean, the incredible thing today is there are -- if you look around outside the United States, the connecting people to the grid for the first time with these low end smartphones is an extraordinary thing. I mean, it's a first, -- and there are all sorts of stories about fishermen on lakes in Africa who kind of can -- once they have their crop of fish they can

figure out what market to take it to, where the highest prices are via the devices they have. It's just -- it's a huge change. You see the same thing all across Asia.

And those are regions where they are un-banked and where there is very low security, right, for people who carry currency, and so to have them able to wirelessly connect to the banking system and the markets in which they operate as business people, is an extraordinarily democratizing thing.

I'll tell you one thing, though, so if you look at -- there's this very interesting supply chain out in that part of the world, which I don't have time to talk about, where they make the cell phones. These cell phones are made and delivered -- smartphones -- very different ways than they are in the United States and Europe, but you get to see -- one of the things that's great about technology is you get to see the future. So, in other words, Randall and I know today what you're going to have tomorrow because we're getting ready to make it today, right, and a lot of that's based upon consumer surveys.

So, you know what the people are getting, the devices most want inside that device? Is a television tuner. So, just like our kids, right, we think, oh, this is going to be great, you know, we're going to give them all these opportunities to do study and whatnot and they want to watch TV.

And so --

MR. WEST: On a small screen.

MR. HUTCHINS: On a small screen. So, it's also going to be a way people who have been cut out of the entertainment world because they haven't been able to afford not just a big computers, but the big TV sets plus the subscriptions, are going to be able to connect to information and entertainment as well.

So, it's a full range of improving both the personal as well as the professional experience.

MR. STEPHENSON: We are in complete agreement on the un-banked and what the smartphone gives them access to that they don't have access to today, and if you think about down market demographically, even in the U.S., you don't have to think about developing countries, but even in the U.S., this is a market that is very accustomed to handing cash to somebody and saying, load this phone up with usage and I'll consume it over time.

Well, it's not a leap for them to say, and then here's more cash, and that is on here, and that's how I do my purchasing and so forth.

MR. HUTCHINS: That's a very good point.

MR. STEPHENSON: So, we think that's just a really hot item for the smartphone industry. It's an area where we are focused and I

think you will see it probably mature in some of the developing countries quicker than perhaps even here.

MR. HUTCHINS: By the way, one thing people don't understand is, you know, this is not a new thing, so Skype, which is a company I used to own for a while, people all think about Skype as being, you know, the cool stuff you do when your daughter's doing her junior year abroad in Hong Kong and you're talking to her at night and whatnot or you get to see your grandkids or whatever it might be, but the vast majority of the business on places like that are people who are economic immigrants to countries talking to their families at home, and the cost of that connection is 10 percent the cost of international long distance, and so it allows people who have to -- who have to travel the world for economic reasons to stay connected to communities they come from at incredibly low prices, and that's another way in which technology has made things accessible and democratizes, it's really, really important.

MR. WEST: In the very back in the corner over here.

MR. KIRBY: Paul Kirby with TR Daily. Randall, you and others at AT&T were very critical, of course, of the FCC when you withdrew your applications to buy T-Mobile. Today, you've commended them several times. Is that more of a kinder touch, if you will, than you were when the T-Mobile deal fell apart?

MR. STEPHENSON: I don't know if it's a kinder touch. I just -- I'm trying to reflect reality.

MR. HUTCHINS: I'm making sure that I'm the only one who criticized them, not Randall.

MR. STEPHENSON: No, I have been critical, and the things that I have been critical of are some of the issues that I've discussed here. I mean, what we're trying to do is encourage the FCC to bring some level of predictability into our industry and predictability in terms of, well, how much spectrum can we own? What deals can we do? What spectrum can we go out and try to procure? And if we go out and do a deal to procure spectrum, how long do we think it should take before we can actually put it to use?

And so I've commended the FCC here this morning because what we're seeing is a stepped up pace. Now, I would tell you I'm still -- I would still challenge the FCC on helping us understand what the rules are, because it's not clear to us, if we go do a spectrum deal, how much we're allowed to own in a given market and exactly what are the rules surrounding that.

So, I've said publically that the industry is a little bit stuck right now because we really don't know what the rules and the expectations of the regulatory arena are in terms of how much spectrum

can you aggregate and own. And so we are all watching very closely and waiting very patiently on the Verizon-Cableco spectrum deal to get approved because we're anxious to see, really, what expectations can we glean out of that transaction.

So, I'm just -- you know, I'm just, I guess, reflecting an attitude that is indicative of how the FCC has been performing in terms of spectrum approvals. I think they've done an admirable job over the last couple of months.

MR. HUTCHINS: This is a really important point I just want to amplify a little bit, which is -- to make a broader Washington point, which is that we've talked a lot about regulation. One of the key problems with regulation is the associated uncertainty, because business people need to make decisions and they need to know what the rules are within which they're making the decisions.

I was unaware of this, I've been told this second or third hand, I could be wrong, things move rapidly, but I was with a group of bankers who were talking about this issue the other day and they said, one of the key reasons why -- look, one of the big problems we have in the United States is housing, getting the housing market moving again. We don't have a syndicated market for mortgages anymore and one of those reasons is because of the failure to sort out the rules for syndication

associated with Fannie and Freddie. So, we've literally been waiting years, apparently, for the rules that allow them to turn back on the syndicated mortgage market in a time period in which we have a huge housing problem.

And, so, there's just a massive amount of uncertainty, as a result of that uncertainty, nothing's happening, and so the -- one of the key things you could do in this environment in addition to making the rules as lightweight and cost effective as possible, is to create as much regulatory certainty as possible, so that once you tell people the rules, they will make decisions and act, and that's a very, very important thing that can be done here, doesn't require legislation.

MR. WEST: Okay.

MR. STEPHENSON: Can I hear an amen?

MR. WEST: Okay, we'll take one more question on the side over here.

MR. BARBAGALLO: Hi. Paul Barbagallo, Bloomberg BNA. On the issue of spectrum sharing, how does the investment community feel about policymakers' efforts to enable greater spectrum sharing? Because, you know, from an asset standpoint it becomes a very different proposition for carriers.

MR. STEPHENSON: Wow, I can't even begin to answer the

question because it would have so many “it depends” attached to it, right, it would depend on how shared spectrum were -- how’s it priced, you know, how do you pay for that asset, and what is the mechanism for accessing it. So, I mean, it would just depend.

I would suggest to you that if it were done appropriately and in the long haul, if the technology were elegant and allowed, you know, us to move customers in and out of that over time, I think the investment community would view anything favorable that would allow the industry to continue growing.

The problem people look at right now with our industry is, you know, are you constrained on growth because of capacity constraints? And, so, it’s a big “it depends”. I don’t know if you have any thoughts on that.

MR. HUTCHINS: No, I think that’s right.

MR. WEST: Okay. We’re out of time --

MR. HUTCHINS: I’d like to ask one question, if I can.

MR. WEST: Sure.

MR. HUTCHINS: Which is, Randall, can you tell us what the next iPhone is going to look like? Come on, you’ve got to know.

MR. STEPHENSON: Actually, I can’t. No.

(Laughter)

MR. WEST: Okay, I want to thank Randall Stephenson and Glenn Hutchins for sharing their views with us. Thank you very much.

(Applause)

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I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

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