Selected Papers of #AoIR2025:
The 26th Annual Conference of the
Association of Internet Researchers
Niterói, Brazil / 15 – 18 Oct 2025

STARLINK IN THE GALÁPAGOS ISLANDS: INFRASTRUCTURAL IMAGINARIES AND DIGITAL SOVEREIGNTY IN PRACTICE

Luciana Musello
Universidad San Francisco de Quito

Introduction

Residents of the Galápagos Islands, a remote Ecuadorian archipelago without a submarine fiber-optic cable to the mainland, have long struggled with slow and intermittent satellite internet offered by local providers. In April 2023, the Ministry of Telecommunications announced Starlink's internet service launch in Ecuador at a press conference in the Galápagos. Framed as a solution to the public's demand for better internet connectivity in remote zones, Starlink's arrival promised to "connect Galápagos to the world" (MINTEL, 2023). This paper examines initial findings from a field study on island residents' experiences of internet connectivity in light of Starlink's recent launch in the country. By tracing everyday engagements with internet infrastructure in San Cristóbal Island, this contribution critically assesses the imaginaries emerging around connectivity solutions in the archipelago, in relation to broader power dynamics shaping the global internet infrastructure.

Digital sovereignty and infrastructural imaginaries

The growing concentration of essential digital technologies in the hands of U.S. corporations has intensified debates about technological dependency and digital sovereignty in Latin America (Ávila, 2018; Becerra & Waisbord, 2021; Rikap et al., 2024). In recent years, U.S.-based companies have expanded their power over digital infrastructure in the region as they increasingly participate in internet service provision, investing in submarine cables (Sverdlik, 2021) and space-based broadband internet (Tepper, 2023). Across Latin America, these transformations align with a broader trend of weakened nation-states and privatized strategic infrastructure, which facilitates capital outflows and reinforces center-periphery arrangements, though often presented as "progress" or "development" (Alderman & Goodwin, 2022). Starlink's rapid regional expansion (Leins, 2024) may therefore pose a new challenge to nations' autonomy in the digital sphere.

Suggested Citation (APA): Musello, L. (2025, October). *Starlink in the Galápagos Islands: Infrastructural Imaginaries and Digital Sovereignty in Practice*. Paper presented at AoIR2025: The 26th Annual Conference of the Association of Internet Researchers. Niterói, Brazil: AoIR. Retrieved from http://spir.aoir.org.

At the same time, digital sovereignty is a contested concept. Recent scholarship has sought to reframe the discussion beyond the nation-state by exploring how a variety of actors, including companies, communities, and even individuals, exercise agency in the digital realm, thereby producing new understandings of digital sovereignty (Couture & Toupin, 2019; Jiang & Belli, 2024; Pohle & Thiel, 2020). Building on this shift, Jiang and Belli (2024, p. 8) suggest looking past state-centric ideals and instead studying how digital sovereignty is enacted “in practice.”

This paper follows this call by examining internet infrastructures as key sites where emerging meanings of digital sovereignty are inscribed (Musiani, 2022). It adopts a praxeological approach (Volmar, 2023) focused on how users experience and imagine internet infrastructure in everyday life, shaping what Parks (2015) calls “infrastructural imaginaries.” This involves analyzing how users’ practices “activate” infrastructures in ways that may either reinforce or resist the power dynamics embedded within them (Starosielski, 2015). It further illuminates the “differential dimensions” of infrastructures (Parks & Starosielski, 2015, p. 11), revealing how diverse actors conceptualize digital sovereignty within specific contexts and territories.

Methods

Following Star’s (1999) ethnographic focus on the relational and situated dimensions of infrastructure, this project entails two interrelated approaches. Fieldwork began in June 2024 and continued a year later, in June 2025, with extended observation periods in San Cristóbal Island. Observation aimed to document and critically scrutinize internet infrastructure through physical walks across the island (van Es & de Lange, 2020). Though usually hidden in the “background” (Star & Ruhleder, 1996), these walks sought to make internet infrastructure visible by examining its physical and discursive manifestations, such as antennas, routers, cables, subscriptions, and users’ interactions with these assemblages.

This approach was complemented with both in-depth and informal interviews with island residents, combined with “mapping” activities of internet connectivity (Risler, 2016). Interviewees were invited to identify reference points on the map (e.g. tourist sites, their home, workplace, study location, public spaces, etc.) and indicate the provider and quality of the internet connection at each site. The mapping exercise elicited a discussion about participants' experiences, perceptions and practices in relation to internet infrastructure, in the context of Starlink’s arrival.

Preliminary findings

Preliminary findings show that Starlink is now a ubiquitous infrastructure in the island. Antennas can be found in the port town, residential neighborhoods, public institutions, boats, taxis, and even in rural San Cristóbal, a zone which previously had little to no internet coverage. In general, Starlink seems to offer a faster and more reliable service compared to local providers. While some users report issues when the network is crowded or antennas are shared among households, Starlink is positively rated in nearly all cases. In contrast, the state provider CNT, once the sole option for most island households, is consistently linked to intermittent internet. CNT has a poor reputation,

with complaints about saturated service, unreliable connection, outdated technology, difficulties when ending contracts and bad customer support. Critiques of CNT's internet infrastructure are often tied to broader frustrations with state control, whose perceived inefficiency and lack of innovation are resented. In this sense, Starlink's entry is welcomed by island residents for bringing much-needed competition to the market.

Many interviewees reported having switched from CNT to Starlink and asserted that people around them had done the same. Indeed, Starlink seems to have displaced CNT in both market share and the public imagination. While CNT is associated with a sense of stagnation, Starlink is a marker of change and progress, enabling a mainland-like internet experience that strengthens users' autonomy. Participants described outcomes ranging from significant improvements in daily activities to life-changing gains. For instance, a student from rural San Cristóbal who had given up on ever accessing quality internet, noted: "We all have Starlink now and it has changed our lives completely." Similarly, a journalist shared that Starlink enabled him to become a pioneer in livestreaming, a previously impossible task. An office worker remarked that Starlink service felt like "a relief", while one park ranger described the experience as "having the internet in your hands."

Implications

Although some users noted a growing dependency on Starlink, potential risks tended to be downplayed. A cybercafé owner argued that depending on a global company was preferable to relying on CNT. Likewise, an IT technician dismissed state investments in local internet infrastructure as "an unnecessary expense," since Starlink "is already enough." Overall, discussions about state-centric digital sovereignty appear secondary in insular and remote zones where improvements in internet infrastructure are long overdue, trust in central governments is eroded, and the need to "catch up" is pressing.

Island residents' "infrastructural imaginaries" (Parks, 2015) demonstrate that digital sovereignty is rather understood as having control over their own internet connection, something at which Starlink excels with reliable service, consistent speeds, non-binding subscriptions, and easy-to-install antennas. In this sense, Starlink's infrastructure appears to be "activated" (Starosielski, 2015) in a way that deepens Ecuador's technological dependency on U.S. companies, but enhances individuals' autonomy. These findings underscore the often contradictory meanings and scales of digital sovereignty playing out in internet infrastructure. Starlink is likely to remain a central issue in debates over digital sovereignty, as it secures its position both in public perception and in the region's digital stack.

References

Alderman, J. & Goodwin, G. (2022) "Introduction: Infrastructure as relational and experimental process", in J. Alderman & G. Goodwin (eds.) *The Social and Political Life of Latin American Infrastructures.* University of London Press, 1-26.

Ávila, R. (2018). ¿SOBERANÍA DIGITAL O COLONIALISMO DIGITAL? Sur - Revista Internacional de Derechos Humanos, 5 (27), 15-28.

Becerra, M., & Waisbord, S. R. (2021). The curious absence of cybernationalism in Latin America: Lessons for the study of digital sovereignty and governance. *Communication and the Public*, *6*(1-4), 67-79. https://doi.org/10.1177/20570473211046730

Couture, S., & Toupin, S. (2019). What does the notion of “sovereignty” mean when referring to the digital? *New Media & Society*, 21(10), 2305-2322. https://doi.org/10.1177/1461444819865984

Jiang, M. & Belli, L. (2024) “Introduction: Contesting Digital Sovereignty: Untangling a Complex and Multifaceted Concept” in Jiang, M. & Belli, L. (eds.) *Digital Sovereignty in the BRICS Countries.* Cambridge University Press, 1-38.

Risler, J. (2016) *Manual of collective mapping: critical cartographic resources for territorial processes of collaborative creation*. Iconoclasistas.

Leins, T. (November 2024) Reach for the Stars: How Starlink Conquered Latin America. *Telegeography*. https://blog.telegeography.com/reach-for-the-stars-how-starlink-conquered-latin-america

MINTEL (@telecom_ec) (18 April 2023) “Inauguramos oficialmente el servicio satelital de @SpaceX #Starlink en Galápagos” (Post) X. https://x.com/Telecom_Ec/status/1648500961495879681

Musiani, F. (2022). *Infrastructuring* digital sovereignty: a research agenda for an infrastructure-based sociology of digital self-determination practices. *Information, Communication & Society*, *25*(6), 785–800. https://doi.org/10.1080/1369118X.2022.2049850

Parks, L. (2015). "'Stuff You Can Kick': Toward a Theory of Media Infrastructures" in P. Svensson & D. T. Goldberg (eds.) *Between Humanities and the Digital*. MIT Press**,** 355-373.

Parks, L. & Starosielski, N. (2015) “Introduction” in L. Parks & N. Starosielski (eds.) *Signal Traffic. Critical Studies of Media Infrastructures.* University of Illinois Press, 1-27.

Pohle, J., & Thiel, T. (2020). Digital sovereignty. *Internet Policy Review*, 9(4). https://doi.org/10.14763/2020.4.1532

Rikap, C., Durand, C., Paraná, E., Gerbaudo, P. and Marx, P. (2024). Reclaiming digital sovereignty: A roadmap to build a digital stack for people and the planet. Available at: https://www.ucl.ac.uk/bartlett/public-purpose/Reclaiming-Digital-Sovereignty

Star, S.L. (1999) The ethnography of infrastructure. *American Behavioral Scientist* 43(3): 377–91.

Star, S.L. & Ruhleder, K. (1996) Steps toward an ecology of infrastructure: design and access for large information spaces, *Information Systems Research*, 7 (1): 111–34.

Starosielski, N. (2015) “Fixed Flow: Undersea Cables as Media Infrastructure” in L. Parks & N. Starosielski (eds.) *Signal Traffic. Critical Studies of Media Infrastructures.* University of Illinois Press, 53-70.

Sverdlik, Y. (February 2021) How Hyperscale Cloud Platforms are Reshaping the Submarine Cable Industry. *Data Center Knowledge*. https://www.datacenterknowledge.com/networks/how-hyperscale-cloud-platforms-are-reshaping-submarine-cable-industry

Tepper, E. (2023). Space Commercialization is Closing the Digital Divide, but Expanding Global Economic Inequality. *Georgetown Journal of International Affairs 24*(1), 55-64. https://dx.doi.org/10.1353/gia.2023.a897701.

van Es, K., & de Lange, M. (2020). Data with its boots on the ground: Datawalking as a research method. *European Journal of Communication*, 35(3), 278–289. https://doi.org/10.1177/0267323120922087

Volmar, A. (2023) “From Systems to “Infrastructuring”: Infrastructure Theory and Its Impact on Writing the History of Media” in A. Pinnix, A. Volmar, F. Esposito, & N Binder (eds), *Rethinking Infrastructure Across the Humanities.* transcript, 51-64.