For more than a quarter of a century Steve Huter has been part of an energetic training team at the University of Oregon-based Network Startup Resource Center (NSRC), providing technical capacity development to thousands of network engineers to strengthen the infrastructure, partnerships and networking expertise around the world. For his contributions to the global internet community he was inducted into the Internet Hall of Fame in 2014 and, more recently, was presented by the Internet Society with the 2018 Jonathan B. Postel Service Award. CONNECT caught up with Steve at TNC18 in Trondheim for a chat about the driving force behind the NSRC and his passion to connect the unconnected.
Tell us more about the NSRC model and why it has been working all these years?

A fundamental tenet of the NSRC model is to listen first. We want to be sure we are helping people solve the right problems to achieve their objectives. Listening carefully to what local internet developers request in terms of assistance, based on their respective conditions and challenges, is vital for a successful outcome. Once we are clear on the needs established within an NREN or its member universities, we provide technical training to build up human capacity and/or direct engineering assistance to help improve operational infrastructure or performance. To build sustainable networks it is essential to empower those who take ownership of the problems they are trying to solve, in other words, work with local hands cultivating local expertise.

The winning formula is a hands-on, request-driven approach that is grassroots in nature, and employs a bottom-up train-the-trainer philosophy, so outreach and training can continually expand. This allows for creative and hard-working young people to enter the scene and bring new ideas to build new internet services beyond what exists today.

In earlier years, as a globetrotting father, how did you explain to your children why you had to hit the road again?

When they were young, I would always try to tell them well in advance of an upcoming trip, and simply explain that I was going to country x to help my friends there build better and faster internet access to help their children. They clearly understood and valued the importance of helping friends.

We also hosted many people at our house in Eugene, Oregon, over the years, from Uganda, Ghana, Congo, Ecuador, Kenya, Senegal, Togo, Nepal, Mozambique, Bangladesh, and other countries, so they were accustomed to the discussions around the dinner table about internet infrastructure and making plans for building more. They have also travelled with me internationally for work, and on their own, have engaged in international community service projects. My daughter Maya worked in northern Senegal a couple of years ago, and my son Emilo spent this summer in Morocco with AMESSIP - Association Marocaine d’aide aux Enfants en Situation Précaire. Emilo lived with the family of a friend I’ve worked with for twenty years – Redouane Merrouch, the director of the Moroccan network MARWAN - and became good friends with his son, Mohamed, who is studying computer science in Ifrane, Morocco.

How do you join forces with GÉANT?

NSRC is currently part of the National Science Foundation’s International Research Network Connections (IRNC) program, as we help facilitate infrastructure development to interconnect national and regional R&E networks across the globe. The NSRC plays an effective support role for the international science community.

This explicitly shared objective has resulted in a strong working relationship between GÉANT and the NSRC, as well as many friendships among the organisations. By providing network engineering assistance and hands-on technical training at many NRENs and their member university networks, the NSRC complements GÉANT’s expertise in procuring and implementing R&E networks around the world in the context of EU-funded projects: GÉANT provides the regional network infrastructure working with the regional organisations and NREN partners in each country; NSRC’s primary focus is to train campus network and NREN engineers to optimize the performance of their network capabilities in support of the research and education community.
What is your fondest memory of working in the R&E networking community?

Building great friendships with thousands of people in 100+ countries over the decades who have invited me along with my family and many NSRC colleagues into their homes to break bread together and enjoy meals with their families is a wonderful benefit that I cherish deeply.

What are the major challenges the NSRC faces today?

About half of the people on Earth still don’t have access to the internet. The R&E community collectively makes many valuable contributions to humanity, but we’ve barely scratched the surface on the potential of the internet and its myriad of potentially useful applications.

One key focus area for NSRC to address this challenge is to support producers of data and new content, not just consumers of existing internet content. The creation of culturally appropriate and educationally useful content in more countries around the world is also of great importance for enriching the global internet and increasing its utility value for all. The combination of improving infrastructure, which creates more supply, and people working together to deliver relevant platforms and services, which drives demand, is good for the whole internet ecosystem.

Success for NSRC is a sustainable community of internet-savvy engineers and local operators that can enable continuous progress in their countries to bring more affordable internet access and better network performance for their respective communities. We’re not there yet, there is a considerable amount of unfinished work in many places around the world. NSRC people like working at the frontiers and helping connect internet developers from all countries and cultures to work together more effectively.

Who is the NSRC?

- 6 NSRC employees at the University of Oregon (UO), plus 4 UO student employees
- distributed, multi-lingual team of contractors from: Australia, Canada, Colombia, Denmark, Dominican Republic, Ecuador, Estonia, France, Gambia, Germany, New Zealand, Nigeria, Senegal, Spain, Sri Lanka, Tanzania, Togo, Uganda, Ukraine, United Kingdom
- hundreds of long-time volunteers all over the world
- NSRC instructor-trainees in all regions of the globe to lead internet development in their countries

Where are you heading next?

My friend Tim O’Reilly inspired me to start asking my internet development colleagues around the world - WTF? What’s the Future? What can we do with this newly built infrastructure that was not previously possible?

For example, Zipline is a California start-up company operating in Rwanda, using small robot airplanes to deliver vaccines, medicine and blood to rural areas. It’s been said that it even fits in our handbags!

“NSRC’s Virtualized Training Platform helps us run our training in a much simpler way. In the past we had to come with huge equipment, this small box can do so much and it even fits in our handbags!”

Maureen Wanja and Michelle Opiyo from KENET at the Train the Trainer workshop held in 2013 in Kigali, Rwanda

“I have known Steve to provide very well-balanced leadership to a globally distributed team, supporting very diverse communities, which I find both inspirational, principled and ultimately transformative and I have derived many leadership lessons from interacting with him.”

Isaac Kasana, CEO of RENU, Uganda

“NSRC played a key role in the establishment of Druk Research & Education Network in Bhutan. Philip Smith helped us design and configure DrukREN. He and his colleagues also helped us build the R&E community competence by carrying out training workshops and donating equipment to DrukREN members to help them connect to the network.”

Karma Jamyang, Senior ICT Officer, DrukREN, Bhutan

Find out more about the NSRC at https://nsrc.org/