### Audio Transcript: How to Build a Solar-Powered Websites

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**Nate Hegyi: This is Outside/In. I’m Nate Hegyi.**

**Justine Paradis: And I’m Justine Paradis. And today, our story today begins on the floor of the US Senate.**

*MUSIC: The Rat Not the Tail*

**The year was 2006. It was a hearing for a bill on net neutrality. Nate, can you define net neutrality for us real quick?**

**Nate Hegyi: Net neutrality. The idea is that Internet service providers must provide services like speed and communications equally to all users – and not just to the highest bidder.**

**Justine Paradis: Yeah, exactly, like companies can’t be like, ‘my website should be faster than your website because I paid more.’**

**Nate Hegyi: Right, exactly.**

**Justine Paradis: So, senators were debating this, they were debating an amendment to the bill. And at this hearing, the late Alaskan Senator Ted Stevens, he stood up to oppose an amendment. And, in stating his opposition, he also uttered a phrase… that would go down in Internet history.**

*Sen. Ted Stevens: They want to deliver vast amounts of information over the Internet. And again, the Internet is not something that you just dump something on. It's not a big truck.* ***It's a series of tubes.*** *And if you don't understand, those tubes can be filled and if they are filled when you put your message in, it’s going to be delayed…*

MUSIC RISE

**Nate Hegyi: The Internet is a series of tubes.**

**Justine Paradis: Of tuuuubes.**

**Nate Hegyi: I like, I guess, Ted Stevens, a senator from Alaska, he’s used to pipelines, and oil, so maybe, yes, he sees the internet as a series of tubes, of pipes, pumping information or something like that.**

**Justine Paradis: This was 2006. It was still solidly in the era of the blog. And that’s where Senator Ted Stevens’ words** [**took on a life of their own**](https://www.nytimes.com/2006/07/17/business/media/17stevens.html)**. His statement was written up on a non-profit advocacy blog first – then noticed by a blog run by *Wired*, and then it was all over the place.**

*Jon Stewart: Alright… that, uh, might have sounded more like something you’d hear from, let’s say, a crazy old man in an airport bar at 3am [audience laughs] than the Chairman of the Senate Commerce Committee, uh…*

**Justine Paradis: And, I bring it up now partly because,you know, 1) obviously it can be pretty funny to go back to moments like this one, when people were reacting to the early days of the Internet before it was so EVERYWHERE, before so integrated into so many of our lives… But, I also bring it up because…. Nate.**

**Nate Hegyi: Yeah.**

**Justine Paradis: If I asked you to describe what is the internet, physically? Like what would you say?**

**Nate Hegyi: I would say the internet is a series of tubes.**

MUSIC:[*“Series of Tubes Music Video”*](https://www.youtube.com/watch?v=R8XSo0etBC4) *by Superfunky59 on Youtube (“I'm abandoning this account. I'll keep the tubes video up because you all seem to love it so much.”)*

**Nate Hegyi: When I think about the Internet these days, I think of “clouds.” Right? I feel like I’ve got my DropBox, it goes to the cloud. I’ve got my Google Drive – it goes to the Cloud. This ethereal, nebulous data cloud floating in cyberspace, somewhere on earth… or something like that.**

**Justine Paradis:... when really the back end of the cloud is a whole bunch of data centers. Big warehouses filled with sometimes thousands and thousands of servers.**

**Nate Hegyi: Right, yeah, our photos are actually stored in a big warehouse in Nevada.**

**Justine Paradis: Connected to us often by** [**wires strung on our telephone poles**](https://www.nhpr.org/word-of-mouth/2019-07-19/north-country-high-speed-internet) **or sometimes satellites… and because it’s easy to sort of forget about all of this physical infrastructure, it can be kind of funny when elements of the natural world get in the way.**

**Inside these data centers – with all those servers, which are basically computers – it can get really really hot. So, data centers require sophisticated air conditioning and climate control systems. And on time, in one of these warehouses – the system essentially malfunctioned – and with the combination of hot air, cool air, and humidity… well, Nate, as an environment report, what do you get?**

*MUSIC: Inner Knowing*

**Nate Hegyi: You get weather.**

**Justine Paradis: You get clouds. And that has actually happened inside data centers. and actually there has been rain reportedly** [**inside one specific data center**](https://medium.com/s/story/it-was-raining-in-the-data-center-9e1525c37cc3)**.**

**Nate Hegyi: Clouds inside clouds.**

**Justine Paradis: Yeah. It was raining in the cloud.**

*MUSIC SWELL and FADE: Inner Knowing*

**One of the strangest examples I found of the physical world interacting with the infrastructure of the digital… it takes place in the ocean. So, depending on how you connect to the internet, you might be relying on a vast network of undersea fiber optic cables… a series of tubes, you might say.**

**Nate Hegyi: [laughs]**

**Justine Paradis: And these cables run along the bottom of the ocean – many along the sea floor across the Atlantic. Actually, the** [**NSA has reportedly wiretapped many of these cables**](https://www.wired.com/2016/09/trevor-paglen-internet-cables-nsa/) **in the service of surveillance of the citizens of this country, but it’s not just the agents of the US government inappropriately interfering with these cables. There’s also documentation of literal** [**sharks**](https://www.wired.com/2014/08/shark-cable/) **that are apparently compelled to bite these cables…**

**Nate Hegyi: Why would they be compelled to bite cables? Those don’t sound very tasty.**

**Justine Paradis: I don’t know,** [**it’s a thing**](https://www.theguardian.com/technology/2014/aug/14/google-undersea-fibre-optic-cables-shark-attacks)**! There are videos of sharks doing this. No one really knows – maybe they're attracted to the** [**etsecondlectromagnetic field**](https://www.popsci.com/article/science/google-protects-it-undersea-fiber-optic-cables-sharks/) **generated around the cables? But the International Cable Protection Committee (which is Indeed A Thing)...**

**Nate Hegyi: That’s a real thing!**

**Justine Paradis: …** [**says**](https://cdn.arstechnica.net/wp-content/uploads/2015/07/ICPC-sharks.pdf) **that, “sharks and other fish are responsible for less than 1% of all cable faults up to 2006” and that none have been reported after – so according to them, this is not an issue.**

*MUSIC Swell: Inner Knowing*

**Justine Paradis: The point is: there’s weather in the data farm, rumors of sharks feasting on undersea cables, and the Internet has a footprint – often not owned by us, often very far away, and often outside of our control, and with so much of our lives, collectively, relying on the digital world – I think all this can feel quite precarious.**

**But this brings me to the case of one particular website – and its founder, who is trying to make the infrastructure behind it as visible as possible. And that infrastructure is literally, in his living room.**

Kris De Decker: which is probably the biggest danger. Nothing has happened yet, but sometimes I see lying there that should not be there -

Justine Paradis: glasses of water…

Kris De Decker: yeah for example or a candle.

**Justine Paradis: So this is Kris De Decker. He is a journalist and creator of *Low Tech Magazine*.**

Kris De Decker: which basically kind of questions the belief in high technology solutions.

**So right now for example, there’s an article on how to build a bicycle operated generator for your home. They’ve done stories on making small wind turbines out of wood instead of plastic.**

**Like most modern publications, Low-Tech magazine has a website..**

**But when you visit this one, as you scroll, you’ll notice an icon in the corner.**

**It’s a meter showing the server’s battery life, and the weather forecast for where he is, in Barcelona.**

*MUSIC IN: Sun Freckles*

**And that’s because this website runs off a server powered by a solar panel on Kris’ balcony. Which means his website is very much NOT immune to natural forces.**

**Nate Hegyi: So, not cloud-based – but cloud-dependent.**

Kris De Decker: The accessibility of the website depends on the local weather in Barcelona.

*MUSIC SWELL: Sun Freckles*

**Nate Hegyi: Today on Outside/In, a conversation with the founder of *Low Tech Magazine*, Kris De Decker. The website is, in a way, an experiment – peeling back the curtain of his website, as a demonstration of one way of making the digital… material.**

**And it brings up questions about how convenient and constant our access to the internet could and should be – and if progress can sometimes mean choosing to live with less.**

Kris De Decker: We have been told that so often that we have come to believe it, that the internet is somehow a virtual thing that uses no energy, but of course, it's just as physical as anything else.

**Producer Justine Paradis is going to tell this first part of the story - and I’ll be back later to ask: could this work on a bigger scale?**

*MUSIC FADE*

**Justine Paradis: When I’m recording an interview remotely, sometimes my source is in a room thousands of miles away from me – so, I have to ask them to look around, and check for anything that might make noise and make the recording sound bad… panting dogs, loud air conditions, that kind of thing. So that’s what I asked Kris De Decker to do when we spoke.**

Justine Paradis: My other question — is there any buzzing appliances or open windows near you – I have to be a remote engineer?

Kris De Decker: Yeah… that's the window. It’s closed but also not really, because there are wires from solar panel going… so they cannot really close.

**Justine Paradis: So, we made peace with the fact that the sounds of the street in Barcelona would be part of our conversation.**

**Kris started his career as a journalist, covering technology as a freelancer for papers and magazines in Belgium. But eventually, he grew disillusioned with his beat.**

Kris De Decker: It's mainly from my experience as a science and tech journalist that I came to *Low Tech Magazine*, actually… because I had been reporting on high tech innovations, and it dawned on me that, well, they often kind of solve some problem, but then they introduce five new problems. And you're back to where you started.

***Low Tech Magazine* explores the idea that we’ve collectively forgotten about older technologies that could still be useful.**

**For instance, as we think about sea level rise, we could look to a 17th century Dutch technique of reinforcing their dykes and harbors with giant woven mats, made out of twigs cut from trees.**

**There’s an idea that you might have heard – “the medium is the message.” That the form of a piece of content also communicates and shapes its meaning.**

***Low Tech Magazine* might be a great example of “the medium is the message.” Because it is powered by a solar panel in an ordinary apartment, everything about it looks different. The design, the equipment, even the experience of visiting the website… especially that it's not always available, including on the day we talked.**

Kris De Decker: Yeah, like this morning, it was offline. Now it's back on because it's sunny.

**At the time of our conversation – the solar-powered website had been running for almost two years. And during that time –**

Kris De Decker: We had an uptime of about 95%. And that's, like, say 17 days that we are offline per year, and then the website just goes down. And then, yeah, well, our readers have to do something else and come back later. Just like with a sailboat or with a windmill.

**And it’s this concept… that the website isn’t always there, *whenever* you want it… that it’s kind of a limited resource…. that’s the concept that people have responded to most.**

Kris De Decker: I mean, I never had to complain about lack of attention, but this really made it explode in terms of visitor traffic and attention and interviews and everything. And it's funny because it's about the form, not the content. But at the same time the form of our website also reflects the whole philosophy of Low Tech Mag so it's not a bad thing.

*MUSIC IN: Inner Knowing stems*

**So – what does it take to run a website out of your apartment?**

**First of all, in this case – the website’s solar panel necessarily had to be small because the website lives in Kris’ apartment. And Kris wanted to live there too.**

Kris De Decker: It’s a physical limit… you cannot put a whole wall of solar panels in front of your balcony, because then you cannot enjoy the sun anymore. So, you need to keep it small.

**Justine Paradis: And even as it is, the website still has quite the physical presence in Kris’ living room. There’s the solar panel…**

Kris De Decker: 50 watts

**… lots of cables, a battery, and a charge control – and then there’s the server, although *that* is actually pretty small.**

Kris De Decker: It fits in the palm of your hand.

**Kris chose a server that was reliable but didn’t use a ton of energy.**

Kris De Decker: Because if you're designing within such limits, even if energy use goes up like, say, 20 milliwatts, that might result in the site going down every night, so it’s really important to choose the right parts for your installation.

**But the design process didn’t stop with equipment. Unless he wanted the entire apartment to be taken over by panels and batteries, he needed to design *Low Tech Magazine* to be very LIGHTWEIGHT - requiring very little energy to operate.**

Kris De Decker: Yeah. We were curious to see how far you can take it, how light a website can be.

**This is pretty different than what’s happening widely elsewhere on the Internet.**

*MUSIC IN: Blue Shadow Stems*

[**Over half the global population are internet users**](https://data.worldbank.org/indicator/IT.NET.USER.ZS) **– over 4 billion people.** [**And a lot of that use relies on data centers**](https://grist.org/energy/your-love-is-blind-addiction-is-not-heating-the-planet-yet/)**…. which, sure, are getting more and more energy efficient… but there’s also more and more of them. including giant facilities with over 5000 servers apiece - these are called hyperscale.**

**So, with the solar-powered website, Low Tech Magazine was removing their website from the data centers – but there’s still another problem.**

**Contemporary website design.**

**Kris explained that websites, in general, are getting “heavier and heavier” in terms of data use.**

**Pop-up ads, GIFs, streaming videos, high resolution images… all of these things of course take energy to generate on your browser, each and every time you visit a site. More data – more energy.**

**There’s a project called** [**HTTP Archive**](https://httparchive.org/reports/page-weight) **which tracks the history of web performance over millions of websites including metrics like the size and number of fonts, videos and images requested by the page. And according to this project, since 2011, the median total kilobytes requested per page increased by 228%.**

**So, the solar-powered site was a perfect chance to apply the first principles of *Low Tech Magazine*: to look for solutions in the past – in this case, the not-so-distant past.**

Kris De Decker: We went back to the first website ever made. That’s like early 1990s... And we based the design completely on that website.

**One fundamental feature of these older websites: they were static, not dynamic. Dynamic websites are generated every time someone visits them. Think about a site like Netflix. The homepage looks different for each user, depending on their viewing habits. Or, if you go to say, the homepage of Buzzfeed - your server has to build all of the elements in your browser, piece by piece.**

Kris De Decker: And with a static website, it’s basically, you open a file on the computer, and it's always there. It's just similar to opening a text document or an image on your laptop. That's how our website works. You basically come onto our server computer and you open a file and you see the file. And then you easily spend ten times less energy.

**But, there are definitely things you *can’t* do with a static page. They’re not as interactive, for instancer. Like, if you want to leave a comment on an article on the solar-powered website, you actually have to EMAIL it to them so that they can manually add it to the page.**

**Another hurdle for lightweight web design? Images.**

Kris De Decker: So, *Low Tech Mag* is a very visual blog. It’s long articles but it’s also a lot of images. And if you look at the first website ever made, you see that it was just text. It had no images. The internet started as a text medium. So, we could have very easilymade very light website simply by getting rid of the images, but that would have been, yeah, like, commercial suicide basically… so what we did instead was to radically compress the images. And we did that with a dithering plug-in. It's a kind of old compression technique, well it’s not really compression technique, it was used for old video games.

Justine Paradis: They look like newspaper images. Like, grainy.

Kris De Decker: Yes, yeah.

Justine Paradis: I mean, when you go to your website it almost just looks like a style choice, to me… rather than an infrastructure choice.

Kris De Decker: Well, to start with, I don't know how it looks for you because it looks different for everybody. It’s one of the things we also did like the first websites. We don't load any custom fonts or logos. We use the design capabilities of the browser. And so, how the website looks depends on which browser you use and which fonts you have installed, for example. And it kind of adapts to these things.

*MUSIC IN: Breef*

**When you visit *Low Tech Magazine*’s solar powered website and see all this together – the battery meter, the dithered images, the static design – it sends a message. The appearance of the solar-powered website is markedly different than most of the websites most of us might visit on a typical day.**

**The website is meant to be provocative, to call attention to the fact that it is solar-powered. To stand out by opting out.**

*MUSIC SWELL AND OUT*

**Justine Paradis: So, Nate.**

**Nate Hegyi: Yeah.**

**Justine Paradis: What does *Low Tech Magazine’s* solar powered website bring up for you?**

**Nate Hegyi: I mean… – sure, you don’t need to have constant access to an article on 17th century Dutch dyke design…**

**Justine Paradis: I mean, speak for yourself.**

**Nate Hegyi: …I don’t need that, every day. But let’s say you run your business off WhatsApp, or you’re a website providing emergency services, or you’re running a security system at a facility – you know, there are plenty of examples where Kris’s design just wouldn’t work.**

**Justine Paradis: Like, the website going down would be kind of catastrophic for either your business or, you know, for people’s lives.**

**Nate Hegyi: Right! I think about, you know, here in Montana, Montana Department of Transportation has its highway site. You know, where you can look and find out, okay, is that highway, is the interstate open during a snowstorm? Or is there avalanche danger? Or NOAA, the weather website. Those are websites you need to have access to 24/7.**

**Justine Paradis: Yeah. But I feel like this speaks to this point. Again, do we need to be… I don’t think that his point with the solar-powered website is not nuanced like that. Like, he’s not saying – “everyone adopt my design, it’s fine if the internet goes down” or at least that’s not what I take away from it. It’s more like: if we want to use less fossil fuels and live on a planet that stays within certain temperature ranges and certain weather patterns, behavior change, in ways that maybe feel like sacrifice, is going to be necessary. Right?**

**Nate Hegyi: Right.**

**Justine Paradis: And so how can you apply this ‘do we need to go 100% all the time’ to different parts of our lives, right?**

**Nate Hegyi: Right. And I think all of us who have cell phones and get really tired of like looking at, ‘oh I'm on Buzzfeed for the umpteeth time…’**

**Justine Paradis: yeah, for no reason.**

**Nate Hegyi: For no reason! I’m just doomscrolling twitter, which i do all the time. I don’t need to be doing that. And what if Twitter was down at night? And I couldn't access, I don’t know, Wordle? If I couldn’t do my Wordle 24/7? Do we need that?**

**Justine Paradis: And it’s the same thing as like… there’s an article that he has up there right now about hot water bottles as a technology where: it’s a low-tech, right, it’s just an object, but maybe you don’t need to heat the entire room while you’re sleeping. Maybe you just need to heat the space in between your blankets where you are. Right? And that’s another way of applying it that has nothing to do with the internet, right? But it's like, take the idea, and think about how you can do it in your life.**

**Justine Paradis: But everything I just said – there’s a big caveat to all this.**

Kris De Decker: Yeah, I’m fine with that. You can call it hypocritical, and in a way it is.

**Nate Hegyi: Yup – a detail that raised some questions for me. That’s coming up – but first - a quick ask: we are already working on Outside/In’s next series… the topic is the transition to electric vehicles. Would you ever consider an electric vehicle? Do you have thoughts about the EV charging network? Concerns? Fill out our survey and tell us what you think we should cover – it really helps us in this early stage of our reporting. That’s in the show notes and on our website - outsideinradio.org.**

**Okay, be right back.**

**BREAK**

MUSIC IN: Plataz, Blue Dot Sessions

**Nate Hegyi: This is Outside/In. I’m Nate Hegyi. Today on the show, we’re hearing producer Justine Paradis’ conversation with Kris De Decker, creator of *Low Tech Magazine –* which runs off of a solar panel, in a deliberate attempt to peel back the curtain on the infrastructure behind websites.**

**Justine Paradis: The website is in operation about 95% of the time, but the other 5% – on a string of cloudy days or when the battery goes low – it goes down.**

**Nate Hegyi: But that’s kind of the point: Kris is asking us: do we – and does our technology – need to be “on”all the time? And this brings us to a possible critique of the website – and really the entire philosophy of *Low Tech Magazine* – could you say that this is technophobia? But Kris doesn’t think so.**

Kris De Decker: The problem with that is people think in two extremes: you go along with everything that comes along, or you're a luddite, and you’re living back in the middle ages. There’s a thousand possibilities in between. And we don't need to go to the Middle Ages or whatever faraway time in the past. We could keep a modern society and modern comforts and convenience, just not the 100% that we have.

And you see that in many things, that it’s this drive to go to the maximum, that's really the damaging thing.

Personally I'm not even “back to the land,” I would die of loneliness there. I'm a city person. I need to be in a city. No, I don't dream of that kind of life. That's not my intention. It's more I want to show that we can do things much more sustainably if we would just sacrifice a little bit. And often the sacrifice is not even a sacrifice. I mean, not being online 16 hours a day. It doesn't make you more unhappy. On the contrary.

**Justine Paradis: The solar-powered website is meant to embody this principle – that we don’t always need to go to the maximum. Again, Kris says it’s up and running about 95% of the time. But sometimes people say to him: hey, you could get it to 100%.**

Kris De Decker: ‘Why don't you put a server in different parts of the world, and then you change the DNS depending on where the sun shines?’ That’s also a possibility to keep it online. It’s funny, many people have given us advice on how to keep the website always online, which we don't even want.

Justine Paradis: It feels like the point is to change your behavior a little bit.

Kris De Decker: Exactly. The thing is: if you want 100% reliability for your solar system, I made the calculation. So, now we have 95%, but if you want 100%, I need to have 7 times the battery size that I have now. Because you need to be prepared for the most unusual weather event. So, if you go to 95%, you can do it with much less, and you’re still online most of the year. Like during summer, basically, we are six months online. It’s just in winter it goes down. So, with just some little kind of sacrifices, you have a much more sustainable system.

*MUSIC SWELL: Sun Freckles*

**Justine Paradis: Making sacrifices for a more sustainable system – but, here’s that giant caveat. I talked to Kris in the winter of 2021, and it was one of those things that I didn’t return to for a while – about a year. But the thing I didn’t realize when I talked to him is that – the solar-powered website is not *Low Tech Magazine’s* only website.**

**That one lives at *solar.lowtechmagazine.com*, but if you go to *lowtechmagazine.com*, the whole magazine is also available there, 24/7. It’s a modern, dynamic website – a simple one, but basically just looks like a blog, hosted at a data center somewhere.**

**Nate Hegyi: Yeah. Wait, doesn't that strike you as a little hypocritical? Like, he’s been talking and saying all these things about his solar-powered website but like if I were to type it in right now, I can just go to the regular version of his website. As well. I don’t know…**

**Justine Paradis: I know…**

**Nate Hegyi: To me it strikes me as a little hypocritical if you’re like, ‘this is the way it needs to be for things that aren’t that important,’ but my website, I still want to have my regular version.**

MUSIC: Sun Freckles drums

**Justine Paradis: So, we decided to call him up again – he was actually in Brussels this time, staying in a friend’s apartment.**

**Nate Hegyi:** Kris, I want to I want to give you what my first reaction was when I when when Justine was first telling me this story… So when I first heard that you had the solar-powered website, but you also had a traditional website that was running on a power-intensive data center, as most websites do, right? My first reaction was like, ‘Oh, that's totally hypocritical.’

**Kris De Decker:** Yeah, I'm I'm fine with that. You can call it hypocritical. And in a way it is.

It's also say a problem in the sense that first it kind of defeats the purpose. I mean, I now have two websites, so all I did is increase the ecological footprint.

**Nate Hegyi: Kris explained that part of the reason they haven’t just gotten rid of the original website is – they haven’t moved the entire back catalogue over yet. It takes time to move the content over because, on the solar-powered website, each article needed to be coded and laid out differently. So, essentially, it’s a lot of work.**

Kris De Decker: Definitely, I would love to move everything to solar powered website, but at the same time… it needs to be financially sustainable also.

**Justine Paradis: One of the obstacles that Kris and his team did not anticipate was that by creating the solar-powered website – they’d accidentally create two distinct audiences. But *Low Tech Magazine* already had a readership – a following which had already existed for years. And when the solar-powered website launched, a lot of the attention came from a community of people psyched about it from the perspective of web design.**

**Kris De Decker:** But on the other hand, there is, of course, a big part of the readership of Low Tech Magazine that is not really into websites. They just come to to the website to read about old technologies and those people sometimes, yeah, let us know that they're not very happy with the design.

And that mostly refers to the battery meter, which is very much in your face… And then there's people who kind of say that they still visit the other the old website because it has color images. So, either we make the solar powered website less radical by kind of making the battery meter smaller, maybe adding color images where it's useful, but then… as a statement in web design, it becomes less powerful. So that's in a way a shame. And at the same time, we don't want to keep two websites, or at least not on different platforms. So we have to find a solution.

**Nate Hegyi: Kris says there is a possible solution that might satisfy both audiences. Remember, the design of the solar-powered website is deliberately extreme – to draw attention to the fact that it’s super lightweight and powered by the sun. But it doesn’t have to look that way.**

Kris De Decker: You can perfectly build a low-energy website that looks like any other website with normal images.

**Justine Paradis: Instead of the dithered images, they could use less visually obvious compression techniques and offer another version of the website, also hosted on the solar-powered server… and give readers a choice.**

Kris De Decker: Just give them the choice. When you go to Low Tech Magazine, you want to see the radical version or you want to see the the the main, say, normal version. But both would be gone if if there's no sun.

*MUSIC: Plataz interlude*

**Justine Paradis: So, Nate – I get why you had the question of, isn’t this hypocritical, to have both websites up, and even why he agreed with you… but I think this brings up for me a tension that we struggle with almost perennially… where, you know, how do we shift to a lower emissions world? And are we placing the responsibility for environmental change on individuals rather than systems? Because I feel like when we place that responsibility on individuals we are holding each other to a really high standard of perfection.**

**Nate Hegyi: That’s fair. Like if you’re at all inconsistent with it you’re being a hypocrite. But it feels like.. making choices to opt out a more energy intensive world… it’s like swimming against the tide, right?**

**Justine Paradis: It’s really hard.**

**Nate Hegyi: And this applies to areas way beyond web design. Like, Kris told us he also chooses not to travel by plane.**

**Kris De Decker:** Yeah. And that's why I think, so, I practice what I preach, not necessarily because I feel morally superior, but more like I want to know what it feels like and how difficult it is and how… Like, for instance, traveling by train. Well, it's really expensive. It's, here in Europe, it's so much more expensive than flying, that, well, it's easy to say, I traveled by train, but then you need the money to do that. If you have a… if you're working from 9 to 5 and you have two weeks of holidays, then it's not so easy to travel by train. So, I'm not blaming people for flying because the whole system is geared towards flying. And from the moment you try to do it differently, you're punished in every possible way. Like, not having a smartphone is a very similar position. Like, yeah, I don't have it, but every day my life gets more difficult… So… by practicing what you preach, you… you feel what makes it difficult. And then I can write about it. And then you you can try to suggest to make these systemic changes, but. Yeah. That's the hard part.

*MUSIC IN: Way of the Walk (epidemic sounds)*

**Justine Paradis: Right now, *Low Tech Magazine* is just one website… one website, swimming against the tide. But *Low Tech Magazine* has published instructions on how to make your own solar-powered website, or even just a lightweight one – which lots of people have done. And some have also scaled things up – – in fact, there’s a project called Solar Protocol, which does exactly the thing we mentioned earlier. The idea that always sunny somewhere, so the platform is hosted on several servers around the world, and each server is active or inactive at different times depending on the local weather.**

**Nate Hegyi: So, a solar-powered platform that doesn’t go down when it gets cloudy.**

**Justine Paradis: Yes! And Kris says he hopes that someone takes the idea even further, and maybe builds a solar-powered data center, one day.**

**Nate Hegyi: Which would be – not just one person swimming against the tide, but a whole ship.**

**Justine Paradis: Yeah.**

**CREDITS**

**Nate Hegyi: Okay, we did our best to describe the look of Low Tech Magazine’s solar website… but you really gotta see it for yourself.**

**Justine Paradis: We’ve got photos of Kris’ set-up on our website and screenshots of both the solar-powered site and the original – so you can compare at a glance. Check it out at outsideinradio.org.**

**Nate Hegyi: And we want to know: which of the two sites do you prefer? We’re running a poll on our website – you’ll find it both on the episode post AND on Twitter – our handle is @outsideinradio.**

**Justine Paradis: Also, a quick reminder that Outside/In is a public radio production – we really do rely on listener support. After you take the poll on our website, please consider donating to support the show – the link to do that is outsideinradio.org/donate.**

**Nate Hegyi: Outside/In was produced this week by Justine Paradis and edited by Taylor Quimby, with help from me - Nate Hegyi - Felix Poon, and Jessica Hunt.**

**Justine Paradis: Oh and special thanks to Melanie Risch!**

**Our executive producer is Rebecca Lavoie.**

**Music in this episode came from Pandaraps, Damma Beatz, Dusty Decks, Harry Edvino, Sarah the Illstrumentalist, and Blue Dot Sessions.**

**The “Internet is a Series of Tubes” remix was created by superfunky59 on Youtube.**

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