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**Tamara Shoemaker**

Welcome to the Cybersecurity 313 Podcast at the Center for  
Cybersecurity and Intelligence Studies at the University of Detroit Mercy.  
It's great pleasure to introduce our guests for today's podcast Chris  
Sorensen who is a senior cybersecurity researcher at GE Digital. He's got  
over 30 years of IT experience with 10 of them being cyber round. He has  
worked on automotive power generation financial services academia and  
the defense industry and it's with great pleasure that I invite him to our  
podcast to talk with us for a few minutes. My first question would be  
Chris how does the stay at home stay safe new work policies been  
affecting your everyday life.

**Christopher Sorensen**

You know I've been working remotely for 10 years so not a big deal for me  
other than I now have; both kids are home from college so we've doubled  
the number of people in the house. And so we are our family dynamic is  
shifting and we're re examining the concepts of personal space and  
shared space and those kinds of things and getting used to that. But you  
know. My focus at work is shifted a little bit to supporting remote people  
because you know we have shifted around 200,000 employees to work  
from home. All around planet Earth. In ten different languages every time  
zone.

**Tamara Shoemaker**

So all these remote things all the new with the new wrinkles that come  
with having everybody read them out. So it's not so much for you guys  
because you're used to it but all the other employees are not right.

Right. Right. And well if you're somebody that has never worked remotely 00:01:50  
the laughs of Joe Public well just flippantly say oh big deal. Working from 00:02:02  
home. And it's not that easy to just flip a switch if you've never worked 00:02:04  
from home. Even if you use a computer at work you might not have your 00:02:08  
home set up to work from home. So we spent a lot of time trying to get 00:02:15  
employees just set up to work from home. And then they never had a 00:02:20  
laptop. We had to order a laptop ship it to him. Teach him over the phone 00:02:24  
how to set it up and connect in remotely. And you have no idea what the 00:02:31  
network situation is like at home. You know it's called The Last Mile. AT&T 00:02:36  
or Comcast or Spectrum or charter whatever your internet services might  
be pretty robust. But when it gets to your home. If you don't even have — 00:02:47  
if you're home Wi-Fi is not set up to support all these multiple devices  
especially with video streaming now all the time. You might not be able to 00:03:01  
effectively work from home. And. Those ISP is. Comcast and Charter and 00:03:05  
AT&T they're scrambling to they're not used to this big shift in. People 00:03:17  
moving from the big fat Internet pipes that go into their building at work.  
Now they're shifting all these people to these little teeny Internet pipes 00:03:23  
that go into everybody's homes and the system globally is straining. So 00:03:33  
there's lots of moving parts to this thing. So you can't just say at work 00:03:37  
from home. It'd be one thing if it was. Just one company said that and it 00:03:41  
was just temporary like if we had a if we had a fire in our building and we  
had to work from home for a week. One company that's fine. But what 00:03:53  
happens when it's every single person on planet Earth that's not work  
from home for months maybe half a year. Right. It's just it's not easy. No 00:04:04  
no I didn't. I should we should probably just recorded that. 00:04:09

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**Tamara Shoemaker**

It is being recorded so I might I might grab it and stick it in another place. 00:04:11  
So it is. So I might just grab it and stick because that is really good. 00:04:16

**Christopher Sorensen**

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Your editor can do some. 00:04:20

**Tamara Shoemaker**

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Correct. Correct. Very good. Yes. Absolutely. So. OK. That you know. 00:04:22  
Wow. Right. So that's I listen to a lunch meeting earlier with the women in 00:04:28  
technologies group and they had Microsoft down there and they were  
talking about how they've been helping the medical community make that  
kind of transition so that they could do a lot of that triage outside of  
physically coming in and figuring out the thousands and thousands and  
thousands of people who have a cough and suddenly think they've got it  
and they need to go rushing into the hospital. And I mean I guess just 00:04:59  
even the traffic on their website just in general has been enough to bring  
them down. So and they've had to learn how to do teams and and you 00:05:05  
know all that stuff on the fly which we same as me I've never used Teams  
before. I use Google and just you know any kind of this kind of meeting 00:05:14  
that kind of thing stuff too. So now suddenly my university is all all in on 00:05:19  
Microsoft product and teams and no one's really used it. We've had it for 00:05:26  
a couple of years but we've never really used it. Right. And any kind of 00:05:30  
you know. So it's all brand new to all of us. So you. 00:05:32

**Christopher Sorensen**

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Know to learn how to use the tools. 00:05:35

**Tamara Shoemaker**

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Where is everything. I don't know how to. Yeah yeah. Whereas everything 00:05:37  
and even people who use these kinds of things all the time like me you

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**Tamara Shoemaker (continued)**

know it's like OK. But out now on this. Where is that at. You know. So it 00:05:45  
was it's been a bit a little bit you know so I'm getting just a tiny touch of  
what it must be like for people who are totally not equipped for this and  
suddenly they're you know and they were saying that the medical  
profession is normally I mean everything is face to face. You know even if 00:06:03  
they have a meeting it's you know let's have a huddle. We're all in this you 00:06:06  
know and they all pile into someplace and they all do it all face to face  
and so now they're not they can't do those kinds of things and never ever  
do. Relearned how to do all that on the fly right. Under the worst pressure 00:06:14  
known to man. Right now. So. 00:06:21

**Christopher Sorensen**

Similarly like you said it doesn't work. It's similar situation with schools 00:06:22  
and teach.

**Tamara Shoemaker**

And there's no difference right. 00:06:29

**Christopher Sorensen**

You know that I've been teaching online and have kind of figured that out. 00:06:31  
But it's taken some time to get there. My wife has got 30 years in 00:06:36  
teaching elementary school. So she runs a computer lab for four and five 00:06:44  
year olds. 30 of them. In a computer lab. And it's it's not so easy to just 00:06:49  
off the cuff. Say OK well let's work let's teach from home now let's do 00:06:56  
remote learning. Can you imagine doing that with a five year old or thirty 00:07:01  
five year olds. Right. It really doesn't translate well. And that's assuming 00:07:08  
that every one of those kids has a device at home and an internet  
connection. That's not a very safe assumption. 00:07:17

|                                                                                 |          |
|---------------------------------------------------------------------------------|----------|
| It's not add on. It's also why right now they haven't decided whether or        | 00:07:19 |
| not they're even going to give any get give any let you count any of the        |          |
| time that that they're getting school right now yet that hasn't been            |          |
| determined whether that's going to count or not because. There are the          | 00:07:33 |
| ones folks that don't have any connectivity and aren't able to do that          |          |
| online. And so the equity issues. Right. So that's right. Right for the         | 00:07:39 |
| group. Yeah. So they have to know you have to decide you know at a              | 00:07:45 |
| Michigan department of education level and the governor's office and all        |          |
| that kind of stuff. Each individual state going to have to decide did all this  | 00:07:52 |
| stuff work. You know did it count or doesn't it count. And you know how is      | 00:07:56 |
| that all going to play out at the end and you're right that the differences     |          |
| between folks that are able to just kind of do it. Because they've been         | 00:08:06 |
| doing bits and pieces of it already or have been or in the ones that are        |          |
| just brand new. And like you said the age levels I just dumb. My son just       | 00:08:12 |
| as did Facebook reading with me live video with my granddaughter who is         |          |
| one. Where I read her stories on Facebook and it's very difficult to I mean     | 00:08:22 |
| you know they a different set of skills doesn't it. I'm just trying to figure   | 00:08:34 |
| out you know know how to how to read or you know how to read a simple           |          |
| child story online and make it you know so that she can understand it and       |          |
| make it an interactive thing for her. So I can't even imagine actually          | 00:08:46 |
| teaching any kind of thing with kids and in that kind of situation. None of     | 00:08:55 |
| us are are our hired actors and actresses do know how to you know the           |          |
| thing that I noticed is that people don't realize that they think that all this |          |
| stuff should come out like a movie and perfect. My grandson was we did          | 00:09:07 |
| a little video for me where he was making dinner. And we're trying to stay      | 00:09:12 |
| in touch right. So he's maybe this little video about making dinner and he      | 00:09:15 |

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**Tamara Shoemaker (continued)**

was done in a couple of different pieces. And at one time he blew his line. 00:09:19  
He didn't say the line that he wanted to use about his ingredients and he 00:09:21  
just lost it because you know he got it wrong and he just stormed off. And 00:09:32  
you know and it's like they see all of these videos online and they see all  
that stuff on TV and everything should be like that. So they're expecting 00:09:37  
that. Of themselves. And I'm sure of their teachers. 00:09:39

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**Christopher Sorensen**

Yeah. 00:09:42

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**Tamara Shoemaker**

Right. It's not gonna be high performance. You know comedian on the on 00:09:43  
the on the stage kind of stuff.

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**Christopher Sorensen**

He's got a video camera in their pocket and they all of a sudden they 00:09:50  
everybody thinks they're Steven Spielberg you decided to push record  
and talk into it and it comes out beautiful right. And it gives you a little bit 00:10:00  
more appreciation now for how TV shows and movies are actually made  
right.

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**Tamara Shoemaker**

Right. That's so much wanted to be able to go through what he'd already 00:10:07  
recorded when he you know it already gotten recorded. No no no no no 00:10:13  
no. Calm down. This can take a long long time to tell you to say your line. 00:10:14  
It might take you know a bunch of takes over and over again. Right. It's 00:10:18  
just very funny. But that's the thing that teachers are expecting to do now. 00:10:23  
Right. Not to mention catch up with the tech part. Of it until they. 00:10:25

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**Christopher Sorensen**

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Learn new tools. You mentioned tools you know you got to learn Teams. 00:10:31  
And we are now on Zoom here and I use different tools for Collaboration 00:10:36  
where I work. Sometimes you have to be able to switch between three or 00:10:43  
four tools that are similar functionality but right as you noted you know  
the button to do it is over here on this tool and it's down here on this tool.  
Not to mention. The cyber security implications. 00:10:57

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**Tamara Shoemaker**

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So what's this thing about the so Zoom bombs. 00:11:02

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**Christopher Sorensen**

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Well they're. Yeah. We are conversing right now. On Zoom. And it is one 00:11:06  
of the most popular remote collaboration video sharing tools available  
primarily because of its low cost. Free for All. But does anybody ever 00:11:25  
consider the security and privacy implications of these tools? There is no 00:11:37  
shortage of articles that have been posted recently about the security  
problems with Zoom and a simple search will show you those things.  
People don't realize that. There have been data breaches at Zoom where 00:11:50  
people's log in information and personally identifiable information have  
been stolen. Many people don't realize that. When you record a session. 00:12:05  
All of your recordings and your chats are stored. At Zoom. 00:12:10

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**Tamara Shoemaker**

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Right. 00:12:17

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**Christopher Sorensen**

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So any personal details that you might send to somebody are stored. 00:12:17  
People don't realize that when you log in if you when you log in to Zoom 00:12:24  
your. You can create a user name and password. And though that 00:12:29  
personal information is stored at Zoom. You're also encouraged for ease 00:12:37

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**Christopher Sorensen (continued)**

of use that you could could just log in with Facebook credentials. I advise 00:12:44  
people never to do. But if you do that then Zoom also has access to all 00:12:47  
your Facebook stuff. So these kinds of things leak out without people 00:12:52  
knowing it or even really considering it. And so we encourage our 00:12:59  
employees. To stick with the company approved products that have been 00:13:05  
vetted by the security professionals.

**Tamara Shoemaker**

I totally agree. I mean it is funny as far as you know as long as I've been 00:13:15  
doing this and as much as I know about this kind of stuff. I we use Zoom a 00:13:22  
couple weeks ago started using Zoom personally. And so it was just my 00:13:28  
family right across the country. And we're all you know trying to have our 00:13:33  
day together and see each other at one and only time I've ever done it. I 00:13:41  
know how it asks you whether you want a password or not to get in the  
meeting. And I said No it's just between my family and I or whatever I 00:13:45  
don't want them to have to remember a password. I want to write a letter. 00:13:50  
Just click and get right on and not have to worry about it. 00:13:51

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**Christopher Sorensen**

It's about convenience right. Right. 00:13:53

**Tamara Shoemaker**

And that was the very thing that this is this bomb thing is where there 00:13:55  
where that vulnerability is people who have not put passwords on their on  
their thing. So. I took you know we did it it it it was passed and I even 00:14:04  
heard about these things are no longer enough ago but I didn't realize the  
you know you think well what's the big deal. Somebody bombs into your 00:14:15  
thing or whatever but apparently they're putting explicit things up there  
and swear words and you know doing all kinds of weird whatever

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**Tamara Shoemaker (continued)**

immigrant kids were all on there. Right. So it would have been devastating 00:14:24  
and upsetting had it happen to us. And I know better. 00:14:30

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**Christopher Sorensen**

Times we trade off convenience for security. That's right. We're we're 00:14:33  
doing that all the time every day. Right. 00:14:41

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**Tamara Shoemaker**

That's one of the things today when I was listening to the gal from 00:14:42  
Microsoft she was talking about how doctors are using. Their own 00:14:50  
personal iPads and different kinds of things to help people who are in  
intensive care because they've been separated from their family and they.  
This may be the only time they get to talk to their family again. And so 00:15:01  
they're using Zoom in all those other kinds of meeting kind of things to let  
them you know speak to their family and say goodbye. But one of the 00:15:13  
things that was difficult for them in the beginning is the fact that each  
one each person had to have their own account. Right. So you can't you 00:15:20  
got grandma is you know hooked to a ventilator and she wants to talk to  
her family and suddenly she's got to set up an account first. Oh yeah 00:15:31  
right. So they they were talking about how they set up Microsoft ended 00:15:33  
up setting them up something secure that was that they didn't need to  
that. That that you know the doctor that the room had their own sort of 00:15:41  
you know private place to be able to do those kinds of things in and they  
could reach out through email to the family and the family then could be  
brought into that room. So there were sort of getting around sort of 00:15:54  
having to do all this but this technology stuff. Like you said you know we 00:15:59  
all. We who are in this sort of know how to do all this but. It's amazing 00:16:01  
how. How much things change and how quickly they happen the last 00:16:06

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**Tamara Shoemaker (continued)**

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couple of weeks. And now everybody's expect to be able to use it. And 00:16:10  
then all the security applications that there that are there out there with  
brand new users doing things I've never done before. I mean if I can mess 00:16:19  
up and do it without a password for my family I'm sure these all these new  
users or are pretty snowed in on what Bill can be and not doing.

**Christopher Sorensen**

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Yeah. And it's not just a few people. This is every person on this planet is 00:16:30  
now being forced to shift. The way they do things and get out of their 00:16:41  
routine and their comfort zone. And that's exactly what the bad guys. 00:16:48  
That's exactly what the bad guys prey at. 00:16:54

**Tamara Shoemaker**

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Right. 00:16:57

**Christopher Sorensen**

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That's their biggest asset. It's when you get out of your comfort zone and 00:16:58  
you start altering your normal patterns. Then they can take advantage of 00:17:07  
that. You're in uncertain waters. And they take advantage of that. 00:17:09

**Tamara Shoemaker**

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So that brings this up too. So the fact that cyber security is now in 00:17:12  
everybody's view right. Whereas for a long time it's only been the 00:17:22  
professionals who are trying to keep things safe that actually know about  
it and are thinking about it and that steps and all that. Like you said 00:17:30  
during this global tragic incident that we're all going through we are now  
all trying to stay connected and we're using it much more. How is that 00:17:41  
making it. How can we continue to get the message out there about how 00:17:45  
important cybersecurity is while we're trying to stay connected.

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**Christopher Sorensen**

Well it's a good question and that's really my. Focus. Out of all of the 00:17:52  
different stuff you can do with cyber security. My passion is around 00:18:04  
helping people who are not technical. Who don't think about this every 00:18:12  
day helping them understand how it does affect them. Every day. Many 00:18:17  
times. Your only awareness of cyber security. Incidents might be if you're 00:18:24  
if you're having to watching a movie about. A hacker. Or reading a book 00:18:35  
about that. And many times your only awareness if you read about an 00:18:40  
incident in the newspaper. And there are plenty of incidents in the 00:18:47  
newspaper aren't there. We see them almost every day. And this could 00:18:51  
lead you to believe that. OK there are a lot of. Companies being attacked 00:18:55  
by hackers but there are the big companies. And. Many times you would 00:19:03  
think that these are banks. They seem to get attacked a lot or the 00:19:11  
financial industry. But data from last year from twenty nineteen shows us 00:19:15  
that in reality only about 10 percent of the cyber attacks are in the  
financial industry. There are lots of industries that are attacked. In fact 00:19:27  
every industry is attacked. These are health care. These are the 00:19:33  
government industries the educational institutions. These are all attacked 00:19:39  
more than financial companies and a lot of reason is because the financial  
companies were the main focus and they have now increased their cyber  
security presence.

**Tamara Shoemaker**

So are you saying saying going after the low hanging fruit? 00:19:55

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**Christopher Sorensen**

There are going after the low hanging fruit literally agriculture. You 00:19:58  
wouldn't think of it. The agriculture industry and the food processing 00:20:03  
industry is a big target. The entertainment industry construction industry. 00:20:08

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**Christopher Sorensen (continued)**

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Travel travel and accommodations. I don't know if you've seen a 00:20:12  
newspaper this week but two days ago Marriott International was on the  
front page. Because they were the victims of a cyber attack. Again. You 00:20:25  
might you might be thinking oh that's old news. Marriott was attacked in 00:20:33  
2018. And that's true. They were well they they obviously didn't learn 00:20:36  
their lesson in 2018. They were attacked and they were fined by the 00:20:43  
European Union 123 million dollars. That was just the fine. That's not how 00:20:53  
much money they lost that's just the fine on top of that.

**Tamara Shoemaker**

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Right. 00:20:59

**Christopher Sorensen**

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123 million dollars so two years later just two days ago it was reported 00:20:59  
that another 5 million customers. Of Marriott lost their information. So it 00:21:11  
happens everywhere. It happens all the time. And it's not just big 00:21:19  
companies either. The statistics from last year show that about half of all 00:21:24  
of the cyber attacks involved small and medium sized businesses. So 00:21:34  
again low hanging fruit. If you think about it. If I'm a cyber hacker and I'm 00:21:37  
trying to make money. I could go after the big targets. And maybe score 00:21:45  
one big heist but that takes a lot of work. And like we just talked about a 00:21:53  
lot of these companies have really beefed up their their cyber defense.  
They've hired people like me. Teams of them who do nothing but cyber 00:22:00  
defense. It's so much easier for me to go after a small business maybe a 00:22:08  
mom and pop shop. That doesn't have a cyber defense team. Heck they 00:22:14  
might not even have an IT team. You know this could be a small firm of 20 00:22:22  
people where there's a bookkeeper. That's also the IT department. That's 00:22:29  
also the sales department that also scrubs the toilets on the week. Right. 00:22:37

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**Christopher Sorensen (continued)**

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And as a hacker I can hit those guys for ten thousand dollars pretty easy. 00:22:38  
Now I've heard it is pretty easy for me to make a living on ten thousand 00:22:44  
dollars. No. But if I attack a thousand companies. For ten thousand 00:22:49  
dollars. Each. That's ten million dollars. So now that's a pretty easy living 00:22:57  
for me.

**Tamara Shoemaker**

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Right. And I've I've heard I've heard a statistic that said those small and 00:23:02  
small to medium businesses that are being hit right now that one in four  
will go out of business as a result of the hit.

**Christopher Sorensen**

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That's right. They are less able to sustain having their business shut down 00:23:17  
than a big company like Marriott International. Marriott International 00:23:30  
despite paying 123 million dollars fine. They're still doing OK. Where it 00:23:35  
hurts a little in the short term but they've also got reserves and they've  
got insurance against this kind of thing. So you're small time businesses 00:23:44  
it's going to hurt a lot. That doesn't even count. Things like identity theft. 00:23:48  
That's a cyber attack against one person an individual. It doesn't get any 00:23:54  
smaller than that a single person and in 19 there were over 14 million  
people. That were victims of identity theft. 00:24:06

**Tamara Shoemaker**

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That was a million you said right? 00:24:09

**Christopher Sorensen**

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Fourteen million. 00:24:11

**Tamara Shoemaker**

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OK. So that whole it can't happen to me thing is gone out the window 00:24:13  
right.

|                                                                              |          |
|------------------------------------------------------------------------------|----------|
| That's right. Anybody with a computer or a cell phone. This thing. Is you    | 00:24:17 |
| know a little mini computer in my pocket. You're a target. And so if you     | 00:24:25 |
| think. If you read about it in the paper and think well that stinks for that | 00:24:29 |
| company about thank goodness it doesn't happen to me you're you're           |          |
| probably you probably have a false sense of security happen to you. I'm      | 00:24:40 |
| always joked well since I'm an academic we don't make a ton of money         |          |
| and I was always like well we don't have a lot of money for anybody to       |          |
| get. So you know it's OK if they you know they there's nothing to get but    | 00:24:45 |
| there is. There's your credit report right. I mean many many times what      | 00:24:52 |
| they do when they get some of this personal identification number is start   |          |
| to open up accounts and other names and other you know in other cities       |          |
| and other places that you have no idea about until it's too late. Until they | 00:25:05 |
| haven't been paying the bills you know maxed them all out and haven't        |          |
| been paying the bills and they are certainly not going to be. Going after    | 00:25:11 |
| the fictitious person that opened up the account in your name. They're       | 00:25:14 |
| going to be going after you. Know that. And it's quite a nightmare to        | 00:25:17 |
| untangle that kind of thing. It's not so much stealing actual cash out of    | 00:25:21 |
| your bank account. If you're personally identifiable information that can    | 00:25:27 |
| be monetized. Exactly like you were saying. I've seen children that have     | 00:25:32 |
| been the victims of identity theft. Kids are a really big target. Popular    | 00:25:43 |
| target for identity theft and you might initially think well my kids don't   |          |
| have any money. So what's the point. They don't have money but they do       | 00:25:51 |
| have a Social Security number and a social security number is what I'm       |          |
| after as a bad guy. I can open up lines of credit. In their name. And then   | 00:26:01 |
| quite often go undetected. For years because a child might not even          | 00:26:08 |
| attempt to take out a line of credit themselves. Usually the first thing the | 00:26:17 |

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**Christopher Sorensen (continued)**

kid does as far as line of credit is college tuition loan. Yeah someday 00:26:24  
when they turn 18 years old they start applying to college and then start  
applying for loans and that's when it's discovered that all somebody else  
stole your identity has bought a couple of cars and a house in your name.  
So your credit gets ruined. Before you've even had a chance to get a start 00:26:41  
in life.

**Tamara Shoemaker**

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Chris for those for some great insights we really truly appreciate your 00:26:47  
time. Thanks for joining us on the 313 podcast for the Center for 00:26:50  
Cybersecurity and Intelligence Studies at the University of Detroit Mercy.  
And thank you for joining us. I hope you can stop by again soon and pick 00:26:58  
up on another one of our amazingly informative podcasts.