



Chappaquiddick Wireless Site Committee
Thursday, November 4, 2011 – 1:00 p.m.

Those in attendance: David Maxson (Wireless Consultant), Roger Becker, Fran Clay, Will Geresy, Dennis Goldin, Georgiana Greenough, Bob Gurnitz, Claire Thacher, and Jane Varkonda.

Absent: Margaret Knight.

Members of the public in attendance: Richard Knight, Bob O'Rourke, Nancy Slate, Sally Snipes, and Martha Weston.

David Maxson (Wireless Consultant)

David Maxson, Isotrope, Inc. was introduced to the Committee. He began by giving his background: Chief Engineer for WCRB. During that time, he also was a consultant on the side for cell phones. In 1996 the Telecommunications Act was passed with new regulations.

He left in 1998 and began consulting full time for a number of municipalities regarding wireless facilities, including permit applications, bylaw modifications, drafting RFPs and leasing of municipal properties to wireless carriers. He often represented towns, sued by wireless companies, as an expert witness.

David Maxson said wireless companies (towers and DAS) look for existing structures, such as water towers, silos, etc. to attach their equipment. There are not a lot of tall structures on Chappy. The carriers used to want coverage on main roads, but now they want to be in residences. They are competing with cable companies now.

Seventy percent (70%) of all data comes from inside buildings. Video streaming comes from wireless, a component. He said that two years ago he reviewed a study conducted by the Center for Disease Control which revealed that 20% of the population do not subscribe to any wireless service, and 20% do not use any land lines. There is a continuing change in technology, and carriers are buying up the radio spectrum to increase capacity.

AT&T is hot to trot in this market and have looked at Katama and Chappaquiddick as possible areas to increase coverage. The tried and true way to get coverage is to get private land owner or municipal land. Their position is to be in most logical position to provide service to to where the most people are located. Cell sites are typically 190' towers with lots of antennas. New approaches have emerged. Select a site with a good line of site which could allow the tower to be shorter. Try not to be above the skyline or vegetation. Other designs are fat flagpoles. You can see one at the Old Courthouse Road in West Tisbury. These are

free standing with no guy wires. The Cape Cod Commission has designated all radio towers as DRI's and encourage lower 80' unipoles. The North Street tower is over 100'.

David Maxson then discussed new carriers that focus on new technologies: METRO "PCS" (Personal Communication Service); CLEAR WIRE is a data service with 4G internet activity including WiMAX technology and LIGHT SQUARED – a spectrum from the government, a temporary situation using borrowed capacity (Sprint) who modifies its antenna. They are waiting for FCC approval.

AT&T wants to merge with T-mobile, they need FCC approval. They want to combine and have one antenna, and make the remainder available to other carriers.

A discussion continued on other existing towers on the island, and their facilities.

North Street, Edgartown wireless tower

Pennywise Path, Edgartown tower

Airport tower

Stagecoach Road, West Tisbury

Maxson said it does not have to be 80-90' towers, they can be 60' with a fenced compound at the foot of the tower usually with a 25' x 25' on a 60' x 60' concrete pad with outdoor cabinets and possibly a 10' x 20' prebuilt shed.

Bob Gurnitz said towers connect to land lines and then digital circuits on fiber optic cables (e.g. Comcast or run its own). There are different ways to use land lines. High capacity crossing the channel is needed and does not currently exist.

Maxson said a back haul or dish antenna is needed for microwave link. Microwave is very limited - only a few users – heavy demand will choke the system.

Dick Knight said he has used cell service on Chappy for 20 years. Yes, the service is spotty. Why do we need to cover Chappy now? Ocean Heights needs coverage.

Roger Becker asked what coverage maps tell us.

Maxson said he wanted to finish his discussion and review DAS. You take the antennas off the tower and put them on top of telephone poles and spread them around. You need a DAS 'Hotel' which is a hub for equipment to service internet, electrical needs. It is a focal point. You need fiber optic cables on the poles as well. You can't repurpose existing fiber optic – you need to install your own backbone. Equipment is spread every ½ to ¾ of a mile (up to 1.5 mi radius) between poles. There are multiple wireless companies on towers, but on DAS you need independent circuit cards to regenerate radio signals from antennas 5'-8' above the top of the pole, which may be above vegetation. The poles are on major roads and considered "public way and commerce" and is the line of communication for commerce. The power

companies can be very picky about DAS systems on their poles. The carriers may have to use a separate pole from the NSTAR pole. Up island project had to add poles for their system. They are called “stub poles.” Often they are across the street from the existing power poles and are not necessarily invasive.

Bob Clay asked if they were hard wired. Maxson responded that the system is not mesh technology because poles have capacity limitations.

DAS in general is more complicated and needs more upfront capital than towers – more economically challenged system. A neutral host DAS company will fund for long term amortization and have no preference for specific wireless companies.

Fran Clay said American Tower has a DAS division. They need to get over an economic threshold to consider it.

Goldin asked about coverage.

Goldin said we’re looking for moral leadership.

Maxson handed out written answers to questions the Committee posed to him.

The next step for Maxson is to provide the Committee with a hypothetical model for DAS coverage on Chappy.

Georgiana Greenough and Jane Varkonda will look into 1) the status of an available cross channel conduit, 2) possible sites for DAS hotel with Fran Clay, and 3) possible regulations and other permitting necessary to complete the project.

The next meeting shall be held on Friday, November 18, 2011 at 1:00 p.m. in Town Hall.

Submitted by Georgiana Greenough