[Narelle] Hi. Welcome to this episode of The Digital Access Show. Now, as we've gone along the last 60 plus episodes, you've heard me talk about screen readers. You've heard about Braille devices, puff and sip tools, lots of different tools that are assistive technology tools that are used by the disability community to read information.

Today, I've actually

[music playing]

brought on a guest who... who's involved with the NonVisual Desktop Access screen reader, NVDA for short. The reason I've brought him on is, you know, I do think it's a tool that developers should be aware of, should know what the use is for, and learn a little bit about how to use it themselves. It's a good testing tool. Quentin Christensen, from NV Access Online, thank you.

[Quentin] Narelle, thank you for having me, and hi everybody.

[Narelle] Quentin, can you tell us a bit about yourself?

What you do, where you're from?

[Quentin] I can. So, I have been with NV Access for 10 years now.

Before that, I was an Assistive Technology Trainer.

So, I taught people to use...

both screen readers and magnification,

and other things as well,

with one of the major blindness organisations.



[Narelle] Quentin, obviously, I use NVDA all the time. I have a severe vision impairment. I am... about 90 percent reliant on it. Can you explain to people exactly what NVDA is, and why it was built. What was the hole it's there to plug? [Quentin] Absolutely. So, NVDA is a screen reader, which is a program that will... basically read out everything on the computer aloud

to someone who's blind and can't read it visually on the screen.

NVDA will also work with,

if you've got a refreshable Braille display,

you can have it read out,

put the information there so you can read it in Braille as well.

[Narelle] Yeah. Why...

I know the story behind it,

but could you tell everyone else why, Jamie and Mick,

where it was developed and why it was developed?

Because I actually find this a very interesting...

story, I really love it.

[Quentin] Absolutely. So, Mick and Jamie met at university,

or met before university.

Before then, actually. They...

decided to, that the cost of traditional screen readers,

so NVDA is not the only screen reader.

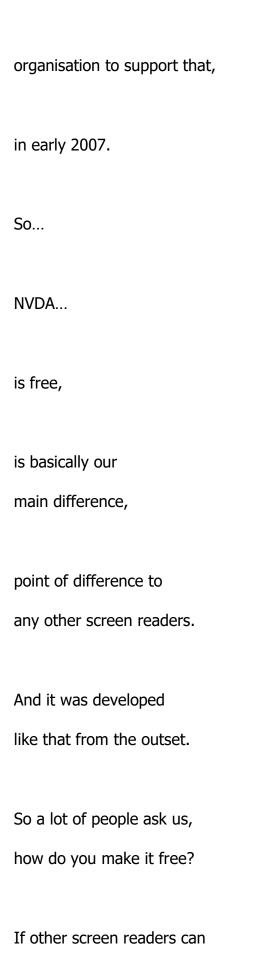
But the cost of traditional commercial screen readers,

these days can

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be $2000 or more,
which is quite
prohibitive, particularly,
not even just here in Australia.
Here in Australia, that's
quite a lot of money. But...
in developing countries,
in the Pacific,
in Vietnam, in Africa,
people wouldn't see
$2000 in, you know, years,
so that just left that
completely out of reach of them.
So, they...
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wanted to see what they could do to develop an option that... wouldn't put such a financial burden on the end user, and also just to see how far they could get with something... that was free. And you know, at the time, they weren't sure. And here we are, 20 years later. So NVDA was first developed in 2006, and you know, the first main version,

and NV Access itself as an



cost \$2000, how is yours free? And the reason is that we set out, or Mick and Jamie set out to do that from the outset. We have partnerships with some of the big tech organisations, Google, Microsoft, Adobe, and so on who help fund what we do. And in return, we give them... advice on how to make their products more accessible. So that ends up a win-win for everybody,

even if you don't use NVDA.

[Narelle] Yeah. That's something I didn't realise,

that you were in partnership with all those companies.

And the other thing that I don't think people realise,

is the actual way NVDA works.

Because when you look at a document, a Word document,

when you're reading it visually,

that's one way,

but NVDA doesn't work like that.

NVDA actually reads

the code behind, doesn't it, and translates it to make sense. [Quentin] That's right. So if you're reading a Word document, it's not so different, and your experience will be pretty similar as someone using a screen reader, compared to someone reading it visually. And we also make

sure that, for instance,

NVDA has a command to say all, or to read from the current point onwards. And if you do that, as the document scrolls, and as NVDA reads further down, we make sure that it does scroll, so it does keep up for sighted users as well. Where it has traditionally been quite different, and I'm... pleased to say that we're working on things to mitigate this,

but where it has traditionally been different is the web.

So,

you know, you might know the web is often built on,

most web pages are built on, you know, HTML,

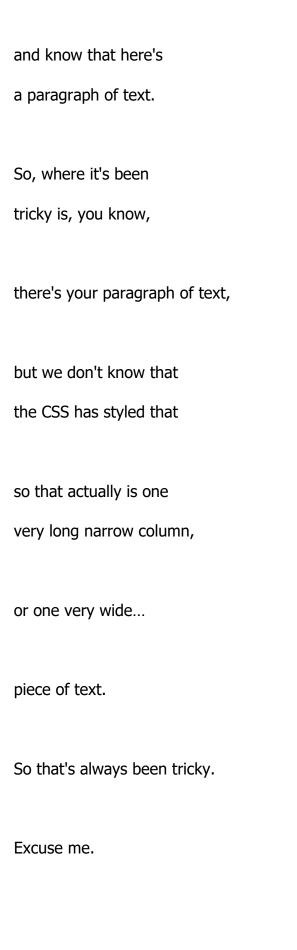
[Narelle] Yes.

[Quentin] And then,
you know, you use CSS

and other things to style it and make it look how you want.

NVDA reads, and screen readers in general,

read that underlying HTML code,



But
we have tried to introduce
a few more features
to make that a bit easier
to manage for people,
particularly our sighted
and partially sighted users.
We know that
actually only a small percentage
of people are completely blind.
Most people who, and even
people who identify as blind,
have some vision
that may or may not be usable to
work, you know, with a computer,

to read things visually or to use magnification,

but in some cases it is.

So we want to allow people to make most of...

every way they've got of accessing that information.

[Narelle] Yeah.

And this is it, because,

for me, as a developer myself,

I wrote code for many years.

And some of the techniques you use for websites

and things like that, they work well.

They work great for a person with vision. Now you can hide an object, whatever. But do you know, NVDA, these screen readers, any assistive technology tool, generally, will pick up those pieces of information that you want hidden, and it really distorts the message that you're getting... via screen readers.

That's why I

wanted to talk to you, because as a developer, one of the things we are told is to test, test, test. And you test for every variable that you can think of. Most developers today don't test for... a person without vision, or a person with dyslexia, or a person with colour blindness, these things. The NVDA tool is the tool that I'm actually saying to people, go and get it,

Test it.
-[Quentin] Yep[Narelle] What are you hearing?
[Narelle] Is it matching up with what's on the screen?
That's where I think NVDA has got a great
use as well.
What are your thoughts?
[Quentin] Yes, absolutely.
And one of the things that we do get feedback on,
is that NVDA doesn't

try and interpret everything and go, ah.

I know what that means.

I'm going to tell you this,

when that's not actually what was written...

on screen, on the page at all.

And there are times when that can be useful,

but there are also times when that can be less useful.

I know a couple of the synthesizers...

Microsoft have done this a couple of times to us recently,

where there was one example where... it would read C, U, P, S and go, ah, I know what that is. That's Cuban pesos. Which was great if you were reading currency information. Not so good if you were trying to read a recipe. -[Quentin] So... -[Narelle] Yeah. [Quentin] So, we've always made sure that NVDA... doesn't make those assumptions.

And you can put things

in that do if you want, but yep, in general, it doesn't. So, you know when you're testing something, that it will tell you, you know, what it should tell you. And if that's not clear, if you've written cups and that's not clear... what it's supposed to mean, maybe that goes back to the design of what you're writing, and that should be clearer,

rather than relying on... a screen reader or something to try and interpret that. [Narelle] Yeah, I know one that I get the giggles every time, is you'll see a capital U and a capital S, and it's always read, US. Always, where really they're wanting you to say us. And that comes back to the way that NVDA, or any screen reader, is interpreting those two letters together.

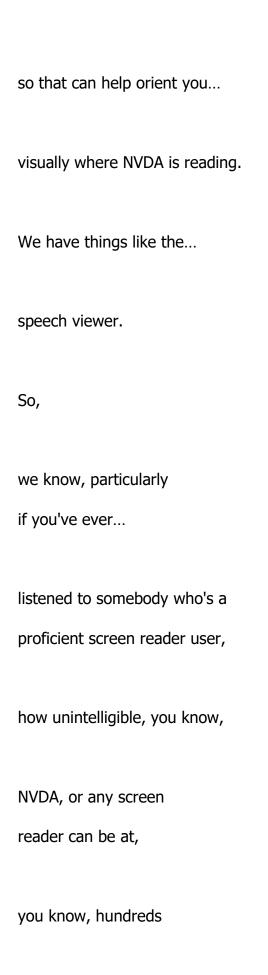
And it is such a big issue, because it actually changes the meaning of... what you're talking about. That's the value of using testing with a screen reader. [Quentin] Yep, yep. And that's one of those things that... can be worth knowing as well when you're testing, that you've written, you know, us and for whatever reason you're writing a sentence in capitals.

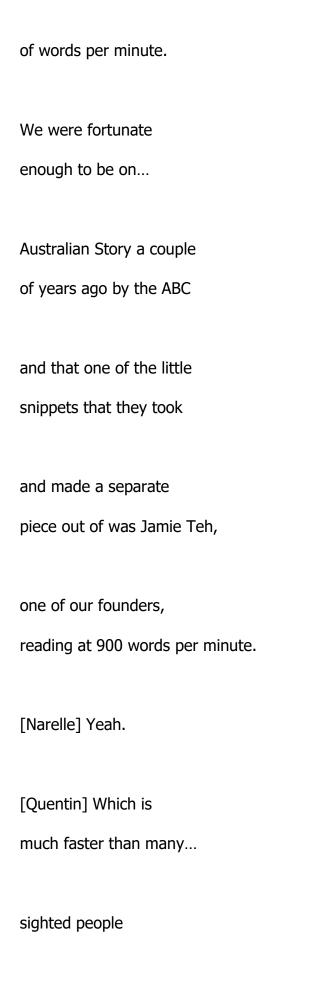
You've written it that way, and...

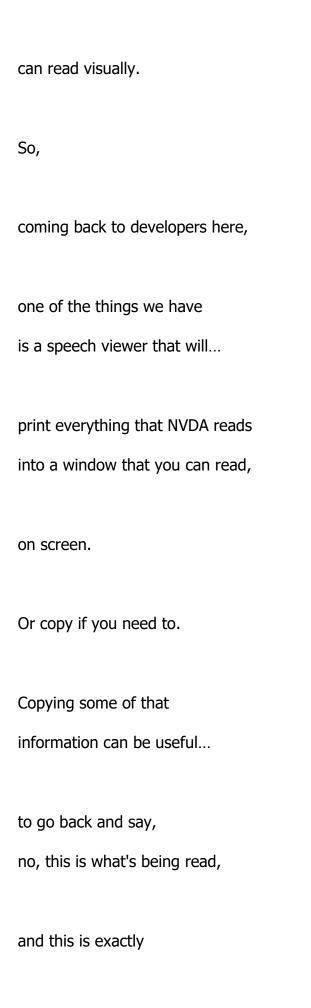
yeah, visually, you look at it, it looks fine. [Narelle] Yeah. [Quentin] Then, yeah, it's not until you test that with a screen... I don't think there's any standard that's going to tell you to look out for that until you actually test it, or have somebody test it to pick up on that.

[Narelle] That's it.

What are some other things that NVDA is really useful for, for developers, coders, designers? [Quentin] So a few other tools that we've got... in NVDA that will help developers and designers, and testers and things is, particularly sighted... developers. We've got things like focus highlight, which will draw a border around whatever currently has focus,



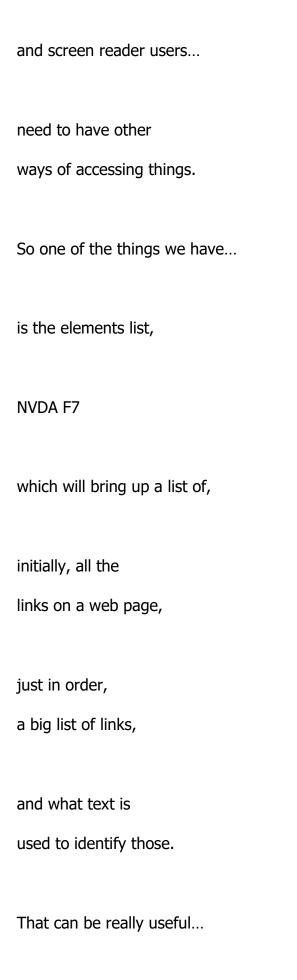




what's being read,
because it came out of NVDA itself.
[Narelle] Yeah. That's actually going to highlight errors
for the developers and the designers as well.
Well, hang on.
NVDA is reading the code.
So what have we done in the code that's causing that issue,
or the design itself?
And don't forget, for people out there,

NVDA doesn't care about colour.
-[Quentin] No.
-[Narelle] Makes no difference.
[Narelle] Colour or images
that don't have alternate text,
it doesn't care.
[Quentin] That's right.
You can set it.
Just a small point.
You can set NVDA to tell you
about changes in colour in text.
But again,
you know, if you're looking
at WCAG or anything like that,

they will also tell you,
you shouldn't rely on colour
alone to convey information.
One other thing that
that NVDA can do
that also meets up
with the WCAG criteria,
that I can't recall
the number offhand.
But
Because the web is often used,
you know, quite
mouse driven, originally,
keyboard users



for, you know,
you'll very quickly see...

I've got a whole page of links there that just say, click here.

And that's not the best way of identifying links.

If you can't tell what a link is from that list,

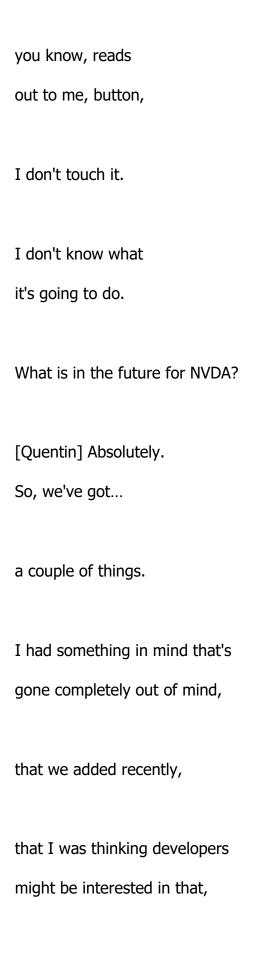
maybe it needs to be, you know,

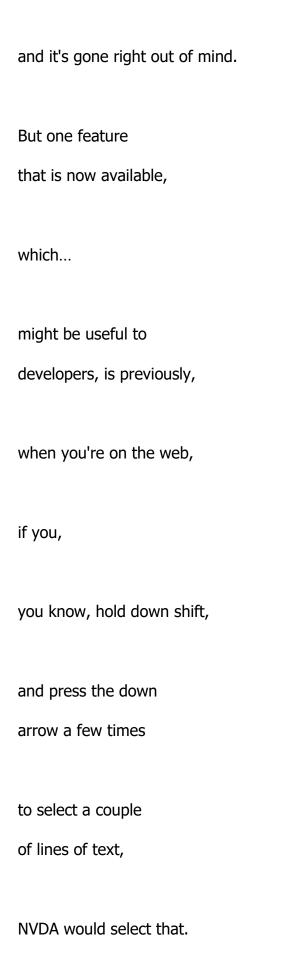
identified a little better in the context of the document itself.

[Narelle] Yeah, because
WCAG does state, you know,

the link name has to be understandable

and tell you where you're going to, and use five words or less. Cause yeah, I often run into that. Learn More. Click here. I like the one I saw a couple of days ago. Button. I just kept getting button, button, button. I'm thinking, yeah, but what's the button going to do? It doesn't tell me. So if NVDA sees,





It wouldn't show anything on screen,

but it would select it.

And when you copied it and paste it into,

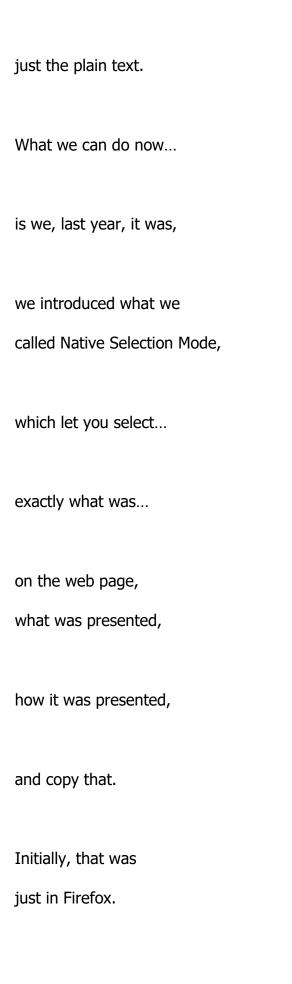
say, a Word document or an email,

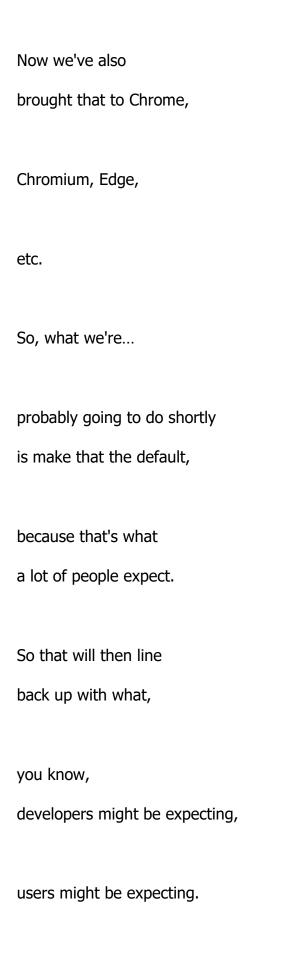
what it will give you is just the plain text.

Not any formatting,

not any headings, not any images,

anything like that that you might've selected,





[Narelle] Actually, that's a good one, because...

Yeah. I get frustrated, actually, because, you know,

when I'm copying something and I think, that'll give my headings.

I can copy it, put in a document, and keep going.

Then you've got to reformat it,

and as a person with a vision impairment,

I've got my documents set up to easily do it,

but it's one extra job that'd be nice I don't have to do.

So, yeah, that's a good one.

[Quentin] Exactly. And the other thing with that that a lot of...

people who are sighted who use them,

or partially sighted or fully sighted who use NVDA,

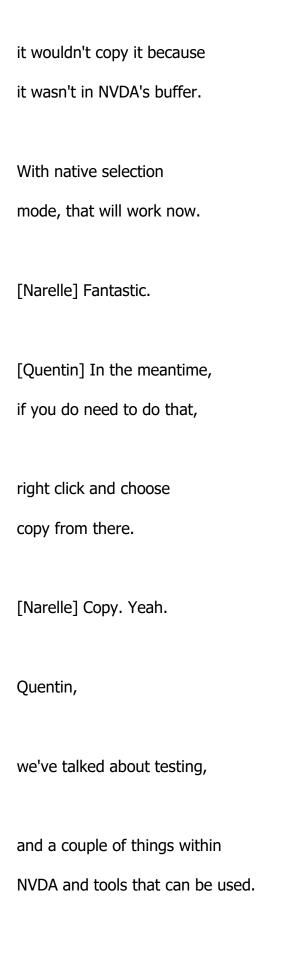
is, if you select something...

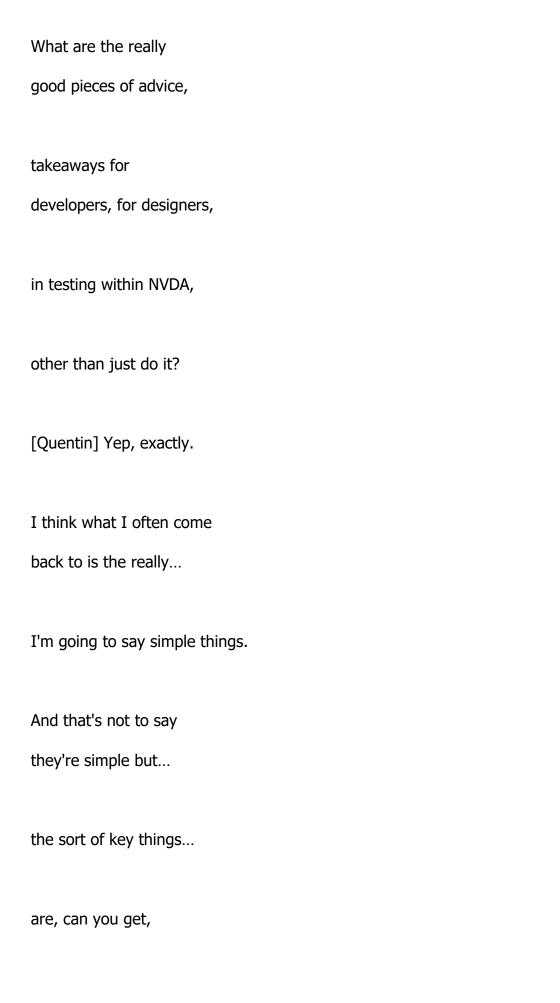
on a web page with the mouse,

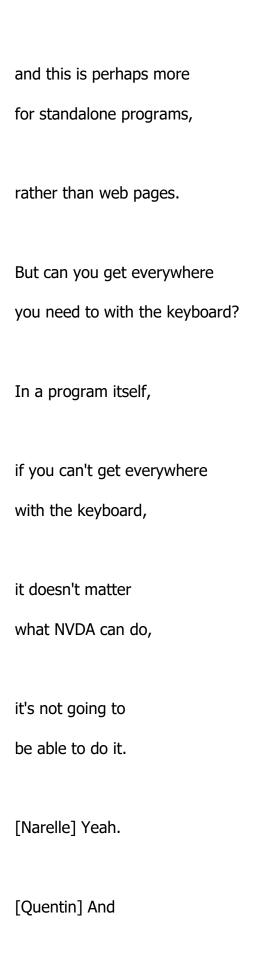
you can, you know, click and drag to select things.

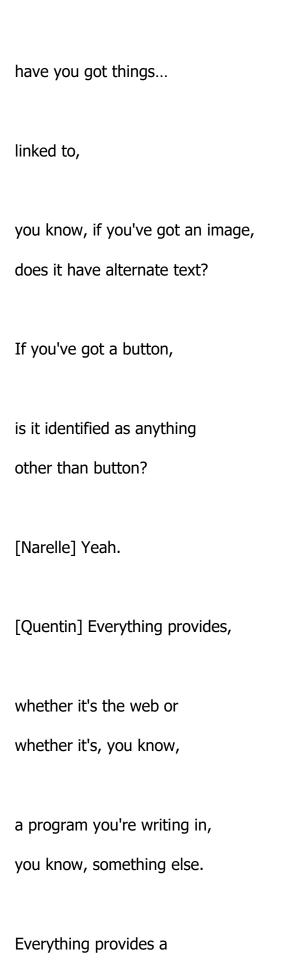
NVDA wouldn't recognise that,

and you'd select it and press control C,









way of linking those labels, and giving that information, so do make sure you use that. And if you want a button, then first of all, use a button. Can you use a button, one of the default defined buttons, rather than going and creating something yourself from scratch. That button that you styled yourself and made out of nothing is beautiful,

but did you include accessibility stuff to make it work?

[Narelle] That's actually a good point.

[Quentin] Yeah. If you can use an out of the box component,

it usually comes with all that accessibility stuff...

behind the scenes so you don't need to do any extra work.

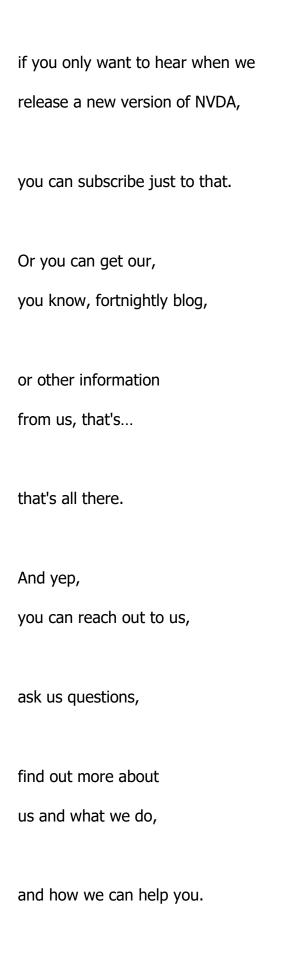
-[Narelle] Yeah.

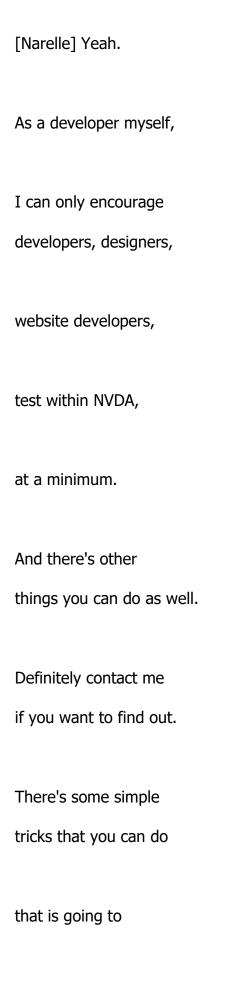
-[Quentin] Yep.

[Narelle] Quentin, how can people keep in contact with you?

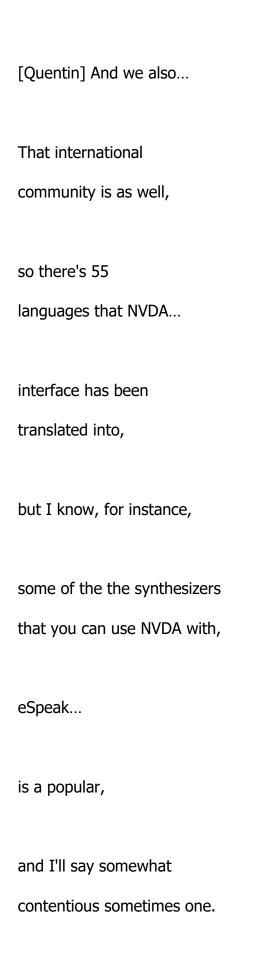
Because if they want to find out more about NVDA,

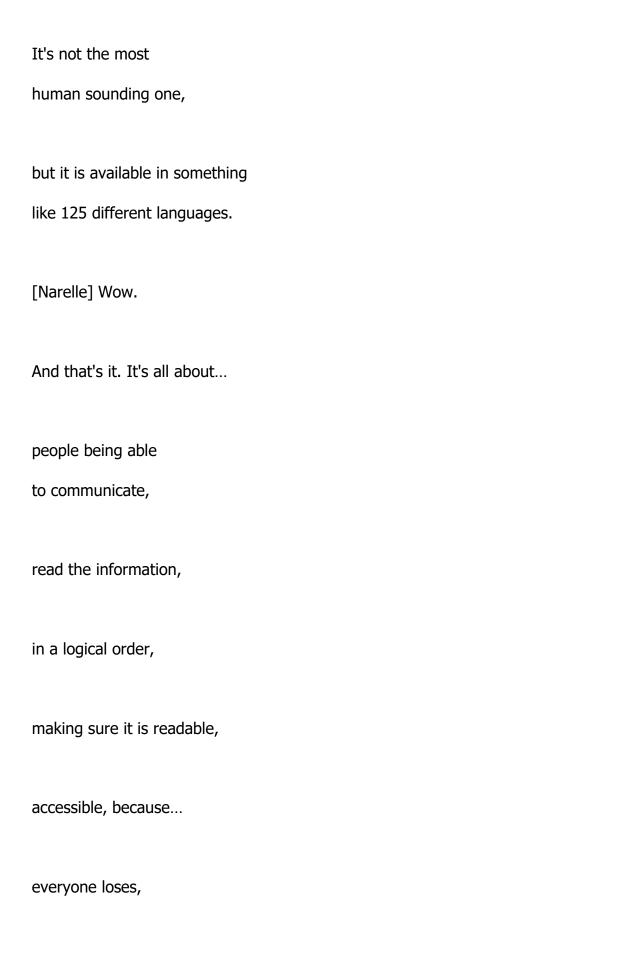
you know, talk to you, what's the best way of contacting you? [Quentin] Absolutely. So, our website is nvaccess.org, and pretty much everything flows from our social medias and so on, @nvaccess and so on. Yeah. We have a... One thing we brought in last year, we've got a mailing list, finally, so you can subscribe. And you know,



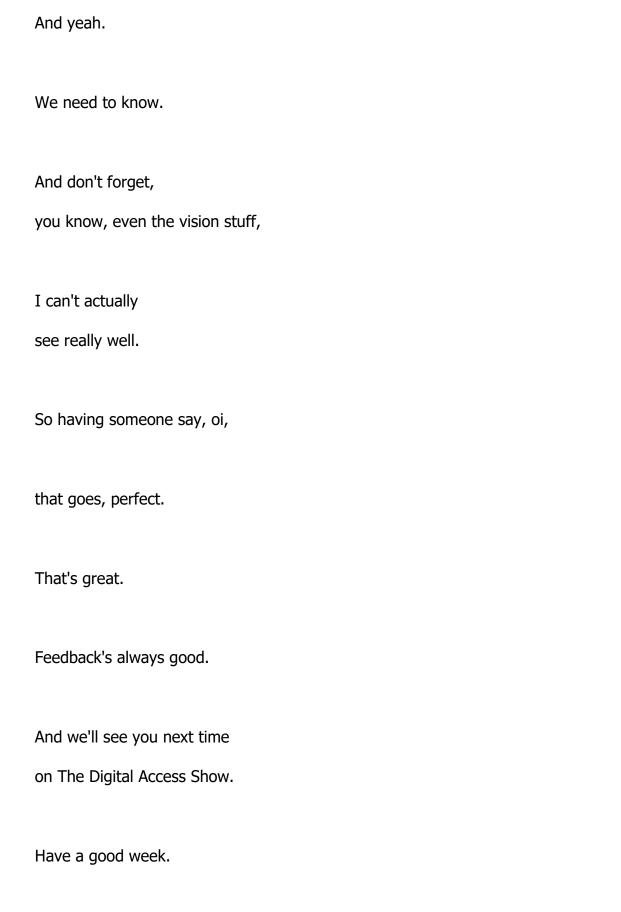


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get you on there,
and we're calling it The
Digital Accessibility Movement.
NVDA is used, I don't know how
many countries now in the world,
but many, many
countries in the world.
[Quentin] We conservatively say...
over 250,000 users in
at least 175 countries,
and over 55 languages it's
been translated into as well.
And excuse me,
I've got a frog in my throat.
[Narelle] Yep.
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well, not everyone.
Most people do end up
with some form of sight issue
as they get older,
and this is a tool
that you can use.
It's only as good as the
amount of testing that's done.
Quentin, thank you.
I really appreciate your time.
If you like what we do, please
like, subscribe, review, share.
We really do love feedback,
and I keep saying
even the ugly stuff.



[music playing]