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August 16, 2011

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street
PO Box 2319, 27th Floor
Toronto, ON
M4P 1E4

Dear Ms. Walli:

RE: Application by Canadian Distributed Antenna Systems Coalition ("CANDAS");
Board File No.: EB-2011-0120

We represent CANDAS in connection with its application to the Board regarding access to the power poles of licensed electricity distributors for the purpose of attaching wireless telecommunications equipment ("**Application**").

In accordance with Procedural Order No. 1, CANDAS is filing the Responses to Interrogatories of Board Staff.

CANDAS will file two paper copies of the above-noted evidence tomorrow.

Yours very truly,

(signed) H.T. Newland

HTN/ko

cc: Mr. George Vinyard
ExteNet Systems, Inc.
Mr. Mark Rodger
Borden Ladner Gervais
All Intervenors

EB-2011-0120

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, (Schedule B);

AND IN THE MATTER OF an Application by the **Canadian Distributed Antenna Systems Coalition** for certain orders under the *Ontario Energy Board Act*, 1998.

RESPONSES TO INTERROGATORIES OF

BOARD STAFF

(on the evidence of the Applicant, CANDAS)

August 16, 2011

Questions

1. Please provide the following information on permit applications for wireless attachments to the poles of Ontario electricity distributors for the purpose of operating the distributed antenna systems ("DAS") network:

   1.1 Total number of permit applications that have been made to each Ontario electricity distributor broken down by distributor.

   1.2 Number of applications that have been processed by each Ontario electricity distributor.

   1.3 Number of attachment permits that have been granted by each Ontario electricity distributor.

   1.4 Number of attachment applications that (a) have not been processed; or (b) rejected by each Ontario electricity distributor and reasons given by each distributor for not processing or rejecting the applications.

Responses:

1.1 During 2009 and 2010 DAScom submitted a total of 435 applications for wireless attachments to the poles of THESL. During that period, DAScom also submitted a total of 222 applications for wireless attachments to the streetlight poles of THESI which, at the time, were non-distribution assets. At least some portion of the THESI streetlight poles that were the subject of these applications have since been classified as distribution assets and will be transferred to THESL. Moreover, during 2009 and 2010, CANDAS understands that Cogeco submitted a total of 303 applications for attachments of fibre optic cabling to THESL poles in connection with the project to build the proposed Toronto DAS Network. No applications were submitted to any other Ontario electricity distributor in connection with any DAS network of which CANDAS has knowledge.

1.2 Of the foregoing applications, THESL processed a total of 184 DAScom applications and, as reported to ExteNet, a total of 186 Cogeco applications. THESI processed a total of 222 DAScom applications.

The last DAScom node attachment application was submitted to THESL in October, 2010.

1.3 THESL granted a total of 184 permits to DAScom for wireless node installations. THESI granted a total of 222 permits to DAScom for wireless node installations.

At last report, THESL had granted a total of 170 permits to Cogeco for fibre optic cable installations related to the proposed Toronto DAS Network.

The last DAScom node permit application was granted around the month of July, 2010.

1.4 Of the DAScom applications to THESL, a total of 251 were not processed. While some applications may have been rejected at various times, all were resubmitted with revisions, and either approved or are still, presumably, pending. The reasons given for not processing the applications at different times varied, but ultimately and for the most part had to do with a lack of sufficient human resources. The reasons given for rejecting the application[s] were typically the planned use of the pole for a future THESL build or that applications were missing information that was later supplied. Of the DAScom applications to THESI, all were processed and none were rejected.

With regard to the Cogeco applications to THESL, at one point in the first quarter of 2010, all of the 285 Cogeco applications related to the Toronto DAS Network then reported as pending, were rejected as a group, reportedly due to a change in the information required to be submitted with attachment permit applications from what had been required earlier with respect to wire attachments. Since then, CANDAS understands that 303 applications were either resubmitted or newly submitted, inclusive of the foregoing 285 rejected applications. During the course of processing Cogeco applications, some applications were rejected on various technical grounds but these grounds were not reported directly to DAScom. Cogeco routinely resubmitted these applications with corrections and at the last report provided to DAScom, had a total of 3 applications that had been denied and were still pending revision and resubmission. To the knowledge of CANDAS members, the reasons given for not processing the Cogeco applications (including those pending for some time prior to being rejected en masse as described above) were, for the most part, the same as those given at various times for not processing the DAScom applications.

Questions

2. Please provide the following details of attachments currently being used to operate the DAS network in Ontario:

    2.1 Name of the Ontario electricity distributor in whose territory the attachment is located;

    2.2 The structure to which the device is attached (i.e. electricity pole, street lighting pole, other pole, or structure other than a pole) – please specify;

    2.3 If on a pole, the location (i.e. communication space or top of pole); and

    2.4 Dimensions and weight of the attachment.

Responses:

To the knowledge of CANDAS, there are no attachments currently being used to operate any DAS network in Ontario. The following responses pertain to attachments that are associated with the proposed Toronto DAS Network but are not operational at this time and could not be made operational unless and until fibre connectivity between these node attachments and an appropriate hub facility is established.

2.1 THESL and, to the extent that it is deemed to be an electricity distributor by virtue of owning distribution assets, THESI.

2.2 There are currently a total of 110 THESL poles to which DAS node equipment is attached pursuant to the permits granted to DAScom (hereinafter referred to as "THESL Node Attachments").

2.3 None of the THESL Node Attachments involves pole-top attachment. Each of the THESL Node Attachments consists of an antenna mounted on a cross arm that is affixed to the pole of the communications space, and other equipment enclosures (*i.e.*, boxes) and cables, including a remote radio unit and a back-up battery power unit, all of which is affixed to the pole below the communications space. Exhibit D, Drawing 4 of 4 (the "Drawing") which is included with the written evidence of Tormond Larsen**,** shows the locations of the THESL Node Attachments on the poles.

2.4 The dimensions and weight of the DAS attachments are set out in the Drawing.

Questions

3. According to section 9.1 of the application, the pole access agreement with Toronto Hydro Energy Services Inc. ("THESI") expired on December 31, 2010 and THESI advised DAScom that it would be required to remove all wireless attachments in accordance with that agreement.

    3.1 Please indicate whether the agreement with THESI was renewed.

    3.2 Please indicate whether THESI is presently processing any of the wireless attachment applications filed prior to the expiration of the access agreement.

    3.3 Please provide the number of wireless attachments currently attached to THESI's poles based on previously approved attachment permits.

    3.4 Please provide the number of attachments that are presently being used to provide wireless service.

    3.5 Please indicate whether any wireless attachments have been removed as a result of the expiration of the agreement. If yes, please provide full particulars including by whom the attachments were removed.

Responses:

3.1 THESI declined DAScom's request to renew the agreement.

3.2 No, they are not.

3.3 None. 84 attachments were removed after the expiration of the Light Pole Access Agreement.

3.4 None.

3.5 All 84 node attachments to THESI poles were removed after the expiration of the Light Pole Access Agreement. The removal work was carried out by Gabe's Canada, Inc. and their subcontractor, Entera Utilities Contractor Limited.

Questions

4. Section 9.2 of the application states that "THESI's refusal to renew the Light Pole Access Agreement suggests that THESL will also refuse to renew the Distribution Pole Access Agreement when it expires."

   4.1 Please indicate whether the pole access agreement with THESL has expired? If yes,

      4.1.1. on what date did expire?

      4.1.2. Please indicate whether the agreement with THESL has been renewed;

      4.1.3. Please indicate whether THESL is presently processing any of the attachment applications filed prior to the expiration of the access agreements; and

      4.1.4. Please indicate whether any wireless attachments have been removed as a result of the expiration of the agreement. If yes, please provide full particulars including by whom the attachments were removed.

   4.2 Please provide the number wireless attachments currently attached to THESL's poles based on previously approved attachment permits.

   4.3 Please provide the number of attachments that are presently being used to provide wireless service.

Responses:

   4.1 The Distribution Access Agreement between DAScom and THESL has not expired. However, in light of THESI's refusal to renew the Light Pole Access Agreement with DAScom and the August 13, 3011 letter, DAScom and ExteNet are of the view that when the Distribution Pole Access Agreement expires, THESI will refuse to renew it and will require DAScom to remove the 84 nodes that have already been installed on THESL poles.

      4.1.1. Not Applicable.

      4.1.2. Not Applicable.

      4.1.3. Not Applicable.

      4.1.4. Not Applicable.

4.2 See Responses to Staff 2.1-2.2

4.3 None. The Toronto DAS Network is only partially constructed, at this point in time, and is not operating.

Question

5. Please confirm whether safety and engineering standards and the data required to be submitted in support of attachment applications was provided by THESL at the time the pole attachment applications were filed by CANDAS members.

Response:

Confirmed.

Questions

6. In its August 13, 2010 letter to the Ontario Energy Board, THESL listed some differences between wireline and wireless attachments.

   6.1 Please indicate whether you agree with the differences pointed out by THESL. If you disagree, please indicate why you disagree and provide information and documentation to support your position.

Responses:

6.1 Please see table below:

THESL Assertion as to Differences Between Wireless & Wireline Attachments	**Reason for CANDAS' Disagreement**
"as a category, wireless communication attachments are distinctly different from wireline attachments"	It is not self-evident that whatever distinctions may exist between wireline and wireless attachments amount to a meaningful categorical difference. While the specific configuration and dimensions of wireless equipment and the fact that it includes one or more antennas may be distinctions, the principles of mechanical engineering and the methods used to attach the cables and equipment to poles are not different in any meaningful way. This is especially true when consideration is given to the facts that: (1) wireline attachments are not limited to cables, but also involve other equipment such as amplifiers and power supplies; and (2) wireline attachments (*i.e.*, fibre and fibre management equipment are a significant component of DAS network deployments relative to the component comprising wireless attachments.
"within the category they [wireless communication attachments] are highly variable in size and configuration"	While there is some variability in the size and configuration of the antennas and equipment enclosures (*i.e.*, boxes) used to deploy wireless infrastructure on utility poles, the physical dimensions and weights involved tend to fall within a reasonable range that is of necessity constrained by the applicable standards and practices that apply to the sizes and configurations of the poles to which these items are attached and that are not dramatically different than the physical dimensions and weights of other equipment attached to poles by the owners or by wireline attachers. Further, the mechanical devices for affixing the attachments to the poles tend to be the same or very similar in size and configuration to those used for other attachments. Finally, for any specific DAS network deployment, there is typically a very uniform equipment configuration so that the prototypical attachment can be reviewed and approved with any deviations handled on an exceptions basis.

THESL Assertion as to Differences Between Wireless & Wireline Attachments	Reason for CANDAS' Disagreement
"They [wireless communication attachments] consist of non-uniform equipment that is essentially self-contained and capable of being supported elsewhere than on utility poles, much as rooftop solar panels are, for example."	Wireless attachments are not inherently "non-uniform". On the contrary, particularly with a DAS deployment of any size, there are many technical and economic reasons for complete uniformity in design to the extent possible within the context of any non-uniformity in the configuration of the poles to which the attachments are to be made. Far from being self-contained and similar to rooftop solar panels, wireless equipment of the kinds at issue here are small parts of an overall network and system that is very complex. Not only must they be physically interconnected not only with the power grid, but also and more importantly with the wireless carriers' centralized equipment and the larger telecommunications network, they must also be configured and located in such a way as to provide seamless radio coverage and sufficient capacity for mobile users located and often moving throughout a specified geographic area, all in conjunction with numerous adjacent "cells" or radio transceivers being used by the same wireless carrier.
"When mounted on utility poles, wireless attachments typically occupy a much greater portion of communication attachment space than wireline attachments."	When antennas are mounted on the pole-top as the case in many areas in the United States, DAS wireless attachments do not occupy any greater portion of the communication attachment space than any other wireline attachment unless the coaxial riser running from the radio unit mounted below the communication attachment space up to the antenna is considered to occupy a significant portion of the space. When the antennas are mounted on cross-arms affixed to the pole in the communication space the portion of such space typically occupied by the wireless attachment is still not necessarily greater than a typical wireline attachment if one considers not only the point at which the wireline support strand is attached, but also the space allowed for clearance between cables. Furthermore, mounting a cross-arm in the communication space to support an antenna is not incompatible with affixing a full complement of wireline attachments in the allotted space.

THESL Assertion as to Differences Between Wireless & Wireline Attachments	Reason for CANDAS' Disagreement
"wireless attachments require special assessments of engineering design and as-built construction."	It is not at all clear that the assessments of engineering design and as-built construction required for wireless attachments are "special" in any sense that constitutes a meaningful difference in comparison with wireline attachments. As noted above, the mechanical and engineering principles and standards are not different because some stationary equipment is wireless and other equipment is not. In fact it is arguable that the assessments of wireline attachments are more complex given the heavier loads, the involvement of many more poles and attachment points in a wireline run, the longer distances and more dynamic forces involved (sway, wind and ice loading, etc.) as compared with wireless attachments that can be evaluated and inspected on a single pole at a single, fixed installation site. In fact, members of CANDAS have been told that their DAS node attachment permit applications could be more easily processed than wireline attachment permit applications submitted to the same electric distribution company.
"the presence of non-uniform wireless communication equipment in the distribution zone or elsewhere on the pole changes the physical equipment configuration . . and could present safety hazards."	As noted above, CANDAS disagrees with the characterization of wireless communication equipment as "non-uniform" in comparison with either wireline attachments or other equipment attachments on utility poles. There is a certain amount of variability over time in all utility pole configurations due to changes in technology and other factors, but with design and permitting processes that are compliant with applicable safety standards, together with proper construction and inspection, there is no reason, whatsoever, that wireless attachments should give rise to safety concerns that are any greater or different than those that are unavoidably present as a matter of routine in the industry This has been the experience of DAS providers in the US and is the conclusion reflected in the decision of the FCC in FCC Order 11-50 (April 7, 2011). At no time in their dealings with THESL, either before or after entering into the Distribution Pole Access Agreement, did THESL advise the members of CANDAS of any concerns about "incremental safety hazards" allegedly created by wireless attachments.
"Wireless communication attachments outside the distribution zone also have the potential to impede safe and efficient access to both distribution equipment and other wireline attachments. . ."	As noted above, while any attachment has the potential to impede access, there is nothing inherent in wireless communication attachments that should make this potential meaningfully greater than is the case with other communications and non-communications attachments. In fact it is arguable that pole-top placement of antennas has the effect of lessening this potential when compared to any kind of attachment mounted on a cross-arm which could have a greater potential of impeding either a pole climber or a bucket truck.

THESL Assertion as to Differences Between Wireless & Wireline Attachments	Reason for CANDAS' Disagreement
"the drilling of holes through poles to mount wireless communications attachments below the distribution zone incrementally weakens poles ..."	Wireless communications attachments do not necessarily require the drilling of holes through poles to any greater extent than is required for affixing other attachments. To the extent that drilling holes through poles is either necessary or the most desirable method for fixing attachments, this can be done safely and, in fact, is regularly done safely through compliance with engineering standards and construction practices that have been developed and used over many decades.
"although wireless communication equipment (antennas, power supplies, etc.) needs to be connected to low voltage power and signal cables, that equipment can be secured and connected as necessary in a wide variety of settings other than utility poles -- buildings and rooftops, for example."	It is simply not the case that wireless equipment such as that designed to be deployed in a DAS network "can be secured and connected as necessary" in a wide variety of setting other than utility poles. Aside from the technical unsuitability of alternative locations such as those cited for DAS deployments as demonstrated in the Written Evidence of Larsen, O'Shaughnessy and Lemay, there are many areas in which such alternatives are effectively non-existent. Moreover, even if they were otherwise feasible alternatives, most such settings do not come with the access to integrated fibre network connectivity that is an essential component of a DAS system and bringing fibre to these locations would be both cost-prohibitive and unnecessarily disruptive and wasteful.
"multiple viable market alternatives for hosting wireless attachments exist and are being used today."	This statement is based on the false premise that all wireless technologies and services are substantially identical in all respect and under all circumstances. As discussed in the Written Evidence of Larsen, O'Shaughnessy and Lemay, prevailing trends in the wireless industry, the limited availability of radio frequency spectrum and the particular characteristics and benefits of DAS networks, means that they are becoming increasingly important as a method of delivering wireless services to meet the needs and demands of all citizens at a reasonable cost and with the least impact on the urban environment. The same could be said of other wireless telecommunications technologies that cover smaller areas with lower power, lower elevation transmission equipment that is closer to the end user, e.g., microcells. In fact, for outdoor deployments, poles in the public rights of way or existing utility easements, whether utility poles, streetlight poles or traffic light standards, are currently for all practical purposes the only viable alternative for hosting such wireless attachments.

Questions

7. Section 2.7 of the application states that "at least one other large electricity distributor in Ontario appears to be following THESL's lead by adopting a 'no wireless policy'" and that "certain other distributors are not prepared to offer pole access agreements for wireless attachments at this time."

   7.1 Please identify the other distributor(s) that have adopted the "no wireless" policy.

   7.2 Please identify the distributors that are presently not prepared to offer pole access agreements for wireless attachments.

   7.3 Please provide evidence that would demonstrate that those distributors are unwilling to attach wireless equipment to their poles and/or unwilling to offer pole access agreements for wireless attachments.

   7.4 If attachment applications have been made to those distributors, please provide information on the status of these applications including:

      7.4.1. whether any permits have been granted;

      7.4.2. whether any reasons have been given for not offering pole access agreements and if so, please state those reasons.

Responses:

7.1-7.2 Since August of 2010, ExteNet, acting on behalf of and in conjunction with DAScom, has contacted a total of six electricity distributors in Ontario regarding attachment of DAS equipment to power poles. Veridian Corporation ("Veridian"), PowerStream, Inc. ("PowerStream") and Newmarket Hydro ("Newmarket") indicated that they would not allow antennas to be attached to their distribution poles. Oakville Hydro ("Oakville") and Oshawa PUC Networks Inc. ("Oshawa") refused to provide DAScom with copies of their standard pole access agreements until such time as DAScom submitted certain information and/or could demonstrate that it had entered into a municipal access agreements. Finally, Enersource Corporation ("Enersource") did not respond to enquiries regarding wireless attachments.

Given the responses of these utilities and in light of the August 13, 2011 letter and the refusal of THESI to renew the Light Pole Access Agreement, DAScom and

ExteNet have put their efforts to construct DAS networks in Ontario on hold and have, accordingly, not pursued these Ontario distributors or approached any others.

7.3

- **Veridian:** Email correspondence to and from Veridian regarding Veridian's "strict no antenna attachment policy". See Schedule Staff 7.3-1.

- **PowerStream**: PowerStream representative, Cheryl Goul, advised verbally, in multiple conversations (including on or about October 12, 2010), that PowerStream would not permit antenna attachments on its poles.

- **Newmarket Hydro**: In a telephone call on or about November 30, 2010, a Newmarket representative, Len McDonald, advised that Newmarket would not permit antenna attachments on its poles.

- **Oshawa**: Oshawa refused to provide a form of attachment agreement. In an email dated February 22, 2011, Oshawa's representative, Eric Andres, stated that Oshawa PUC would not provide a form of attachment agreement until DAScom submitted an "application package/request to attach" as well as proof of a municipal access agreement with the City of Oshawa. See Schedule Staff 7.3-2.

- **Oakville**: Oakville refused to provide a form of attachment agreement. Oakville Hydro did not respond to numerous phone calls and voicemails, over a 6-7 week period requesting information. When contact was finally made on or about October 26, 2010, Oakville representative, Daniel Steel, stated that Oakville would not provide a form of attachment agreement without evidence of a municipal access agreement with the City of Oakville.

- **Enersource**: After difficulty making contact with Enersource between August and October of 2010, ExteNet immediately provided equipment information requested by Enersource on October 27, 2010. Subsequently, Enersource failed to respond to repeated attempts to make contact through January 2011 and no determination as to wireless attachments was ever reached.

7.4 No attachment applications have been made to any Ontario electric distributor other than THESL.

7.4.1. Not applicable.

7.4.2. See the responses to Staff 7.1-7.3.

Schedule

Staff 7.3-1

From: Matthew Aceto [mailto:maceto@veridian.on.ca]
Sent: Thursday, January 13, 2011 2:05 PM
To: Peter Komon
Cc: Brian Kirk
Subject: RE: New third party attachment request

Hi Peter,

The reasoning behind the no-antenna policy, is that Veridian would like to minimize the third-party attachments to as little as necessary. Since poles are on public road allowance, there is an esthetic concern to minimize clutter. More-so, Veridian's prime objective is distributing power, not renting poles. Therefore, we must maintain the ability to mount additional hydro equipment in the future (ie: transformer banks, high voltage risers, load break switches, etc).
The SCADA antennas that mount to poles are property of Veridian, and therefore pose no conflict of interest.

In fact, we strictly don't allow attachments of any party other than "Common Carriers" or "Major third Parties". Since you have stated that your company is regulated by the CRTC, I am assuming that the purposes of your business fit the description of a Common Carrier; am I correct?

Matt

From: Peter Komon [mailto:pkomon.ctr@extenetsystems.com]
Sent: Friday, January 07, 2011 3:55 PM
To: Matthew Aceto
Cc: Brian Kirk
Subject: RE: New third party attachment request

Matt,

Thank you for your prompt response. You have made it clear that Veridian has a strict no-antenna policy, that the agreement was for fiber only and that you are not in a position to change or make exceptions to that policy. However, I would like to understand the reasoning behind for that policy. I am aware that Veridian uses a SCADA system which includes smaller, low power antennas (presumably on the poles). I can understand the desire not to have large microwave or high power antennas on your poles. However, DAScom's antennas are not dissimilar from the SCADA antennas - they are low power and relatively small.

Given the similarity of the SCADA antennas and DAScom's antennas, understanding the basis for the no-antenna policy might bring to light the fact that having our antennas on Veridian's poles is not actually contrary to Veridian's goals in having the policy.

I continue to have concern over the fact that Veridian has chosen to allow the "major third parties" (presumably Bell, Rogers and Telus?) to set the guidelines on behalf of all possible attachers, including those with different business models, in different industries and using different technologies. However, my goal is not to dissuade Veridian from having and maintaining a no-antenna policy. Rather, my hope is that DAScom might be able to achieve its goals of attaching antennas without violating integrity and goals of Veridian's policy.

Thanks in advance for your feedback

From: Matthew Aceto [mailto:maceto@veridian.on.ca]
Sent: Thursday, January 06, 2011 3:57 PM
To: Peter Komon
Cc: Brian Kirk
Subject: RE: New third party attachment request

Hi Peter,

See my comments below. I am not in a position of authority to change our policy as you request; however, I am giving you Veridian's current stance which has been stated firmly.

Matt

From: Peter Komon [mailto:pkomon.ctr@extenetsystems.com]
Sent: Thursday, January 06, 2011 4:09 PM
To: Matthew Aceto
Cc: Brian Kirk
Subject: RE: New third party attachment request

Matt,

One of the biggest issues I had with the agreement as provided was that it did not permit attachment of "Wireless Transmitters" (i.e. antennas). While I appreciate the fact that Veridian has similar agreements with Bell, Rogers, Telus, etc., at a minimum those carriers do not require antennas as it is not a part of their business model. Accordingly, there must be at least some distinction, as well as a basis for working outside of Veridian's policy, between the existing attachment agreements for incumbent carriers and DAScom.
There is no mention of antennas because Veridian has a strict no-antenna policy; you and I have discussed this before. You requested that I send you the attachment agreement so that you may attach your fiber only (as I recall).

Further, many of the other amendments to the agreement that I proposed relate to the protection of our investment. Neither our business, nor our customers (such as PMI, Videotron, etc.) are willing to invest millions of dollars into creating a network if there is no guarantee that the network will be available for more than a few years. Not being a huge incumbent telecom carrier, we do not have the leverage to ensure sustainability of a network without contractual protection.

The agreement was formed with all major third parties in consensus. I understand your concern for your investment; however, Veridian also has an interest in limiting unnecessary liabilities. This is not to say that you must remove after five years, but we simply cannot commit to a 20 year contract.

While I recognize Veridian's desire to maintain an equal playing field amongst its attachers, the intention of that parity is to ensure that no one is unfairly advantaged. However, by maintaining a strict policy with regard to attachment terms, Veridian is effectively advantaging the incumbent carriers over other attachers. Thus, our requests are not intended to ask for an advantage, but only to allow us to make a sound investment in a newer technology so that we may fairly compete in the marketplace.
Could you kindly explain how Veridian's policy is unfair? Particularly, what advantage does it give to larger carrier over a small carrier?

As such, I ask that you reconsider our proposed changes. And if you refuse to reconsider your position, please provide me with the appropriate executive contact so that I may escalate the matter to the appropriate level. Since we've had difficulties connecting via email in the past, please confirm that you received this email. I trust that this will not take longer than a few days, but advise when I can expect a response. Please note that Brian Kirk, Assistant General Counsel is now copied on our correspondences.
Rest assured, your concerns are not falling on deaf ears. If this matter needs to be escalated to Veridian management, I shall see to it; in the mean time, I am still your contact. I understand Veridian's policy and I have advocated on your behalf to change it; still, Veridian Executives remain firm. I would advise not to escalate the matter until an argument of yours cannot be addressed by myself.

Peter

From: Matthew Aceto [mailto:maceto@veridian.on.ca]
Sent: Tuesday, January 04, 2011 2:36 PM
To: Peter Komon
Subject: RE: New third party attachment request

Hi Peter,

It was explained to me that the agreement was formed from with the consent of our current attachers (ie Bell, Rogers, Telus, etc.), and cannot be changed.

Matt

From: Matthew Aceto
Sent: Tuesday, January 04, 2011 2:27 PM
To: 'Peter Komon'
Subject: RE: New third party attachment request

Hi Peter,

I have no record of receiving the email you sent on October 27th. I will forward your comments for review.

Matt

From: Peter Komon [mailto:pkomon.ctr@extenetsystems.com]
Sent: Monday, December 27, 2010 10:58 AM
To: Matthew Aceto
Subject: FW: New third party attachment request

Mathew,

Have you had a chance to take a look at the requested changes? Please let me know status.

Peter

From: Peter Komon [mailto:pkomon.ctr@extenetsystems.com]
Sent: Tuesday, October 27, 2010 3:14 PM
To: Matthew Aceto
Subject: RE: New third party attachment request

Mathew,

Please see below for the requested amendments to the agreement. Please feel free to call me to discuss any of the propsed changes to the agreement if you have any questions.

Regards,
Peter

Requested changes

1.4 First line: Insert "antenna" after ....material, apparatus, equipment.
Delete last sentence beginning "Unless otherwise agreed..."

5.1 Need a definition of "satisfactory financial performance." Proposed language: Satisfactory financial performance is the fulfillment of Licencee to pay all compensation as
defined by and within the time frames stipulated within this Agreement, inclusive of all rights, remedies and extensions as provided for within the Agreement, including but not
limited to dispute resolution and the ability to cure defaults.

Delete $100,000 and Insert $10,000.

5.4 Delete entire clause as this clause can lead to arbitrary decisions by the Owner.

6.3 Insert ", or as soon a commercially reasonable" to the end of the last sentence.

7.1 Clarification: Haven't we done this already?

7.2 Delete: "At the Owner's sole discretion" and Insert "At Owner's discrestion and expense and not later than ten (10) business days after Licencee's Permit request".

7.3 Insert: "but if the Owner fails to to communicate an opinion within ten (10) days after the joint field visit, then the Owner will have deemed the Affixing of Attachments approved" to the end of the paragraph.

7.4 Insert: ", based on then current market labor rates," after "preliminary estimate."
Insert: "The Owner shall provide the Make-ready estimate within thirty (30) days of the Licensee's Permit request.

9.3 Please define the capitalized term "Strand".

9.23 Delete: gross

10.1 Redraft clause to state that Owner is responsible for clearing and costs of clearing Owner's space. All joint users of the communication space are jointly responsible for clearing vegetation and their pro rata share of costs.

11.1 Correct dates.

11.12 Delete the second sentence.

14.2 Modify: Owner shall be responsible for its negligence. Delete gross

15.1 Delete "five (5)" and in its place insert "twenty (20)".

From: Matthew Aceto [mailto:maceto@veridian.on.ca]
Sent: Monday, October 18, 2010 10:53 AM
To: Peter Komon
Subject: FW: New third party attachment request

Hi Peter,

Sorry, I did not ignore your request. I must have forgotten to forward this thread to you.

Matt

From: Terry Britton
Sent: Tuesday, October 12, 2010 8:28 PM
To: Matthew Aceto
Subject: RE: New third party attachment request

Hi Matt,

Here is a copy of the Third Party attachment agreement. It is set up that there is no changes allowed, they can only fill in the blank spots. It is that same agreement for all attaches. You should also ask were they intend to go as most poles already have the three allotted space occupied and there might be extensive make ready work to add height to the existing poles. They might have to talk to Rogers or Bell and go joint with them.

Terry

From: Matthew Aceto
Sent: Tuesday, October 12, 2010 3:28 PM
To: Terry Britton
Subject: FW: New third party attachment request

Hi Terry,

This gentleman's company wished to attach fiber as a third party user on Veridian poles. They claim to be governed by the CRTC, and no longer have an interest in attaching antennas.

He asks for "the fiber agreement". Since each company has their own individual set of terms and conditions, I imagine there is not a previously prepared document for me to send this gentleman; or is there?

Thank you,
Matt

From: Peter Komon [mailto:pkomon.ctr@extenetsystems.com]
Sent: Tuesday, October 12, 2010 3:14 PM
To: Matthew Aceto
Subject: RE: DasCom

Yes, please forward the fiber agreement.

Thanks,

Peter

From: Matthew Aceto [mailto:maceto@veridian.on.ca]
Sent: Tuesday, October 12, 2010 2:06 PM
To: Peter Komon
Subject: FW: DasCom

Hi Peter,

I got your voicemail from today. I've forwarded your data sheets on to Veridian's Chief Operating Officer, who below stated that no antennas are allowed in any case. Are you still interested in fiber attachments without antennas?

Regards,
Matt

From: Matthew Aceto
Sent: Wednesday, October 06, 2010 8:11 AM
To: 'pkomon.ctr@extenetsystems.com'
Subject: FW: DasCom

FYI

Matt

From: Terry Britton
Sent: Tuesday, October 05, 2010 9:12 PM
To: Matthew Aceto
Subject: FW: DasCom

FYI

Terry

From: Axel Starck
Sent: Tuesday, October 05, 2010 8:15 PM
To: Terry Britton
Subject: RE: DasCom

Agreed. The only space available to federally licensed public carriers is the communications space for cable/fibre/conductor and associated hardware (at or below that space?). No antennas in any case – I think we deny anything with an antenna in any case – worker safety, interference with our own SCADA communications equipment?

Axel

From: Terry Britton
Sent: Tuesday, October 05, 2010 11:06 AM
To: Axel Starck
Subject: FW: DasCom

Good morning Axel,

We have another request for antennas to be placed on Veridian poles. The information is attached for your viewing. I think we stick to our plan of not allowing these to be attached to our poles as they would have to be outside of the communication space.

Let me know what you think.

Terry

From: Matthew Aceto
Sent: Tuesday, October 05, 2010 9:18 AM
To: Terry Britton
Subject: FW: DasCom

Here are the specs for the proposal to attach antennas on our poles.

Matt

From: Peter Komon [mailto:pkomon.ctr@extenetsystems.com]
Sent: Monday, October 04, 2010 3:46 PM
To: Matthew Aceto
Subject: FW: DasCom

Matthew,

Attached please find the specs on the antennas and equipment boxes. The equipment shown in the attachments is typically used and attached in the construction of a node pole. The only other type of equipment that is attached is an optional battery back-up unit that weighs about 100lbs and is of similar dimension as the Powerwave equipment . As you made me aware, Veridian's current policy is not to allow antenna on poles due to possible future need for Veridian to place transformers and risers. Please know that we understand that the utilty companies require priority over telecom equipment and that there is a certain amount of flexibility to the placement of antenna.

Please forward the fiber optic attachment agreement, so that I may review and suggest some minor changes to allow equipment and antenna. If you have any questions, please feel free to call, other wise I will touch base with you later this week..

Peter Komon
(630) 505-3846

Schedule

Staff 7.3-2

From: Eric Andres [mailto:eandres@opuc.on.ca]
Sent: Tuesday, February 22, 2011 7:28 AM
To: Peter Komon
Subject: RE: DAScom

Hi Peter,

As per the last meeting, we are still waiting for the submission of the application package/request to attach, drawings and fibre network as well as proof of ***Municipal Access Agreement***. We are not able to provide the "Joint Use Agreement" unless we receive this requirements to confirm attachment, methodology and fibre network route.

Regards,

Eric Andres, EIT
Distribution System Engineer
Oshawa PUC Networks Inc.
100 Simcoe Street South
Oshawa, Ontario L1H 7M7
(905) 723-4626 ext .5220
eandres@opuc.on.ca

From: Peter Komon [mailto:pkomon.ctr@extenetsystems.com]
Sent: Thursday, February 03, 2011 2:59 PM
To: Eric Andres
Subject: DAScom

Eric,

Can you let me know what the status is of us being able to acquire an attachment agreement from you?

Best,

Peter

Questions

8. Please provide copies of the pole access agreements with THESL and THESI. If this is considered confidential, a request for confidential treatment of these documents may be made and will be subject to the Board's Practice Directions on Confidentiality.

Responses:

DAScom is bound by the confidentiality provisions of the pole access agreements and ExteNet is bound by a separate non-disclosure agreement. It is waiting for a response to its letter of August 11, 2011 to THESL and THESI notifying them of the Board Staff's request that the agreements be produced. A copy of this letter is attached as Schedule Staff 8.1-1.

Schedule

Staff 8.1-1

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VIA E-MAIL

August 11, 2011

Toronto Hydro Energy Services Ltd.
Toronto Hydro Energy Services Inc.
6th Floor - 14 Carlton Street
Toronto ON M5B 1K5

Attention: Mr. Lawrence Wilde
VP, General Counsel & Corporate Secretary

Dear Mr. Wilde,

RE: Application by Canadian Distributed Antenna Systems Coalition
Board File Number EB-2011-0120

We write pursuant to an interrogatory request made by the Board Staff in the above-referenced application, that DAScom Inc. provide copies of its pole access agreements with Toronto Hydro Energy Services Ltd. ("THESL") and Toronto Hydro Energy Services Inc. ("THESI") (the "Pole Access Agreements").

Disclosure of the Pole Access Agreements is prohibited by Non-Disclosure Agreements and by confidentiality clauses in the Pole Access Agreements themselves, subject to certain conditions. Clause 28.02 of the Pole Access Agreements and clause 5 of the Non-Disclosure Agreements permit DAScom Inc. to disclose the Pole Access Agreement to a regulatory body, if required by law, provided DAScom Inc. gives notice to THESL and THESI and gives THESL and THESI an opportunity to prohibit or restrict the disclosure.

CANDAS' responses to interrogatories are due August 16, 2011. Please advise us before that date if you intend to object to the disclosure of the Pole Access Agreements to the Board Staff. Alternatively, please let us know if you are willing to consent to the disclosure of the Pole Access Agreements and what conditions, if any, you wish to attach to such disclosure.

Yours truly,

(signed) Helen T. Newland

HTN/ko

cc: Mark Rodger
George Vinyard

Questions

9. Section 5.8 of the application states that there are two DAS networks currently operating in Montreal. Please provide details of these networks including:

   9.1 Total number of attachments to the electricity distribution poles.

   9.2 Total number of attachments to the streetlight poles.

   9.3 Specific location of the attachments on the poles (i.e. within the communications space or other parts of the pole).

   9.4 Are other structures currently being used or contemplated to be used to accommodate the wireless equipment necessary for operating the DAS networks as an alternative to utility poles? If yes, please provide the following information:

      9.4.1. list the alternative structures;

      9.4.2. what arrangements are in place or need to be in place for the use; and

      9.4.3. reasons for the use.

   9.5 A description of the process for applying and gaining access to electricity distribution poles.

   9.6 Information on whether any concerns relating to safety hazards or operational issues were raised by the utilities in relation to attachments of wireless equipment to their poles.

   9.7 A detailed description of the pole access agreements entered into for the establishment of the DAS network including whether they were reviewed or approved by a regulatory agency and/or contain standard terms and conditions.

   9.8 The rate that applies to DAS network attachments per pole or per attachment and the rate that applies to wireline attachments broken down by distributor.

Responses:

CANDAS does not possess information about the Videotron Montreal DAS network beyond that which is published and summarized in section 4 of Johanne Lemay's Written Evidence. Accordingly, the following responses relate only to the Montreal DAS network designed by ExteNet ("Montreal DAS Network"). This network is only partially

completed and in operation in connection with the provision of wireless services by Public Mobile Inc.

9.1 The Montreal DAS Network currently comprises DAS node attachments on a total of 261 power poles and third party fibre optic cable attachments in excess of several thousand. The Montreal DAS Network has undergone some design revisions. Completion of the Network is expected to involve addition DAS node attachments to power poles, the number of which has not yet been determined.

9.2 The Montreal DAS Network in its current state of construction includes DAS node attachments to a total of 54 city-owned poles, including street light and traffic light standards. The design revisions referred to in Staff 9.1 will result in additional DAS node attachments to a total of approximately 264 city-owned poles.

9.3 As currently designed and as constructed to date, all of the fibre optic cable attachments to power poles that are associated with the Montreal DAS Network are affixed in the communications space on the poles. Similarly, the DAS node attachments to power poles are affixed in the same locations and in substantially the same manner as is described in Staff 2.3 with respect to the Toronto DAS Network.

9.4 No.

9.4.1. Not applicable.

9.4.2. Not applicable.

9.4.3. Not applicable.

9.5 The access process involves a written request, on a prescribed form, to Hydro Québec along with the submission of supporting technical documentation. Hydro Québec must respond within 18-33 days, depending on the number of poles covered by the request. If Hydro Québec rejects the request, it must indicate the reason for its decision. If Hydro Québec fails to respond to the request within the time period, the request is deemed to have been accepted and DAScom is permitted to commence installation of the attachments in accordance with the applicable standards.

9.6 Hydro Québec has never raised any safety or operational concerns or issues that are specific or unique to the attachments of DAS equipment on power poles. Issues that it has raised have been limited to the usual concerns that arise with

respect to attachments comprising a new equipment configuration. All issues have been resolved to the satisfaction of Hydro Québec.

9.7 DAScom and Hydro Québec entered into two separate pole attachment agreements for equipment/fibre and antennas, respectively. These agreements reflect standard forms provided by Hydro Québec, with some limited modifications negotiated by the parties.

CANDAS can not confirm if the Hydro Québec standard form of pole attachment agreement was reviewed or approved by any regulatory or governmental agency. We note that the Régie de l'énergie (Québec) does not have oversight of the use of, or jurisdiction over, Hydro-Québec's utility poles and attachment agreements. The jurisdiction over the use of utility poles has specifically been granted to the Commission municipale du Québec, pursuant to the *Act respecting certain public utility installation*, L.R.Q., c. I 13 (the "Act"). Under the Act, the Commission municipale du Québec, acting as an administrative tribunal, may order the sharing of the utilization of a public utility installation, such as utility poles, if need be. The Act does not provide for the approval, by the Québec government, of agreements for the use of poles for third party attachments.

9.8 Hydro Québec's attachment rates are stipulated in documents that, by the terms of the applicable agreements, are confidential with no exception for production in regulatory or judicial proceedings. In any event, CANDAS would also note that neither it, nor any other party, is requesting that the Board, in this proceeding, review and vary the current Board-approved attachment rate. Accordingly, information regarding attachment rates in other jurisdictions is not relevant.

Questions

10. Please provide examples of pole access agreements entered into by members of CANDAS where the terms and conditions governing attachments have been determined by a regulatory agency.

Responses:

CANDAS has no examples of pole access agreements entered into by is members where all of the terms and conditions governing attachments have been determined by a regulatory agency.

The pole access agreements that ExteNet Systems is party to in the United States pre-date FCC Order 11-50 (see Application, Tab 22), which Order prescribes terms and conditions of access. Going forward, ExteNet Systems anticipates that in jurisdictions subject to the FCC Order (and in other jurisdictions where the state regulators follow the lead of the FCC) existing and new attachment agreements will conform to the terms and conditions reflected in the FCC Order.

Questions

11. Please provide examples of jurisdictions where the DAS networks has been deployed and expanded with minimal incremental construction.

Responses:

Almost without exception, the installation of the fibre optic cabling component of a DAS network comprises the greatest portion of the construction work, in terms of cost, time and geographic areas affected (including the numbers of utility poles to which attachments must be made and/or the lengths of underground conduit that must be installed). Because the incremental cost of installing higher capacity fibre optic cables is small, relative to the base installation cost of installing fibre optic cables in the first place, the fibre optic cable components of DAS networks are designed to include sufficient capacity to accommodate increases in demand, both in terms of the number of connected node sites and the number of wireless carriers using the network. Accordingly, once a DAS network is constructed, the only incremental construction required to expand the fibre component of the network is the extension of the fibre into new geographic areas, beyond the area covered by the original network design (*i.e.*, a "build out").

The incremental construction at node sites that may be required for expansions of DAS network capacity varies, depending on the initial equipment configuration, the numbers of wireless carriers using the network and the numbers and types of technologies and frequencies they are deploying. Accordingly, the incremental construction required to expand network capacity could include: (i) adding to or replacing components in existing equipment enclosures already affixed to the poles; (ii) adding or replacing equipment enclosures; (iii) adding antennas; and (iv) constructing new node sites on additional poles at locations served by the existing or expanded fibre deployment. The numbers of poles that would be affected by any of these activities is small, relative to the total number of poles in the original DAS network deployment.

ExteNet Systems and its operating subsidiaries in the U.S. have deployed and expanded outdoor DAS networks for additional and existing wireless carrier customers in a number of jurisdictions including: Rancho Santa Fe, California; Grosse Pointes, Michigan; Brookline, Massachusetts; and Houston, Texas.

Questions

12. Section 3.12 of the Application states:

> The Board's reasons for accepting the settlement of Issue 2 are articulated in the following passages: On this issue, the parties are in agreement. In the Settlement Agreement of October 19, 2004, all parties agreed that if the Board does set access conditions, these conditions should apply to access…by all Canadian Carriers as defined in the Telecommunications Act and cable companies.

12.1 Please provide the names of "the Canadian carriers as defined in the Telecommunications Act and cable companies" that were employing pole mounted wireless antennas with similar weight and shape to DAS antennas prior to issuance of the CCTA order by the Board on March 7 2005.

Responses:

12.1 Although CANDAS does not have the requested information with respect to all Canadian carriers who may have been employing pole mounted wireless antennas around the time of the CCTA Proceeding, CANDAS understands that Toronto Hydro Telecom Inc. was attaching WiFi equipment, including antennas, THESL poles in that time period.

Questions

13. Sections 3.12 of the Application states: "The LDCs also confirmed that all users of the communications space should pay the same charge." Sections 3.14 of the Application states: "The Board ultimately decided the pole charge issue in a way that did not distinguish among various types of attachments."

13.1 Is it your understanding that all communications attachments at the time of the CCTA Order were wireline attachments?

13.2 Is it your understanding that all wireline attachments fit within the two-foot communications allowance on a typical pole?

13.3 To your knowledge what is the relationship between the space requirement of a typical wireline attachment and the DAS antenna equipment on a pole?

13.4 To your knowledge, what is the relationship between the weight of a typical wireline attachment and the weight of the DAS antenna equipment?

Responses:

13.1 No. See response to Staff 12.1.

13.2 No. All wireline attachments on power poles do not fit within the communications space on a typical pole. Although the wireline components of cable TV and other wireline telecommunication deployments are affixed to poles at points within the communications space, the associated equipment enclosures that house amplifiers and power supplies are typically of a size that require that they be affixed at points below the allocated communications space.

Schedule Staff 13.2-1 is a photograph of a pole in Toronto showing a wireline deployment including a back-up power unit. See also response to THESL 45(a).

13.3 – 13.4

These questions ask for comparisons between DAS pole attachments and wireline pole attachments. To properly appreciate the limited differences between the two, it is necessary to appreciate the many ways in which these two types of attachments are similar.

Both DAS and wireline deployments include a fibre component. The fibre component of a DAS installation is attached to poles in the same way as the fibre component of a cable TV or other wireline telecommunications attachment.

Both DAS and wireline communications installations also require the attachment of equipment enclosures that house electronic gear such as amplifiers and power supply units. The equipment enclosures on DAS deployments are very similar to the equipment enclosures on wireline installations, although the latter may be larger than the former.

DAS deployments also require the installation of antennas on the node site poles. A wireline communications installation does not typically require the installation of antennas on poles. The preferred location for a DAS antenna is on top of the pole but it can also be installed on a side-arm affixed to the pole within the communication space. Antenna in the Toronto DAS Network are attached to the THESL poles using a side-arm. The size of the antenna component is similar to the size of wireline fibre splice enclosures.

The table below compares the weight and space requirements of a DAS deployment and a wireline deployment.

DAS vs. Wireline Network Components

Attachment	DAS	Wireline
fibre	same weight as wireline; attached within communications space	same weight as DAS; attached within communications space
equipment enclosures	● remote radio unit boxes weigh approximately 22.2 Kg ● Dimensions of cabinet (H x W x D): 50 cm X 32 cm X 17.2 cm ● Weight of back-up battery unit: ranges between 26.8 kg (what is found in Toronto) to >100 kg, depending on the type and if significant battery back-up is required ● Dimensions of back-up battery cabinet: 15.1 cm x 9.8 cm x 9.75 cm	● T1 or cable TV amplifiers varies in size and weight based on the manufacturer. Weight ranges from a few kg and upwards to 45kg ● Example of dimensions range from 23.0cm x 16.5cm x 8.2 cm to 71 cm x 27 cm x 33cm (Coolmaster T1 Repeaters) ● Back up battery units varies but Alpha Technologies is widely used. Their units, with 4 batteries, weigh 186kg ● Dimensions of battery back up unit cabinet: 114.3cm x 91.4cm x 81.2cm
antenna	12-24 kg, depending on the type of antenna	N/A

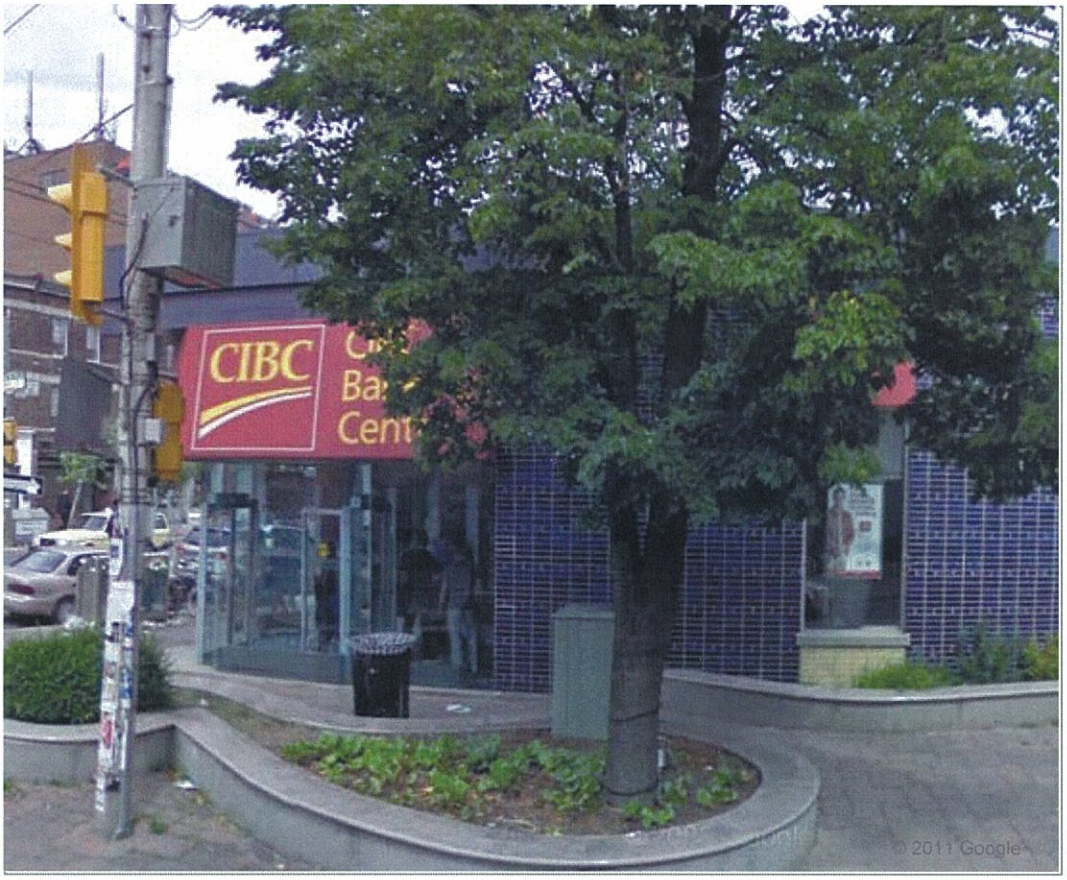
Schedule

Staff 13.2-1

Google maps

Address **131 Grace Street**

Address is approximate



Google maps

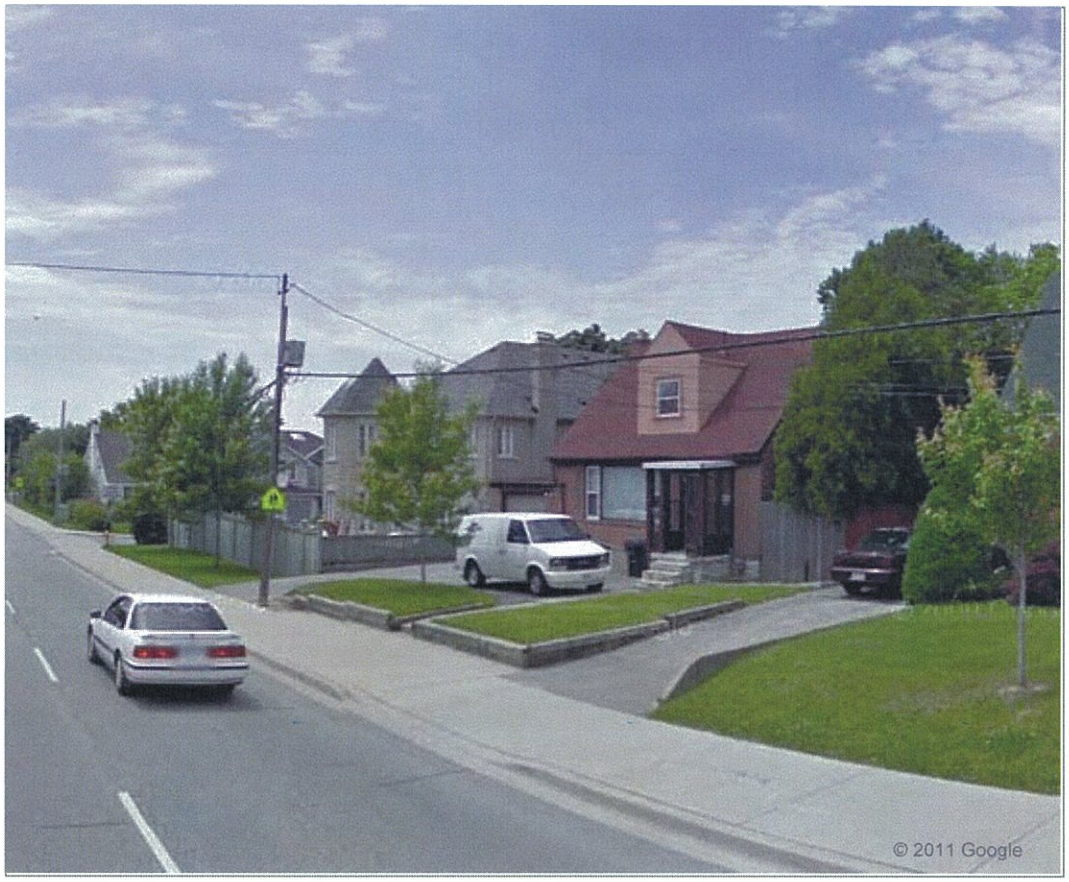
Address **Keele Street**

Address is approximate

Google maps

Address **2113 Keele Street**

Address is approximate



Questions

14. Section 5.3 of the Application states:

> Optimal and effective design and deployment of DAS networks require that node antennas be attached at elevations that correspond roughly to the heights of utility and street light poles (9-14 metres), as opposed to higher elevations of towers and the roof tops of multi-story buildings (greater than 15 metres).

14.1 Considering the optimal installation height of 9 metres to 14 metres, it appears exterior building walls in the downtown core may also offer the optimal height for installation of DAS antennas. Have you conducted any studies to establish the technical feasibility of installing the antennas on exterior building walls at appropriate heights? If so, please provide the results. If not, please explain why not.

Responses:

14.1 ExteNet has not conducted any formal studies in this regard, but in the course of designing and implementing outdoor DAS networks, it has considered the use of exterior building walls and found this not to be a feasible solution for the following reasons:

- Extensive use of node antenna mountings on exterior building walls requires a significantly higher number of node sites because the propagation of radio frequency ("RF") waves is adversely and severely affected by the close proximity to the wall. Poles located at intersections provide good RF propagation along roadways in several directions (*i.e.* north-south & east-west). There are more obstructions to the RF propagation in respect of installations on exterior walls. This in turn, impairs the quality of service.

- In many areas there simply are no building wall locations suitable for achieving the RF propagation characteristics required for a DAS Network. Where such locations do exist, property owners may be unwilling to make them available.

- Even where building wall locations are available, the lack of uniformity in such structures present complex engineering, design and construction challenges.

- Where DAS antenna are affixed to building walls, the fibre component of the DAS network would have to be extended to connect the fibre suspended from poles to each DAS node location on each building wall location. The cost and time to make these connections would be considerable.

- The negotiation of agreements with multiple property owners for highly variable installations would be a complex and lengthy process.

- The close proximity to occupied spaces within buildings at the optimal elevation could present significant challenges with respect to compliance with laws and regulations limiting RF emissions exposure.

- Timely maintenance and repair of node equipment located in non-uniform spaces, within privately owned buildings, would be difficult.

Questions

15. Section 5.5 of the Application states:

> Traditional cellular telephone network technology relies on "**Macro Cell Sites**," comprising large antenna arrays mounted on tall communication towers or on building tops. These sites transmit high powered radio signals over large areas. Especially in urban settings, these large, wireless installations: (i) are typically more obtrusive; (ii) often provide incomplete coverage in areas around tall buildings which block radio signals; (iii) are less flexible in areas where capacity requirements may be changing;

15.1 In relation to the large antennas employed on Macro Cell Sites, is it true that a DAS antenna serves relatively smaller area and to cover an equal area, greater number of DAS antennas are required in relation to the number of required Macro Cell Site antennas?

Responses:

15.1 Yes.

Questions

16. On a pole where there are already 2 or 3 existing communications attachments installed and occupy most of the allocated 2' communication space, how will the DAS antenna bracket be installed within the communication attachment space without disturbing the existing attachments? Please provide drawings showing installation of the DAS antenna under such conditions?

Responses:

In designing a DAS network, efforts are made to select poles that require minimal "make ready" work such as the rearrangement of existing attachments in the communications space. Where it is necessary to attach antenna supports within the communication space, brackets and side-arms are designed and installed in such a way as to fit on the pole between the points at which the wireline attachments are affixed, without disturbing or limiting the number of pre-existing attachments. See Written Evidence of Tormod Larsen, Exhibit B, sheets 2 and 3 of 14.

Questions

17. Even when it is possible to install bracket of DAS antenna within the allocated communication space, based on the dimensions of the antenna provided by the applicant, will the antenna not protrude into the allocated safety clearance space between power lines and communication lines? If the answer to this question is yes, please comment as to whether installation of DAS antennas will or may impair the operational efficiency and present incremental safety hazards to workers.

Responses:

No. DAS node antenna installations, whether affixed to a pole in the communications space or on the pole top above the power zone, are designed in a manner that does not involve intrusion into safety clearance spaces. Put simply, mounting an antenna some distance from the pole on an extension arm affixed in the communications space increases the distance between the top of the antenna and the power lines.

Questions

18. If a DAS antenna is attached outside of the allocated communication space, i.e. at the pole top, as shown in the photographs included in the application, how will the contractor's staff, who may not be authorized to carry out live line work on THESL distribution system, be able to install the antenna without obtaining a power shut down?

Responses:

See reply to THESL 20.

Questions

19. Please provide typical installation drawings, showing the number and diameter of holes required to be drilled in a pole for mounting of DAS antennas and accessories on a pole.

Responses:

The requested drawings will be provided as soon as possible.

Questions

20. Section 10.11 of the Application states**:**

> As is set out below, there is no question that THESL's refusal to permit wireless attachments discriminates unjustly. Access is granted to cable attachers. Access is granted to wireline attachers, but not to wireless attachers. And, access is granted to some wireless attachers, but not DAScom.

20.1 Please identify the wireless attachers (other than DAScom) that THESL has granted access.

20.2 Please provide a description of such attachments as to size, weight and location on THESL's pole and a comparison with DAScom's attachments in each of these respects.

Responses:

20.1 Please refer to the Application, sections 10.21-10.22, for information regarding wireless attachments to THESL poles. See also the response to Staff 12.1.

20.2 CANDAS does not have the information requested. Presumably, THESL can provide the information.

Questions

21. During the term of the contracts with THESL and THESI, was DAScom ever requested by THESL or THESI to remove an attachment for any reason? If so,

    21.1 Please describe the procedure of notification and timing that was followed?

    21.2 How many times did this occur?

    21.3 Were reasons given, and if so, please provide those reasons.

    21.4 Were the attachments removed? If so, by what party and within what timeline.

Responses:

21.1 To CANDAS' knowledge, THESL has not requested that DAScom remove an attachment during the term of the relevant pole access agreement.

To CANDAS' knowledge, THESI has not requested that DAScom remove an attachment during the term of the relevant pole access agreement. THESI gave notice of non-renewal of the Light Pole Access Agreement during the term thereof and demanded that attachments be removed from THESI poles, following expiration of the agreement. See response to Staff 3.

21.2 Not Applicable.

21.3 Not Applicable.

21.4 Not Applicable.

Questions

22. Is CANDAS, Dascom or ExteNet aware whether any Canadian jurisdiction or any Canadian electric utility permits attachment of wireless devices to the tops of poles? If so, please provide the names of such jurisdictions and/or utilities, and copies of any studies or documentation supporting the decision of the jurisdictional authorities or utilities to do so.

Responses:

CANDAS and its members are not aware whether any Canadian jurisdiction or any Canadian electric utility permits attachment of wireless devices to the tops of poles.

Questions

23. George Vinyard's Evidence, page 4:

> ExteNet Systems' experience in arranging for attachment of DAS network facilities in the United States is extensive. Directly or through its operating subsidiaries, ExteNet Systems has entered into approximately 80 attachment agreements with over 35 utilities, most of which involve attachment to power poles. Many of these arrangements in respect of attachments of antennas and related equipment, including radio units. Negotiations with over 20 other utilities are currently ongoing in connection with over 30 new attachment agreements.

23.1 For each of these agreements or utilities as appropriate, please indicate:

23.1.1. whether the utility permits pole-top attachments, with medium voltage power lines attached at a level below the DAS antenna;

23.1.2. the rates in effect for wireless attachments and wireline attachments;

23.1.3. the average charge paid by ExteNet Systems to the utility for "make ready" work on a pole;

23.1.4. in case of pole top installations installed above the medium voltage power lines, please indicate whether the antennas are installed by the power company's staff or by contractors; and

23.1.5. if installed by contractors, under what circumstances a power outage is required during installation of the antennas?

Responses:

23.1.1. The table below provides the information requested.*

Type of Utility	Total # of Attachment Agreements	# of Attachment Agreements Allowing Antenna on Pole Top	# of Attachment Agreements in States Governed by FCC Pole Attachment Regulations
ELECTRIC UTILITIES			
Wireline Only	16	N/A	7
Wireless Only	15	6	6
Combined Wireline and Wireless	9	6	3
Conduit Only	3	N/A	1
Subtotal Electric Utilities	43	12	17
TELEPHONE COMPANIES			
Wireline Only	9	N/A	0
Wireless Only	6	1	0
Combined Wireline and Wireless	11	2	8
Conduit Only	7	N/A	3
Subtotal Telephone Companies	33	3	11
JOINT POLE ASSOCIATIONS			
Combined Wireline and Wireless	2	2	0
Grand Total:	78	17	28

*It should be noted that the agreements referred to in the table above pre-date FCC Order 11-50.

23.1.2. Neither CANDAS nor any other party is requesting, in this proceeding, that the Board vary the current pole access rate. Accordingly, the information requested is not relevant to the issues raised by the Application.

23.1.3. Neither CANDAS nor any other party is requesting, in this proceeding, that the Board vary the current pole access rate. Accordingly, the information requested is not relevant to the issues raised by the Application.

23.1.4. Where antennas are installed on pole tops above the medium voltage power lines, the work is carried out by utility staff or by third party contractors, qualified and approved by the utility to do such work.

23.1.5. When pole top antenna installations are carried out by contractors, the circumstances under which a power outage may be required are the same as they would be where the installation is carried out by utility staff. It has been the experience of ExteNet Systems that pole-top antenna installations are regularly and safely carried out by qualified workers without requiring power outages affecting electric customers.

Questions

24. George Vinyard's Evidence, page 4

> In the course of its dealings with various electricity distribution companies in the United States, ExteNet Systems has encountered and had occasion to deal with many legal and practical issues related to both wireline and wireless attachments to distribution poles. Moreover, ExteNet Systems has actively participated in FCC and state utility commission proceedings related to pole attachment terms and conditions.

24.1 Given ExteNet Systems' knowledge of existence of legal and practical issues and of the fact that electric utilities are subject to regulation of their activities with regard to pole attachments, please outline the steps taken by ExteNet, DAScom, or CANDAS as applicable, to satisfy itself as to the policy and practice of the Board, and/or of Ontario electricity distributors, with regard to telecommunications attachments, in advance of committing to the capital cost of its installations in Toronto?

Responses:

24.1 DAScom and ExteNet took the following steps prior to committing significant investment in the Toronto DAS network:

- In October, 2008, DAScom first approached THESL in connection with pole access for attaching wireline and wireless infrastructure to utility structures. THESL advised that it would be prepared to permit wireless attachments on its poles and forwarded its standard attachment to DAScom, specifying access rate of $22.35 (Application, Tabs 12 and 13).

- Over several months in 2009, prior to entering into any pole access agreements, DAScom and ExteNet communicated and met with representatives of THESL and THESI regarding the overall scope and also the technical and operational details of the proposed Toronto DAS Network. During this time, DAScom and ExteNet provided THESL and THESI with detailed drawings and photographs of the proposed node installations. Subsequently, they constructed a full-sized prototype of the proposed node installation on a utility pole at DAScom's Toronto office parking lot in order to assist THESL and THESI personnel in understanding

how the DAS equipment assembly would co-exist with other attachments on a utility pole. Representatives of both THESL and THESI inspected the prototype and indicated that they had no objections or suggested changes. A photograph of this prototype is included as Tab 14 of the Application.

- On July 20, 2009 representatives of ExteNet and Public Mobile met with Mr. David O'Brien, the then President and Chief Executive Officer of THESL, to discuss the Toronto DAS Network project, including Public Mobile's new wireless network. Mr. O'Brien expressed his support for the new wireless network. See response to THESL 15, Schedule 15.1.

- Subsequently, DAScom entered into the Distribution Pole Access Agreement with THESL, effective August 1, 2009.

Notwithstanding the response above, the extent of CANDAS' due diligence on this issue is not relevant to the issues raised by the Application. The members of CANDAS were entitled to rely on the CCTA Order which unambiguously obliges electricity distributors to provide pole access to all "Canadian carriers" as that term is defined in the *Telecommunications Act*. Both DAScom and Public Mobile are "Canadian carriers" with the meaning of the Act.

Questions

25. Section 6.3(a) of the Application: Agreement with City of Toronto

25.1 Please describe the process by which DAScom provided the technical specifications and physical descriptions of its proposed pole attachments to the City of Toronto in negotiating the Access Agreement.

25.2 Please provide a copy of any technical specifications and physical descriptions that were provided to the City of Toronto.

25.3 To CANDAS' knowledge, did the City of Toronto consult with THESL or THESI as to the technical issues associated with the proposed attachments before entering into the agreement?

Responses:

25.1 It is somewhat unclear by what is meant or intended by the reference to the "process" in question 25.1. However, the following are the steps taken by DAScom and the City of Toronto regarding specifications related to an MAA. DAScom submitted a "preliminary" application package to city of Toronto staff on May 20, 2009. The preliminary application became the official application document once we provided an "original ink signature" on the RF Emissions Report prepared by YHR Engineering in section 3. The RF Emissions Report was sent independently by YRH Engineering directly to City of Toronto Planning Dept. staff.

Included in the application package were preliminary A&E drawings which provide general technical specifications and physical dimensions of the equipment DAScom was proposing as of May 20, 2009. Photos of existing installations were also submitted. The initial application was accepted by the City. For additional demonstration to the City staff, DAScom installed a mock node installation at DAScom's storage yard in Toronto. This installation was approved from an aesthetics perspective in the Staff Report (see Application, Tab 11). The City planning staff did not request any additional A&E documentation related to any proposed pole attachments, other than what was provided to the City in the May 20, 2009 application package.

25.2 The technical specifications and physical descriptions of pole attachments that Dascom provided to the City of Toronto were included in pages 17-22 of the May 20, 2009 application.

25.3 CANDAS is not privy to the requested information. The City of Toronto has informally acknowledged, to DAScom representatives, that the City tends to coordinate with THESI/THESL on projects that affect or involve those parties, however CANDAS has no direct knowledge of the consultations and coordination with THESI and THESL that occurred.