



**Transcription for:
Wheels of Change by PBS Frontline/World**

Vietnam — Wheels of Change
Reported by Marjorie McAfee

Marjorie McAfee: Vietnam is a country in constant motion. Without a good set of wheels, it's easy to get left behind. That's especially true for Vietnamese wheelchair riders like Huan Dien. He lost his legs in the war with Cambodia in the early 1980s.

Huan Dien, translated from Vietnamese: I fell once, because the ramp to the sidewalk was blocked. I was going too fast, and the wheelchair hit it, and flew forward.

Marjorie McAfee: Because the streets of his neighborhood aren't wheelchair-friendly, Huan mostly stays home in a small apartment. To make ends meet, he rents his backroom workshop to another wheelchair rider, Tuong Gion, who contracted polio as a child.

Tuong Gion, translated from Vietnamese: Vietnam still has a lot of shortcomings. They haven't yet been able to find a way to improve things for disabled people. Usually when they build things, they don't think if it's convenient for anyone. So, disabled people put up with a lot of difficulties.

Marjorie McAfee: But a world away, there's a new wheelchair. And it's making an impact.

Ralf Hotchkiss: Hit it hard and nothing happens.

Marjorie McAfee: Ralf Hotchkiss is an engineering professor at San Francisco State who's been thinking about wheelchair design for a long time.

Ralf Hotchkiss: Very strong. You can go down a hike and hit hard and nothing fails.

Marjorie McAfee: And nothing happens.

Ralf Hotchkiss: This wheel... there's no way I can break it.

Marjorie McAfee: After becoming paralyzed in a motorcycle accident 30 years ago, Ralf started out just trying to make a better wheelchair for his own use. But he ended up making a bigger breakthrough with something he calls a RoughRider.

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Ralf Hotchkiss: It was necessary to come up with the RoughRider because there was no other wheelchair that worked well enough in all of the difficult situations in developing countries. Everything you do, you have to go long distances over rocky or sandy or muddy roads.

Marjorie McAfee: Ralf gathered design ideas from around the world. The front wheel comes from a shopping cart in Zimbabwe.

Ralf Hotchkiss: Very flexible, very light. Made out of auto tire retread rubber.

Marjorie McAfee: Ralf and his associate, Marc Krizack, showed me the advantages of a RoughRider over standard hospital chairs, which are much less stable. Its standard parts, like bicycle tires, make it less expensive to repair. After years of tinkering, Ralf decided the RoughRider was ready for the rigors of the developing world.

Toàn Nguyễn, translated from Vietnamese: The first time I met him, there was an instant connection between us. Ralf and I view each other with great admiration and respect.

Marjorie McAfee: In 2006, Toàn Nguyễn was approached by Ralf to produce the Rough Rider in Vietnam.

Toàn Nguyễn: I saw that two people from opposite sides of an ocean could meet to make this wheelchair.

Marjorie McAfee: Mr. Toàn makes the RoughRider using locally available materials and inexpensive labor. It's Ralf's vision that the RoughRider should be easy and cheap to make any place in the world. His associate, Marc Krizack, checks in with Mr. Toàn whenever he can.

Marc Krizack: It's been how long? One year! Since I was here.

Marjorie McAfee: He's brought the latest innovation from San Francisco with him.

Marc Krizack: Now, all you have to do is copy this, exactly as it is. And you'll have another size, smaller.

Marjorie McAfee: As always, there's no charge for the design. Ralf's technologies are open-source. And his Whirlwind Wheelchair Network also helps raise money from Western foundations to help pay the 175 dollar cost of the chair.

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Marc Krizack: Wheelchair users don't make the market; they can't afford to buy their own wheelchairs. So what Whirlwind does is not only just transfer the technology to factories like Kiến Tường, but we also market the chairs. We've tried to raise the money so that they can actually sell the chairs.

Marjorie McAfee: With Whirlwind's help, Mr. Tuan regularly donates his RoughRiders to those most in need. While we were there, we found him at a disabled athletes' tournament giving away chairs to the participants... including Tuong Gion, who we'd met earlier in Huan's back room.

Tuong Gion: When it comes to competing, the wheelchair is very comfortable. It doesn't block my arm movement.

Marjorie McAfee: After the game, Tuong went for a ride through his neighborhood.

Tuong Gion: This wheelchair is very strong, and you can lean back without falling. With other wheelchairs you fall backwards.

Woman: What is this?

Tuong Gion: It's a brake. You just pull it up to stop.

Marjorie McAfee: Ton may be sold, but his friend and landlord Huan has his doubts.

Huan Dien: Is it comfortable to sit in?

Tuong Gion: Yes, very comfortable. It's a smooth ride on the streets.

Marjorie McAfee: Huan says his old chair suits him better.

Huan Dien: Now, for me to get up in this chair, it's very easy. But getting in and out of the RoughRider is impossible. I tried it. I'm not strong enough to push myself up from the ground with my hands.

Marc Krizack: The first rule of wheelchair provision is: do no harm. You can give someone a wheelchair and it can be a very inappropriate wheelchair. It'd be like giving somebody a little sports car. Even if it's the best Mercedes-Benz sportscar in the world, if the person lives in Alaska and it's the wintertime they're never going to be able to use that.

Marjorie McAfee: Marc heard about Huan's concerns, so he decided to pay him a visit and bring Mr. Toàn along as well.

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Toàn Nguyễn: Do you remember me? Do you remember?

Huan Dien: Yes, I remember.

Marjorie McAfee: It turns out, Huan got his first chair from Mr. Toàn more than 20 years ago.

Toàn Nguyễn: Meeting, again, it's very emotional.

Marjorie McAfee: Huan says the RoughRider's footrests are of no use to him, but Marc explains that the chair is designed to be easily modified.

Marc Krizack: So, go ahead: use your tools and fix it. Let's do it. Let's do it right now.

Marjorie McAfee: Within minutes, they've raised the footrests to create a step.

Huan Dien: Getting up is easier.

Marc Krizack: Much easier.

Marjorie McAfee: And they see another benefit of the modification...

Huan Dien: Yes, that's right. If I buy anything, I can put it here.

Marc Krizack: You can use the footrests to carry things, even.

Huan Dien: I can transport things like this; that's good. Having something on the footrests is better. I'm not afraid of falling backwards.

Marjorie McAfee: Huan decides to keep the chair after all. For Ralf, it's been the same story all over the world. He's brought the RoughRider to dozens of countries, including Mexico, Iraq and South Africa, through partnerships with several factories abroad.

Marc Krizack: I would like to see Whirlwind Wheelchair become unnecessary, as soon as possible. I would like to help to develop a self-sustaining, competitive industry of wheelchair building all over the world. Once the marketplace is populated, hopefully by then there will be so many people working on inventing wheelchairs — making wheelchairs better than ever — that maybe in 10, 20, 30 years we won't even recognize today's chairs; they'll be history.

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Marjorie McAfee: On the final day of the ping-pong tournament, Mr. Toàn helps present awards to the athletes, many of whom are now using his chairs. And afterwards, everyone gathers for a banquet.

Singer translated from Vietnamese: Disabled, but not paralyzed, determined to step forward in life.

Marjorie McAfee: On this night, the RoughRider seems to be the star of the show.

Singer: Disabled, but not paralyzed, we continue to live our lives. This precious life gives us complete happiness. This entire world gives us complete happiness.