

WATERSIDE TV-TELEPHONE-INTERNET SITUATION AND POSSIBILITIES

1. CURRENT SITUATION

Waterside does offer the following service, a basic TV service for the English non digital channels via Direct TV. Monthly cost for this service is \$4,551.33 for an annual total cost of \$ 54,616.00. Seven French and one English Canadian Channel sourced via a Shaw dish supported by 8 decoders provided by various owners, for two of the owners we do reimburse their costs, (total yearly cost \$2,596.00). The balance of the total annual (\$65,000.00) cost, \$ 7,788.00 covers maintenance cost of the system.

Waterside is not involved in the telephone or the internet services to the units, only its own needs and Wi-Fi service at the clubhouse. We have an emergency red phone at the club house, a phone in the library, a phone in the kitchen and the office telephone system. The phone line in the kitchen is used to provide the source for the WI-FI service that is available at the club house and a limited surrounding area at a yearly cost of \$3,000.00.

On the TV system we have a group of owners that added dish antenna either from Direct TV or Dish Network (total 18 antennas) or via Shaw (total 16 antennas) for a current total of 34 antennas. These benefit 67 owners, one for each Direct TV or Dish Network and 49 for Shaw. Their justification is mainly to get reception in HD service and expanded TV stations. We could reduce the number of antennas on Direct TV if they would allow multiple owners on one antenna, this is technically possible but Direct TV simply refuses to allow it. The location of those antennas and any future antennas was determined by a specialist firm about 3 years ago.

We need to keep in mind that over 75% of our owners are snowbirds either from Canada, the US or Latin America. A large portion of owners do not have internet access due to their own decision. A growing number of owners do not use a land line telephone, they use a cell phone and this should be growing as there is more and more offerings of free long distance service on cell, like the current TV drive by T-Mobile and also by some Canadian provider. ***Finally a substantial group of owners are not maintaining their telephone land line or their internet for a 12 months period, which does create problems for their current and future service.***

2. MAJOR COMPLAINTS

The main sources of complaints come from the internet lack of speed, the non-availability of HD service and in a more limited way the lack of HBO service.

On the internet we do believe that we now have the truth, ***it is not a problem unique to Waterside. It is a nationwide, coast to coast problem created by an AT&T decision not to expand their DSL service*** anymore which creates a lack of ports available to connect internet

service (see attach). By the way the main complainers are the one that use the internet to source either their telephone service on Facetime, Skype, Magicjack or others service that do take away revenue from the telephone land line supplier. Some owners have and others would like to add a sling box for TV service, which also requires a high speed internet.

The stability of our TV service is another source of complaints, as our in-ground and surface equipment is getting old and hard to service with poor availability of replacement parts; we do from time to time experience a shut down in TV service for a portion of our site. So far we have managed to resolve those situations.

3. HOW CAN WE RESOLVE THE ABOVE ISSUES

There is no easy solution; we can either sign a multi-year contract with a recognized bulk account supplier like AT&T or Comcast. Those firms can offer a bulk account for a multiyear contract, where Waterside will be the one paying the invoice and the cost spread over 411 owners via the monthly maintenance fee. This will cover telephone, TV and internet services to all, ***you need it or not***, this becomes a permanent twelve months service charge.

We have in the past contacted AT&T for their Uverse service, they will only service Waterside if we have a bulk/multi-year agreement and use the existing copper line past the on-site main connection box and probably fiber up to that box near the "petanque".

We are trying to contact Comcast, and were referred to their bulk department, it may be difficult to obtain service from them as our current system is not of any use and their investment would be substantial. On any solution, we will have to find a way to maintain the Canadian stations, our security system and communication channel. ***Remember that a multiyear non concealable contract will need the approval of the owners, before signature.***

Waterside can also find a tier supplier to provide same service as above but on a less financially secure basis, we have been contacted and received proposal in the past by such a firm.

If we forget the phone and TV service we can find alternatives for the internet via Hughes Network or from a private company with a series of antenna to be installed on our site. We have contacted Cisco system to discuss with them the various equipment and suppliers that do offer this type of service, we have a call scheduled with them Wednesday, July 29, 2015. We have investigated the antenna possibilities many years ago and we faced issues due to our building construction, mainly the stucco and the wire mesh in it.

Owners on an individual basis can use a wireless device like the ones of Virgin, Verizon, AT& T and others; we cannot recommend this solution for a full site service. I did personally test the wireless device; it did work nicely until they changed their billing structure by limiting the

consumption, so it became way too costly. By the way, this is what AT&T is recommending to use due to their lack of ports availability.

On the TV side we can upgrade our service with Direct TV to have some stations in HD, it will not be perfect, this will mean an increase of our maintenance cost, may be \$10.00/\$20.00 a month. We can easily change our Shaw decoder interface to obtain Canadian TV channels in HD, this will be a onetime \$20,000.00 cost. My suggestion here is that we test using one of the Shaw TV stations, upgrade Waterside decoder to a HD one, we can try to get a loner for the test, if not the cost is \$2,000.00 and this will serve to see how our current in-ground conduit and equipment will perform. We can also determine if the 49 owners that have HD via their contract with Shaw will still maintain their service or simply use Waterside's 8 different channels. We can always increase the number of Canadian channels available by installing additional decoders, if we can find them.

4. CONCLUSION

If we could determine exactly what the owners want I am sure we would see a difference between the permanent resident versus the snowbird. From a snowbird point of view and we have talked to more than 50 of them over the summer months, as long as they have a fast internet and if we could add HD TV to the Canadian stations they would be pleased. Remember that our responsibility is for all of the owners, not only the snowbird. This is also supported by a study conducted by a small committee last spring; the main subject was internet performance.

From a permanent owner perspective, they would like to get the 3 services, until some of them hear about the increase in monthly maintenance costs. We would also need to have a solution for the long distance charge back to owners, permanent or snowbird. Any adopted solution will mean additional work for the office, imagine the phone calls when service is not working, owners would call the office and not the provider (AT&T, Comcast or a tier party supplier). Additionally, Waterside would carry the financial risk of bad debt.

5. SHORT TERM ACTIONS

- Publish this memo and the press release related to the nationwide lack of DSL port.
- Continue our search for an internet solutions and discussion with Cisco.
- Conduct an HD TV test on a Shaw Canadian TV channel, to determine reaction of our system.
- Maintain communication with owners on the subject, by telling them not to cancel internet service with AT&T.

Andre Mongrain, July 27, 2015

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MINISTRY OF INNOVATION / BUSINESS OF TECHNOLOGY

Internet nightmare: AT&T sells DSL to your neighbors, but not to you

AT&T's empty merger promise leaves residents without fast or reliable Internet.

by Jon Brodtkin - Jun 11, 2015 9:00am EDT

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Port problems

When AT&T employees tell customers there aren't enough ports available, they're being quite literal. To get more background on DSL architecture, Ars spoke to Siefaan Vanhastel, who has a Ph.D in telecommunications and is the wireline division marketing director at Alcatel-Lucent. (Vanhastel's comments in this article are about network architecture in general and not specific to AT&T.)

Each potential DSL subscriber has a telephone line that connects to a port on a DSLAM (digital subscriber line access multiplexer), a piece of equipment that sits either in a phone company's central office or in one of numerous cabinets spread throughout a coverage area. "The cabinet is literally an iron box that stands somewhere in the street and all the telephone lines from the neighborhood or multiple streets, they come together at this one cabinet and inside the cabinet you have the DSLAM," Vanhastel said.

A typical cabinet can hold one or two DSLAMs and serve about 400 to 800 subscribers, one household per port, he said. The cabinet typically connects via fiber to the provider's central office, and from there to the rest of the Internet. The main limitation for subscribers is in the copper phone line that connects from their homes to the DSLAM. The more distance data has to travel over copper from the DSLAM to homes, the fewer megabits (or kilobits) per second customers get. But as long as the nearest DSLAM has enough ports to serve each local household, they can typically get service.

While each phone line provides a dedicated connection from the DSLAM to the home, the total bandwidth is limited by the connection from the DSLAM to the rest of the network. A DSL provider might cap the number of households it serves at some number less than the number of ports in a cabinet if it believes there isn't enough bandwidth to provide a good experience to everyone in the area. But if the provider is willing to invest in its network, it could add another fiber from the cabinet to the central office to boost bandwidth.

If there's enough bandwidth but not enough ports, the provider could add a cabinet or add equipment to an existing cabinet. "Typically service providers will leave some spare room in a cabinet," Vanhastel said. "If that's already happened, you need to go to a bigger cabinet." The process of adding a cabinet can be slowed down by local permitting.

DSL standards have advanced over the years, allowing higher speeds over the copper connections from DSLAMs to homes. But the copper speeds are always faster over shorter distances, so Internet service providers have been placing fiber closer to homes, at least in areas where they believe the investment is worth it.

AT&T offers wireline service over four network architectures: legacy DSL, which varies in speed from 768kbps to 6Mbps; IPDSL, which goes up to 18Mbps; U-verse fiber-to-the-neighborhood, which brings fiber to within 2,000 to 3,000 feet of homes and goes up to 75Mbps; and fiber-to-the-premises, which can hit a gigabit by bringing fiber all the way to each home. Neither IPDSL nor legacy DSL comes with AT&T's U-verse TV service. AT&T has about 16 million Internet subscribers, making it the nation's second-biggest provider after Comcast.

Even with legacy DSL, there's still fiber involved, but it's further from the homes. The DSLAM that



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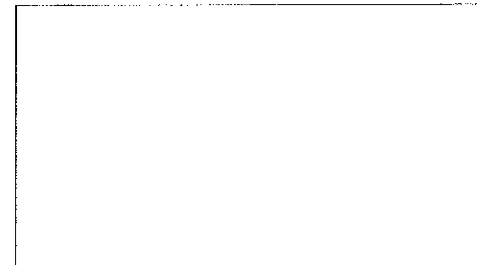


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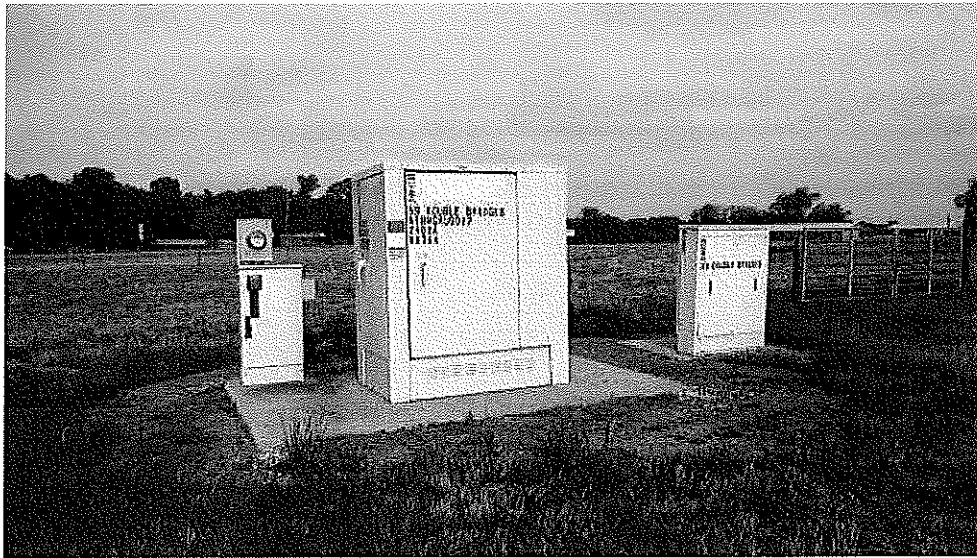
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Enlarge / An AT&T cabinet that serves Lewis' region.

Mark Lewis

serves Lewis' neighborhood in Georgia is about 2.5 miles from his house, he said. While AT&T wouldn't serve his house, his neighbors can still get 3Mbps service from the copper lines leading from the DSLAM to the neighborhood.

UPDATE: After this story was published, we heard from a couple of sources who said that a fair amount of AT&T's legacy network relies on old technology known as IFITL, or Integrated Fiber In The Loop. The technology was installed by BellSouth in the 1990s and was "sorely outdated" by 2005. Where it's still in use today, it places severe limits on how many people can get service and how much bandwidth they can receive. This network architecture is technically different from DSL, but AT&T may still refer to it as DSL.

Apartment complexes faces DSL limits, too

Lewis and many others in AT&T DSL areas live in rural areas, where properties can be an acre or bigger. But the networks' limitations can also affect apartment complexes, with residents in one unit able to get service while others cannot.

Elaine Spurgeon of Portola, California, says that her apartment complex's "property manager in the adjoining building has DSL from AT&T." But Spurgeon herself can't get DSL. There is no promise to connect new residents when others move out; AT&T has just decided not to hook up any new customers in the area.

"Over the past six months I have been persistent in calling AT&T and also using their online tools to try to obtain DSL service, with no effect," Spurgeon told Ars via e-mail. "I encountered responses from a simple 'no' to having the agent also curious after noticing DSL service in the same telephone junction box as mine, and then fall back to they had to go with what the computer told them and couldn't do anything.

"Through the help of my son, I currently use a Verizon 4G hotspot connection on my phone. He is currently paying over \$200 extra for access to more data, and it is just enough to cover the basics of my daily Internet usage. I would gladly give up the extra speed of 4G for the much slower DSL just to have the ability to watch or download video content or even keep my computer updated by not having to deal with a limited metered connection. (As I type this, Office is telling me that updates are available, and the 500-700MB is not something I can risk as it could put me over my data allowance for the month.)"

Matthew Peck of Midland, North Carolina, near Charlotte, told Ars that "We live outside of town in Midland and bought a house that had AT&T DSL. We didn't immediately renew when we bought the house and now can only get Internet service via 4G cell service or satellite, neither of which are good solutions. Repeated calls to AT&T always result in the same response: 'There are no ports available in our area.'"

AT&T wanted more than \$200 a month for 30GB of mobile data, but Peck told Ars that "I couldn't stomach paying AT&T that much when they were effectively trying to force me to that solution by not

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maintaining their wired network." Instead, he is using a cheaper T-Mobile hotspot.

Longtime AT&T employee disappointed by lack of Internet service

Few people know AT&T as well as Sandra Meitrott, who retired from the company in 2013 after 34 years with AT&T as an IT project manager and in other tech roles. But her quest to get acceptable Internet service has left her disillusioned with her former employer.

Meitrott and her husband live in Mountain Ranch, California, a rural town, on a property they purchased in 2001. Building a house was a long process, but they finally got it done and activated AT&T copper phone service in August or September of 2007, she told Ars. That was a few months before AT&T's deadline for bringing broadband to 100 percent of its wireline phone territory.

Despite having copper phone service, Meitrott is a few miles from the nearest areas where AT&T has set up DSL service, she said. She and her husband rely on \$80-per-month satellite with a 30GB monthly data cap. They can't even use AT&T's cellular service because the reception is too poor, and so they buy Verizon Wireless service instead.

"There have been promises made with every single [AT&T] merger," Meitrott said. "They paint one picture to get it approved and what they ultimately deliver is completely different."

Fixed wireless could fill some gaps, but others may be left behind

AT&T showed the FCC a map of the 13 million locations where it plans fixed wireless service, covering parts of 48 states, and it looks impressive:

Figure 1. Post-Transaction Fixed WLL Coverage.



Legend
 ● FWLL Footprint

AT&T

But our analysis of the numbers shows that millions within AT&T's wireline footprint will be left out.

In 2012 AT&T said it "plans to expand and enhance its wireline IP network to 57 million customer locations (consumer and small business) or 75 percent of all customer locations in its wireline service area by year-end 2015." Based on those numbers, there are 76 million customer locations in the wireline service area.

In 25 percent, AT&T said it is "currently not economically feasible to build a competitive IP wireline network." AT&T wants to serve that 25 percent with wireless only, though in many cases that would be mobile rather than more reliable fixed wireless.

By adding the 13 million new fixed wireless locations to the 57

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million where it plans wireline IP service, AT&T says it will bring "high-speed fixed broadband" to 70 million locations. Since only about two million of the new wireless locations will be inside the copper footprint, that means 59 million of the 76 million wireline locations will get access to something approaching modern broadband. The other 17 million includes people with AT&T's slowest DSL as well as those who can't get any AT&T Internet service at all.

"There is no way that AT&T will ever service my Internet data needs."

The bulk of the planned 57 million locations in the "wireline IP network" are fiber-to-the-premises and fiber-to-the-neighborhood, while the remaining 24 million will be connected to the company's IPDSL network, which offers DSL service of up to 18 Mbps. The 57 million does not include those on AT&T's "legacy" DSL installations, which vary in speed from 768kbps to 6Mbps.

The new fixed wireless should offer an improvement over mobile hotspots. AT&T does have a "Wireless Home Phone & Internet" product today that can theoretically be offered nationwide because it relies on the cellular network, but AT&T's filings with the FCC indicate that AT&T doesn't consider this to be an appropriate replacement for "fixed" Internet service. Unlike Wireless Home Internet, the new fixed wireless service that AT&T says it will build if the FCC allows it to buy DirecTV will be reliable enough to be a good replacement for wired Internet service, AT&T told the FCC in a filing last year:

Although the new fixed WLL [wireless local loop] technology will make use of wireless spectrum and AT&T's LTE network infrastructure, it is not merely a version of "best efforts" mobile broadband service for the home. Rather, the fixed wireless local loop product will provide consumers with a robust broadband experience, with speeds and usage comparable, and typically superior, to the best wireless services available in the areas in which the fixed WLL solution will be deployed. The fixed WLL deployment is expected to utilize 20 MHz (10+10 MHz paired "uplink" and "downlink") of spectrum dedicated to the fixed WLL service. The service will incorporate advanced technologies, including professionally installed customer premises equipment, that significantly enhance spectral efficiency and signal quality.

"By using a fixed antenna, this service is designed to perform as well as services with advertised speeds of 15-20 Mbps," AT&T also noted.

AT&T won't build out this network unless the FCC approves the merger because its current TV service is losing money, lagging behind competitors in the cable and satellite industries. That might sound counterintuitive, but the company says owning DirecTV will allow it to sell its own TV-and-Internet bundles in areas where it doesn't today, generating more revenue and making the new construction worthwhile. (AT&T actually sells bundles including DirecTV already, through a partnership with the satellite company, but would presumably make more money if it owned DirecTV itself.)

Since the fixed wireless network will exist mostly outside AT&T's wireline territory, there will be more uncertainty for people who have been waiting years for AT&T to provide Internet service. There is a chance the fixed wireless service could reach Meitrott, but she isn't counting on it.

"There's just not enough customer density to make it financially viable" for AT&T to build in her area, Meitrott said. Between the lack of DSL and AT&T's poor wireless performance where she lives, "either way you look at it there is no way that AT&T will ever service my Internet data needs," she said. "There's no way."