CAPTURING THE PUBLIC IMAGINATION: COMMUNICATING THE CULTURAL SIGNIFICANCE OF SUBMARINE INTERNET CABLES

Bronwyn Holloway-Smith (Massey University)

Email: bronwyn@holloway.co.nz

Massey University College of Creative Arts
PO Box 756
Wellington 6140
New Zealand

Abstract: Popular terms such as "wireless", "the cloud", and "cyberspace" have misled public perceptions of internet infrastructure, belying its physical and geographically-bound reality. This can cause problems for the submarine cable industry, particularly when explaining the infrastructure of the internet to uninformed potential investors, regulators, and the public in general. As an independent forum art can be a useful mediator in these situations, enabling shifts in these perceptions of the internet. This paper discusses a range of artworks that present new perspectives on submarine internet cables from outside the industry.

A MĀORI BLESSING FOR THE SOUTHERN CROSS CABLE

One early morning in October 2000 a traditional Māori blessing was conducted on Takapuna Beach in Auckland, New Zealand to mark the landing of the Southern Cross Cable, part of the Southern Cross Cable Network (SCCN) – a significant fibre optic link between the geographically-isolated New Zealand, Australia, and the USA.

The cable has remained the primary transnational internet connection between New Zealand and the rest of the globe for the past fifteen years – carrying approximately 98% of the nation's international internet traffic.

The ceremony, arranged by Telecom New Zealand (now Spark NZ), was led by local Māori kaumātua [elders] Danny Tumahai and Dr. Takutai Moana Wikiriwhi of the

A hongi between Danny Tumahai and Telecom NZ CEO Theresa Gattung at the SCCN dawn blessing ceremony. Image: courtesy of Spark NZ

Ngāti Whātua iwi, the tribe of the greater Auckland region.

How was this event interpreted and acknowledged by these elders? According to Mr. Tumahai the Māori god of the sea – Tangaroa – was acknowledged, the symbolism of te ahi kā [a lit fire] was

evoked, and that the chant *He Aha Te Hau*[1] was recited[2].

He Aha Te Hau is also known as *Tītahi's Chant*. Tītahi was an 18th century Ngāti Whātua leader and this whakataukī [proverb] is said to be his foretelling the arrival of the British colonial discoverer Captain James Cook in the central Auckland harbour, the Waitemata.

How is the arrival of colonisers relevant to the landing of a submarine cable? Both travel across oceans and both facilitate cultural exchange: the importing and exporting of cultural artifacts and information. The history of submarine internet cables also relates closely to geo-political alliances, often colonial in origin.

Although it is less visually obvious than the continued arrival and departure of great sailing ships, the arrival of a new submarine internet cable similarly signifies the future importing and exporting of culture. It is therefore fitting that, in recent years, a number of cultural producers have been creating works that explore new ways of interpreting and presenting these cables to audiences who might be unfamiliar with the structure of the trans-national internet.

In line with topical internet-related issues, some of this interest has been spurred by questions of governmental regulation and wholesale surveillance, particularly following high-profile document leaks via Wikileaks and Edward Snowden.

However, there are other potential avenues that might be explored in representing cables to the public. One such example is the work of New Zealand artist **E. Mervyn Taylor** from 1962.

In the early 1960s Taylor was commissioned by the New Zealand Government to create a mural for the foyer of the Commonwealth Pacific Cable (COMPAC) landing station in Takapuna,

Auckland. This was a publicly recognisable way of celebrating the 1962 completion of the Takapuna leg of the cable.

COMPAC was a major post-WWII submarine telecommunications system built between 1961-63 to connect a network of Commonwealth countries. The Takapuna leg of the SCCN lands in the same complex as COMPAC once did, and follows the same infrastructural routes as its predecessor.

Taylor's resulting artwork was a large-format ceramic tile mural depicting Te Ika-a-Māui, the traditional Māori creation story of the demigod Māui fishing up the North Island of New Zealand.

As reported in New Plymouth's Daily News on 9 July 1962, "*When asked if he had any special reason for selecting this particular myth for the cable, Mr. Taylor explained that the myth of fishing up a piece of land was a poetical Polynesian way of describing the discovery of a new island. There was an analogy, he thought, between the "fishing up" of New Zealand by Māui and its modern counterpart where the new cable again draws New Zealand out of the Pacific into the telephone systems of the world.*"

As an artist myself, I am currently in the midst of a Fine Arts PhD titled **The Southern Cross Cable: A Romance**. This thesis responds to the question "*What local cultural narratives are connected to the physical sites of the Southern Cross Cable Network in New Zealand, and how might these narratives be applied in a Fine Arts context, with the aim of influencing public perceptions of New Zealand's connection to the trans-national internet?*"

Following a number of historic shifts in the structure and ownership of New Zealand's communications, Taylor's mural was largely forgotten until, as a result of my research, it was found stacked in cardboard

Te Ika-a-Māui as installed in the COMPAC landing station. Image: K.V. Lunn (1975), courtesy of Archives New Zealand

boxes in the disused COMPAC landing station, having been hidden from the public for an estimated 20 years.

Alongside this discovery, I had been invited by public art commissioning group Letting Space to propose a project for the Auckland office space of advertising firm JWT. The work needed to straddle both corporate and public spheres: a visually-engaging display was to be located within a vitrine space located between the firm's boardroom and open-plan office space, and the project also needed to have the ability to engage outside audiences. A durational time limit of several months was set for the commission.

The resulting project was titled **Te Ika-a-Akoranga** [The Fish of Learning]. Akoranga references the physical location of the SCCN and COMPAC landing stations: 1 Akoranga Drive, Northcote, Auckland, and translates as *"learning, subject, discipline, profession, school, educational course, academic programme, academic course, teaching, class, lesson"*[3] – an analogy I felt was appropriate in considering what the present-day internet represents.

The project featured a time-based aspect where small sets of photographic tile prints were posted to JWT each week – allowing the time-demanding restoration process. Each tile in the mural was cleaned, photographed, the digital file edited, and reproduction photographic tiles printed in duplicate – a process that took months.

A literal dragnet was used to mount the photographic tiles in reference to surveillance narratives ("dragnet surveillance" is a term used by Snowden to describe the catch-all data collection practices of the NSA).

In addition to the digital work, two physical photographic versions of the mural were constructed: one located at the JWT offices in Auckland and a second parallel work in my Wellington studio.

Te Ika-a-Akoranga installed in the JWT Auckland office.
Image: Bronwyn Holloway-Smith (2014)

With the support of both Spark NZ and the Taylor family (E. Mervyn Taylor passed away in 1964), the images of each tile were made publicly available under a Creative Commons Attribution license – a free download – via bronwyn.co.nz. This was a response to the likely scenario that this work had originally been commissioned with public money through the New Zealand Post Office (a government department at the time).

Through this process sixteen tiles were discovered to be missing from the original mural. With close consultation of archival

records I created paintings of each missing tile, which were then photographed, printed, and included in a full display of the mural that took place in Wellington, New Zealand in November 2015.

The project gained a good amount of local media attention, including an interview on *Radio New Zealand National,*[4] and coverage in the magazines *Fishhead*[5], *Good*[6], *Artzone*[7], *Capital*[8], and the major Wellington newspaper *The Dominion Post.*[9] I have delivered several talks on the project: including at Massey University's Post-graduate seminar series Critical Forum and at the NZ National Digital Forum.

Overall, as evidenced by the warm reception of this project by key stakeholders JWT and Letting Space and positive media reviews, **the power of Taylor's choice of subject matter and the story behind the mural's recovery and restoration created a connection between New Zealand culture and submarine cables that was easily understood**.

The mural has now been returned to the care of the Spark Arts Trust and is currently undergoing restoration work – with the 16 missing tiles being recreated in ceramic. It is hoped that the mural will be returned to both a publicly-accessible space, and a space that is located in a site relevant to New Zealand's cable communications as it was originally intended.

The following artists have also made work relating to submarine internet cables in the past decade.

TARYN SIMON (USA)

As part of her series **An American Index of the Hidden and Unfamiliar** (2007)[10] photographer Taryn Simon created a series of over 60 photographs of American sites that either have restricted access, or little known sites of curiosity usually hidden from public view. Included amongst them are a nuclear waste facility, a chryopreservation unit, a customs contraband room, a forensic anthropology research facility and a photograph of transatlantic submarine cables reaching land in a New Jersey landing station.

As Salman Rushdie noted in his introduction to the book on the project: *"In a historical period in which many people are making such great efforts to conceal the truth from the mass of the people, an artist like Taryn Simon is an invaluable counter-force. Democracy needs visibility, accountability, light... Somehow, Simon has persuaded a good few denizens of hidden worlds not to scurry for shelter when the light is switched on, as cockroaches and vampires do, but to pose proudly for her invading lens..."*

Viewed on its own, the photograph of the cable is a fairly straightforward documentary representation, but viewed amongst the series of images it could be seen to take on a mystical, shrine-like form. The fact that this site has simply been included in this cabinet of curiosities asks the viewer to consider more deeply what is being represented.

STEVE ROWELL (USA)

In 2010 US artist Steve Rowell began a 3-year project to research and document historical telecommunications sites in the UK, Canada, and the USA. This work resulted in an installation at the Chicago Museum of Contemporary Art in 2013-2014. The work, titled **Points of Presence**[11], featured a two-screen slide projection showing documentary photographs of landing sites and stations, paired with a recorded recitation of code from the STUXNET virus – an early cyberweapon.

The use of slide projectors, paired with this haunting soundtrack, creates a somewhat romanticised presentation of a crime scene investigation. The resulting effect might suggest something is amiss or, alternatively, the chosen presentation media could be a response to the nostalgia and technological history of the sites being responded to.

LANCE WAKELING (USA)

A Tour of the AC-1 Transatlantic Submarine Cable[12] is a travelogue-style video work by US artist Lance Wakeling documenting his visits to the four landing sites of the submarine internet cable *Atlantic Crossing 1* at Fire Island, New York; Sennen Cove, England; Castricum, the Netherlands; and Sylt, Germany.

The artist narrates the video in a dry, yet poetic manner, weaving together divergent threads of information that associates internet infrastructure sites with topics including, in the artist's own words, *"chance encounters and associative digressions […] political protest, global security, war, the panopticons of Jeremy Bentham and Argus, the urban history of docks and data centers, Sylt's corrective geology, and the problem of representing global communication structures, whose scale far exceeds that of the individual."*[13]

Although we never see his face, the voice of the artist lends a personal note to the piece. By visiting these sites and recording his experience in a diaristic manner the work might be seen as a pilgrimage.

JOHN JOHNSON (NZL)

In December 2013 a banner appeared on a cable marker post on Takapuna Beach in Auckland, directly atop the Southern Cross Cable landing site. Accompanied by an anonymous press release on the news site Scoop, the work described itself as "a guerilla art strike" accrediting the work to "an artist dubbed "Unknown"". The press

release made specific reference to the SCCN, and stated the aim of the work as being "in protest of the growing mass surveillance conducted by international spy agencies, revealed by Edward Snowden, and the passing of New Zealand's new GCSB Amendment Bill."[14]

The site-responsive installation was removed shortly thereafter and by February 2014 the artist John Johnson had claimed ownership of the work, titled **Five Eyes Network. Surveillance Outpost**, via his personal website.[15]

In the opinion of my research assistant – who visited and documented the work – this direct intervention in the cable landing site was one that went largely unnoticed by visitors to the beach. However the photographic record of the event serves to remind us that these landing sites are not static – they are living sites that shift and change. These are sites where stories are being acted out every day, often without knowledge of the cables that pass beneath, but on occasion *because* of the cables that pass beneath.

TREVOR PAGLEN (USA)

Trevor Paglen has photographed a number of locations off the coasts of Europe and the US where international underwater fibre-optic cables come together before reaching land. Referred to as "choke points", these are places where Fibre Optic cables are believed to be tapped by the NSA. Paglen's initial images were of landing sites above ground but he soon learned to scuba-dive – successfully locating and photographing cables underwater.

In 2015 he exhibited images from this series at Metro Pictures in New York[16] [17], and also led a group on a dive to one cable site during the art fair Art Basel Miami Beach. As one reviewer commented *"The images trace the obscured existence of this extreme feat of engineering on the seafloor*

and bring to bear a parallel between perhaps humanity's greatest achievement and its least explored frontier."[18]

EVAN ROTH (USA)

Paris-based artist Evan Roth has been developing a series of works that employ "ghost-hunting" technologies to record elements of cable landing sites. A single video work and series of images was exhibited at the ICA Studio, London and on the website POSTmatter.com in July 2015. Here Roth presented cable landing sites in the Auckland, New Zealand, region taken using a camera that the artist modified himself to shoot primarily in the infrared spectrum, referencing both the infrared lasers that pass data through fiber optic cables, and the filming technique commonly used in paranormal hunting.

As observed by the POSTmatter editors, *"Recording both the physical remnants left of the web and the internet's physical landscape [...] Roth attempts to reconnect with a network that once stood for free space and untold potential, one that has now been controlled and centralised by monetisation, centralisation and surveillance. It represents an alternative way of experiencing and visualising the internet and a search for optimism within what has become an increasingly dark force."[19]*

By using these ghost-hunting technologies, Roth suggests that the often invisible aesthetic strategy of cable landing sites shares something with the paranormal. To the artist's eye, these cables are mysterious, almost mythical. Roth is both an enthusiast and a skeptic, seeking a way of connecting with an invisible god while remaining suitably suspicious of this hidden-yet-dominating force.

CONCLUSION

In her book **The Undersea Network**, Nicole Starosielski notes that *"Perhaps most significantly, millions of Internet users around the world rely on undersea cable systems for social, political, economic, and media exchanges, but have little recognition of the structures of dependency into which they are often locked."[20]* Indeed, popular terms such as "wireless", "the cloud", and "cyberspace" mislead the public perceptions of internet infrastructure, belying its highly physical and geographically-bound nature.

Starosielski continues to observe that *"If cables remain invisible to policy makers, government regulators, corporate customers, business managers, and politicians, then critical decisions about infrastructure funding – which could make our networks more robust and accessible – will continue to be uninformed."[21]* She further suggests that *"[The creation of] new cultural narratives for undersea cables is critical to an informed public participation with the transnational Internet, especially in a privatized cable system where [...] popular perception can affect the development of new networks."[22]*

Artists are in a unique position as they can operate as independent mediators between industry and the public. As cultural officers, artists are in the business of developing engaging ways of informing the public. These projects present new perspectives on cables from outside the industry, and as such present new potential methods of engaging the public and explaining cable infrastructure.

As I work towards the culmination of my PhD I intend to continue positioning historical cultural narratives in proximity to present-day political and social issues surrounding submarine internet cables, further exploring a culturally-led approach to the representation of global communications connectivity.

Using the Southern Cross Cable as an example, my approach begins by considering the cultural relevance of the cable's landing sites at Takapuna[23] and Muriwai[24] beaches, adding to this an awareness of national[25] and international contexts.

This thesis will test the theory that better public understanding of internet infrastructure can be encouraged by employing an awareness of the cultural history of cable landing sites and developing methods of storytelling that engage local knowledge.

Art has the power to shift public perceptions of internet connectivity, encouraging a more personal understanding of how it exists in relation to the landscapes it passes through. When local contexts are considered, art can also facilitate a local sense of pride in cable landing sites.

In this way, art can assist in capturing public imagination, enabling better understanding and appreciation of internet infrastructure.

REFERENCES

[1] He Aha Te Hau / He aha te hau e wawara mai? / He tiu, he raki / Nāna i ā mai te pūpū-tarakihi ki uta / E tīkina atu e au te ko tiu / Koia te pou, te pouwhakairo / Ka tū ki Wai-te-mata / I ōku wairangi e / Kōkiri!

The chant can be translated into English a few ways, depending on how the words are interpreted. The translation included here is just one interpretation:

What is the wind that softly blows? / 'Tis the breeze of the north, / That drives on shore the paper nautilus. / If I bring from the north wind / The handsome carved post, / And place it here in Wai-te-mata, / My fears will be fulfilled. / Advance!

[2] Phone conversation with the Author, 2014.

[3] Māori Dictionary, "Akoranga", accessed February 9, 2016, http://maoridictionary.co.nz/search?idiom=&phrase=&proverb=&loan=&keywords=akoranga&search=

[4] Radio New Zealand National, "Lost art work rediscovered", 1 June, 2014, http://www.radionz.co.nz/national/programmes/standing-room-only/audio/2598085/lost-art-work-rediscovered

[5] M. Rashbrooke, "Secrets and ties", FishHead, Issue 43, November 2014, 90.

[6] "Restoration complete on long-lost art treasure", Good, Issue 41, March/April 2015, 16.

[7] C. van Bohemen, "Raise the standard", Artzone, Issue 61, 2015, 21-26.

[8] C. Beardsworth, "Tile-o-file quest", Capital, Issue 27, December 2015, 43

[9] O. Wannan, "Rediscovering art history – one tile mural at a time", The Dominion Post, 14 November 2015, A9.

[10] T. Simon, "An American Index of the Hidden and Unfamiliar: 14/17, Transatlantic Sub-Marine Cables Reaching Land", accessed February 9, 2016, http://tarynsimon.com/works/aihu/#1

[11] S. Rowell, "Points of Presence", accessed February 9, 2016, http://www.steverowell.com/index.php/current/points-of-presence/

[12]   L. Wakeling, "A Tour of the AC-1 Transatlantic Submarine Cable", accessed February 9, 2016, http://lancewakeling.com/work/tour.html

[13]   Ibid.

[14]   You Can Make Contact, "Artist Graffitis Landing Point of NZ's Undersea Internet Cab", press release, February 9, 2016, http://www.scoop.co.nz/stories/PO1312/S00187/artist-graffitis-landing-point-of-nzs-undersea-internet-cab.htm

[15]   J. Johnston, "Five Eyes Network – Outpost", accessed February 9, 2016, http://www.jjprojects.com/portfolio/five-eyes-network-outpost/

[16]   T. Sohn, "Trevor Paglen plumbs the internet", The New Yorker, September 22, 2015, accessed February 15, 2016, http://www.newyorker.com/tech/elements/trevor-paglen-plumbs-the-internet-at-metro-pictures-gallery

[17]   L. Jobey, "Trevor Paglen: What lies beneath", FT Magazine, December 31, 2015, accessed February 15, 2016, http://www.ft.com/cms/s/2/beaf9936-a8ff-11e5-9700-2b669a5aeb83.html

[18]   G.Allison, "Trevor Paglen at Metro Pictures", Aperture Photography, Issue 16, 1 October, 2015, accessed February 15, 2016, http://aperture.org/blog/trevor-paglen-metro-pictures/

[19]   POSTmatter, "Fig-2: Evan Roth", accessed February 9, 2016, http://postmatter.com/#/currents/fig-2-evan-roth

[20]   N. Starosielski, *The Undersea Network*, (North Carolina: Duke University press, 2015), 10

[21]   N. Starosielski, *The Undersea Network*, (North Carolina: Duke University press, 2015), 10

[22]   N. Starosielski, *The Undersea Network*, (North Carolina: Duke University press, 2015), 68

[23]   As Graeme Lay notes in the introduction to The New Zealand Book of the Beach 2, "In an era of rapid social and physical change, the beach remains an abiding and constant presence in the lives of nearly all New Zealanders." (G. Lay, ed., *The New Zealand Book of the Beach 2*, (Auckland: David Ling Publishing, 2008), 7.) Takapuna is an idyllic beach located on the East coast of Auckland's North Shore. The beach looks out towards Rangitoto Island, a defining landmark feature of Auckland, and opens out on to the Hauraki Gulf, the primary shipping route to Auckland Harbour. The SCCN enters the beach via The Strand (a street), that runs adjacent to a large park area beside the beach. The Strand leads past the Takapuna Library – which is home to a local history archive – and continues up to the main shopping area of Takapuna. The area has a strong connection with New Zealand literary history, and has even led to the North Shore City Council producing a North Shore Literary Walks self-tour guide. (G. Lay, *North Shore Literary Walks* (Auckland: North Shore City Council, 2012), accessed June 27, 2015, http://www.aucklandcouncil.govt.nz/EN/newseventsculture/heritage/Documents/northshoreliterarywalks.pdf) As the pamphlet notes "Nowhere in Takapuna is far from its beach, and most of the writers who have lived in the town chose homes within easy walking distance of the glorious sweep of sand which extends from The Strand to Hauraki Corner."

[24]   Muriwai beach, on Auckland's west coast, is a vastly different site to Takapuna. The beach is renowned for its wild nature: windswept, pounded by surf, and marked by its black volcanic sand. The beach opens onto the Tasman sea and is part of the Muriwai Regional Park. Visitors are drawn by a large gannet colony at the southern end of the beach, and the surfing and kite-flying opportunities presented by the beach conditions. The coast line is also highly important in Māori history – it is believed to be the site where the first four waka (ocean-faring canoes) landed when the Māori people arrived in New Zealand. The souls of the departed are also said to pass up this coast line on their final departure from the world – as they head to Hawaiki (the Māori afterworld). Many New Zealand artists have also spent time at Muriwai, most notably Colin McCahon – a celebrated New Zealand artist who made many works about the beach during the period that he had his studio there. The SCCN landing point is towards the northern end of the beach, near Okiritoto stream – an area where Ngāti Te Kahupara lived from the 1700s until the late 1800s.

[25]   New Zealand is marked by its history as a British colony and the impacts this had on the indigenous Māori people. As a young nation it continues to pursue the development of its own sense of national identity, particularly at a political level. Most recently this has manifested in a $26 million attempt to change the national flag and over $150 million spent on WWI Centenary commemorations. Coincidentally, the Southern Cross Cable is also named after a star constellation that features on the current New Zealand flag.