

## Introduction

Fortis Telecom is the first competitive local exchange service provider to deliver secure, high performance broadband, carrier grade telephony and managed PBX services over a wireless last mile. There is \$30B+ of unmet customer demand for telecom services in the local exchange that remains after the failed attempt at telecom reform in 1996 and the collapse of the competitive carrier industry in 2000.

## The Market Need: Real Competition in the Local Exchange

Thirteen years ago the Telecommunications Act of 1996 was passed, opening the telecommunications industry to competition. The existing phone companies were to allow competitors to connect to their "last mile" infrastructure. (Connectivity from the local telephone exchanges to the customer premises is called the "last mile" delivered through copper or fiber cable. ) No one really knew if the existing phone companies would cooperate or, failing that, if the regulatory agencies would force their compliance. Yet investors channeled cash in record amounts into business models that failed to consider problems with depending on and reselling their competitor's, (the phone company's "last mile"), infrastructure. Also, investors failed to consider that there were far too many of these new companies, targeting the same customers. The increased number of competitors resulted in price-based competition. When competing on price, there are few winners. Margins decrease, making it incredibly difficult to be profitable. Further investigation reveals that the downfall of many startup Competitive Local Exchange Carriers (CLECs), no matter how well financed, was simply that they failed to balance key business factors successfully.

## Project Description

Fortis Telecom believes that WiMAX technology is the answer to building an economically viable local exchange network. We've proven the technology in a two year trial in the Folsom/El Dorado Hills California area, which is located about 20 miles east of Sacramento. We are proposing the creation of a wireless broadband "last mile" network, providing voice and broadband services, in the six-county Sacramento, California region, known as the Sacramento Area Council of Governments (SACOG) region. Its members include the counties of El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba as well as the following cities: Sacramento, Elk Grove, Rancho Cordova, Citrus Heights, Fair Oaks, Folsom, El Dorado Hills, West Sacramento, Davis, Woodland, Roseville, Rocklin, Lincoln, Yuba City and Marysville.

## Proposed Service Areas

The SACOG region consists of a mix of metropolitan, suburban and rural areas. The availability of broadband capacity with speeds above 2 Mbps is limited to the urban and suburban areas. Businesses are forced to settle for DSL circuits with inferior upload speeds or pricey T1 circuits, which only offer a maximum speed of 1.5 Mbps.

Area Name	# Businesses	# Households	# Anchor Institutions
El Dorado County West	872	17392	73
Placer County	1755	57767	298
Sacramento County	45101	415059	5154
Sutter County	1010	25606	183
Yolo County	2308	135320	312
Yuba County	747	15500	107

### **Proposed Services and Applications**

Fortis Telecom is currently offering 6-20 MBPS Internet Access, Virtual Private Networks and Voice Services for:

- 1 Small and Medium Sized Businesses
- 2 Small Office/Home Office Users (SOHO)
- 3 Medical Facilities
- 4 Managed Care Facilities
- 5 Education Facilities and Libraries
- 6 Government Agencies including, Public Safety and Law Enforcement

### **Approach to addressing the non-discrimination and interconnection obligations**

Fortis Telecom will provide full net neutrality, free of restrictions on content, sites, platforms and the types of equipment that may be attached. Legitimate communication streams will not in any way, be degraded, or interfered with. TCP/IP ports will not be blocked. Data packets will not be remarked or reprioritized.

We support Quality of Service (QoS) for third party applications, so users can take advantage of IEEE 802.1p QoS. This will ensure that their latency sensitive applications, such as Voice over IP (VoIP) function properly.

### **Type of broadband system that will be deployed (network type and technology standard)**

Fortis Telecom is deploying a Wireless network based on the WiMAX (IEEE 802.16) standard. Commercially available since mid 2004, deployed by over 150 operators in more than 30 countries, Alvarion is the most advanced, field proven commercial WiMAX solution and the first to offer CPE powered with Intel PRO/Wireless 5116 broadband interface WiMAX chip.

Alvarion supports fixed, nomadic and portable services with a clear path for the emerging WiMAX mobile industry based on the IEEE 802.16e standard. Alvarion is designed for a variety of frequencies in both licensed and license-exempt bands from 2GHz to 6GHz spectrum, and operates in both FDD and TDD duplex modes. The system, with excellent sensitivity and market leading OFDM radio technology, is robust and operates in adverse channel conditions and non-line-of-sight links.

With high power radios that support diversity and smart antenna techniques, Alvarion enables the use of indoor self-install CPEs in both dense urban and suburban environments. Alvarion CPEs are powered by Intel and deliver broadband access services to a wide range of customers, including residential, SOHO, SME, large enterprise and multi-tenant customers.

**Qualifications of the applicant**

The Fortis Telecom Network has been designed by Peter Oliver and David Hudock who each have over 25 years experience in network engineering, network operations and business management. Additional management team members are ready to join the company as the company grows. These include retired and current executives from major telecom carriers such as Sprint, Verizon and Qwest.

Oliver was an early Sprint employee and is a contributor to the nations first all fiber optic network and has extensive experience in designing and deploying Operations Support Systems (OSS) for large scale carrier networks. Hudock was an early Intel employee, where he was instrumental to establishing the Intel global network.

Both Oliver and Hudock were employees of OSI where their NetExpert and Visual Agent software was deployed in over 80% of the wireless service providers around the world. In their previous startup company, Ai Metrix, Inc., Oliver and Hudock designed and deployed large scale telecommunications Operations Support Systems for Comcast, Cincinnati Bell, Broadwing (now Level 3) and the United States Department of Defense, Defense Information Systems Agency (DISA).

**Overall infrastructure cost of the broadband system**

We've budgeted \$4,984,965 for the construction of 6 tower sites.

**Overall expected subscriber projections for the project**

We expect to acquire about 5500 subscribers over a five year period. Our cumulative subscriber projections for each year are as follows:

2010 - 419  
2011 - 1622  
2012 - 2921  
2013 - 4219  
2014 - 5518

**Number of jobs estimated to be created or saved as result of this project**

We expect to save or create 64 jobs over a five year period. This does include additional job creation for the communities that we will serve. Our headcount projections for each year are as follows:

2010 - 34  
2011 - 43  
2012 - 50  
2013 - 58  
2014 - 64