

Municipal Telecommunications \& Energy Update January 27, 2016:
Cell Tower Update: Conventional \& DAS/Small Cell Siting Issues
Municipal Broadband (FTTH)
HB 5016 - Telecom Relocation Bill
Cable Law and the Unfunded MPSC and Beyond PROTEC Comments Re Proposed Hazardous Pipeline Rules

ITC v Oshtemo Twp
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# Cell Tower Update: <br> Conventional Cell Towers 

## \& <br> DAS/Small Cell Siting Issues

## Cell Tower Update: <br> Conventional Cell Towers

## The Way We Were

## 47 USC § 332 - Mobile services

- "(7) Preservation of local zoning authority (A) General authority Except as provided in this paragraph, nothing in this chapter shall limit or affect the authority of a State or local government or instrumentality thereof over decisions regarding the placement, construction, and modification of personal wireless service facilities."
- (B) Limitations (i)...(I)shall not unreasonably discriminate among providers...(II)shall not prohibit or have the effect of prohibiting the provision of personal wireless services.
- ...shall act....within a reasonable period of time...
- (iii)....Any decision by a State or local government...shall be in writing and supported by substantial evidence...
- (iv)No State or local government...may regulate...on the basis of ... radio frequency emissions...
- (v)... within 30 days after such action or failure to act, commence an action in any court of competent jurisdiction.


## The Way We Are Mobile Industry Background

- Obama Administration Endorses Mobile as Part of National Broadband Plan
- Millions of New Antennas Needed to Cover the Nation and feed our Smart Phones and Machine to Machine Connections
- Avg: 20-40,000 new Antennas/State
- Result: Industry Desperate = Increased Market Value for Antenna Sites as Landlords of Cell Towers, Water Towers, Municipal Buildings etc
- Industry Also Trying to Shape Streamlined Regulation...


## "New" Federal Law

- FCC 2009 Shot Clock Order
- Reasonable Time to Act = 90 Days (Collocation) 150 days (New)
- Congress
- HR 3630 February 2012
- Sec 6409
- ..."a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station..."
- FCC Guidance on Section 6409(a)
- Now applies to DAS? Not on Muni Property
- US Supreme Court: Arlington v FCC
- Shot Clocks Upheld
- FCC: NOI Broadband Deployment Acceleration


## "New" State Law

- 2012 PA 143 Cell Tower Collocation
- Objected to by PROTEC, MML and MTA
- Passed/Effective May 24, 2012
- Local Government Foreclosed from regulating
- 20'/10\% Height Increases
- Unlimited Width Increases
- Increases up to 2500 sq ft base
- 14 Day Shot Clock on Application Completeness If Allowed
- 60-90 Day Approval Shot Clock


## New State Law Cont'd

- MICHIGAN 2012 PA 143 ZONING ENABLING ACT Amendment (EXCERPT): 125.3514 Wireless communications equipment as permitted use of property; application for special land use approval; approval or denial; authorization by local unit of government; definitions.
- (1) Wireless communications equipment is a permitted use of property and is not subject to special land use approval or any other approval under this act if all of the following requirements are met:
- (a) The wireless communications equipment will be collocated on an existing wireless communications support structure or in an existing equipment compound.
- (b) The existing wireless communications support structure or existing equipment compound is in compliance with the local unit of government's zoning ordinance or was approved by the appropriate zoning body or official for the local unit of government.
- (c) The proposed collocation will not do any of the following:
- (i) Increase the overall height of the wireless communications support structure by more than 20 feet or $\mathbf{1 0 \%}$ of its original height, whichever is greater.
- (ii) Increase the width of the wireless communications support structure by more than the minimum necessary to permit collocation.
- (iii) Increase the area of the existing equipment compound to greater than 2,500 square feet.


## State Law Cont'd

## - T-Mobile v West Bloomfield Federal 6 ${ }^{\text {th }}$ CA Aug 21, 2012 Opinion

- Lessons learned from this Cell Tower Denial?
- 1. Communities must decide early whether to fight a proposal or not.
- 2. Prepare your objections with substantive expert evidence rebutting the provider's reports and testimony up front. This can include:
- a. Vigorous cross exam of industry experts
- b. Presentation of experts which could include: cell tower design, city planners, coverage analysis and valuation experts
- c. RF emissions and other health arguments are improper under federal law.
- d. Don't be afraid to delay the proceedings until such work can be done and presented on the record at the City or Township level.
- 3. Lay testimony from residents re aesthetics is not sufficient.
- 4. Appeal on poor facts can result in adversely impacting a much broader group of communities.
- 5. The result of this Opinion is that the 6th Cir has now adopted some of the more stringent rules from other circuits interpreting federal law as applied to communities including:
- a. Denial of a single application can now constitute a violation of federal law which forbids actions preventing wireless service
- b. Individual provider coverage gaps now constitute "significant gaps" in service.


## Take Away I What all This Means for You as <br> Landlords: Revenue

- When you receive a call or letter from the Mobile/Cellular Industry "offering" modest "bonus" to amend Current Agreements:
- You now know:
- Industry DESPERATE to Add Antennas and Upgrade to

Fiber Connections to Towers

- Consult with Counsel
- Renegotiate Entire Agreement
- Demand Market Rates
- Do NOT let tenants add regulatory functions to lease


## Take Away II What all This Means for You As Regulators

- Michigan's 2012 PA 143 Dominates Landscape
- Local Government Foreclosed from regulating
- 20'/10\% Height Increases
- Unlimited Width Increases
- Increases up to 2500 ' sq ft base
- 14 Day Shot Clock on Application Completeness If Allowed
- Approval Shot Clock: 60 Days for Collocation 90 Day for new


## Cell Tower Update: DAS/Small Cell Siting Issues

## Distributed Antenna Systems

- What?
- Definition: FCC DAS Forum definition: A network of spatially separated antenna nodes connected to a common source via transport medium that provides wireless service within a geographic area or structure. http://transition.fcc.gov/presentations/02012012/panel-1/allen-dixon.pdf
- Not, but often confused with: Micro cells, Small Cells, , picocells, femtocells, temporary cells etc.
- Where?
- Everywhere: Outside in Rights of Way, Public Buildings/Structures, Private Property and Inside Buildings
- Why?
- Obama Administration Endorses Mobile as Part of National Broadband Plan
- Industry:
- 1-2 million New Antennas Needed to Cover the Nation and feed our Smart Phones and Machine to Machine Connections
- Avg: 20-40,000 new Antennas/State
- 70\% of mobile calls originating indoors, reliable wireless
- Data revenue up 52.6\% to \$3.9B
- AT\&T 2Q2009 data revenue up 37\% to \$3.4B - (108B text messages)
- Wireless data revenue $28 \%$ of total wireless
- Wireless data drives demand for cellular across the board


## Examples of DAS Antennas









## Cell Tower Update: DAS/Small Cell Siting Issues

- The Rules:
- Old Michigan Metro Act
- Metro Authority Determination \#1
- Purports to bring DAS under the Metro act BUT: Preempted by express language of the Act - Only apples to "lines".
- New FCC Regulation -Summary - See Tab 2


## State and Local Regulation

- Michigan: Determination No. 1 - Distributed Antennae Network Systems June 2, 2004:
- "Distributed antennae networks providing telecommunication services through existing or new cable facilities within the public right-of-way are considered telecommunication facilities under Section 2(j) of the METRO Act; and are, consequently, subject to the provisions of the Act. All other local ordinances, laws, and regulations not specifically pre-empted by the Act shall remain in force. "
- BUT: The Authorizing statute says something different: MCL 484.3102(j): (j) "Telecommunication facilities" or "facilities" means...copper and fiber cables, lines, wires, switches, conduits, pipes, and sheaths... which...provide telecommunication services or signals. Telecommunication facilities or facilities do not include antennas, supporting structures for antennas, equipment shelters....

Latest Rules for DAS
FCC Acceleration of Broadband by Wireless Report and Order Dated October 17, 2014, Released October 21, 2014

See Tab 2
The FCC Essentials:

1. The FCC says Locals retain proprietary property Interests = Franchising fees (Revenue) and Regulation
2. But it also says - Approval of One May = Approval of More:

- Future Collocators may be able to add as much as 10 feet vertical and 6 feet horizontal


## Metro Act Trumps Metro Authority FCC Trumps Metro Act

So - How to approach a DAS Application submitted typically under the Metro Act?

1. Respond to the Metro Act App re Lines
a) Modified Metro Act Permit
2. Respond to the Antennas Etc., Per the FCC
a. Franchise/License/Lease with careful language re fees and limited permission

## Municipal Broadband

- See Michigan Bar Journal Article Tab 3


## "The Internet

changes everything

- Business Week December 4, 1995
J. Neil Weintraut, managing director for technology research at Hambrecht \& Quist Inc.


## Internet of Things



InternetAppliance ${ }^{\text {m }}$


## Muni BB = INNOVATION

"If I had asked people what they wanted, they would have said faster horses."

- Henry Ford



## Where We Are

- 150+ year old Copper Wire Transmission System

k5519435 www.fotosearch.com
- Little Global Difference Between DSL and Cable


## Where Everyone Else that Matters Is



- Like Korea, Japan, rrance, Germany and all of our other major economic competitors


## Where we MUST Be Headed

- Fiber Fiber Fiber Fiber Fiber Fiber Fiber Fiber
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Fiber Fiber
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## WHY FIBER?

## Speed and Capacity



## The Link to Economic Stimulus

- As with any new technology, Fiber faces challenges:
- Cost of implementation,
- Political resistance by the incumbent system and
- Public learning curve to get to the point of demanding it
- The link is obvious and yet studies to confirm it are in their infancy. See those mentioned.


## The Economic Lift From Broadband

- McKinsey Global Institute - May 2011
- "Internet matters: The Net's sweeping impact on growth, jobs, and prosperity"
>2 billion Internet users worldwide
> Internet accounts for $3.4 \%$ of GDP in 13 countries we looked at, and $21 \%$ of GDP growth in the last 5 years in mature countries
> $2.6 \%$ jobs created for 1 job lost
$>75 \%$ of Internet impact arises from traditional industries
$>10 \%$ increase in productivity for small and medium businesses from Internet usage
> Small and medium businesses heavily using Web technologies grow and export $2 x$ as much as others
> Up to €20 per Internet user per month of consumer surplus


## FCC Broadband Plan

- FCC Broadband Plan is the best place to start
- http://www.broadband.gov/
- Take the Test:
- http://www.broadband.gov/qualitytest/about/ What speed (up and down) Do you really have?


## Akamai State of Internet Connectivity Report for Q1 2012

- Broadband Speed and Adoption Trends
- 666 million IP addresses from 238 countries.
- South Korea and Hong Kong avg. at 15.7 Mbps and 49.3 Mbps respectively
- 146 million were from the United States with $60 \%$ at 4 Mbps minimum - lags in $14^{\text {th }}$ place globally.
- Delaware continues to lead the States at an average speed of 10.2 Mbps,


## Akamai Report Cont'd

- "Some states are working to advance legislation that would restrict community/municipal broadband efforts, which could effectively limit consumer choice to the service tiers and speeds that the incumbent telecom and cable providers have made available to that market, slowing the progress towards ubiquitous broadband and universal broadband adoption."
- http://www.akamai.com/dl/whitepapers/akamai soti q112.pdf?curl=/dl/ whitepapers/akamai soti q112.pdf\&solcheck=1\&WT.mc id=soti Q112\&


## Internet Speeds and Costs Around the World



NORWAY 7mbps
RWAY 7m
$\$ 4.04$
3) ${ }^{3}$ FINLAND 22mbps
\$2.77
\$0. 27
PRICEPER MONTH
FOR IMBPS IN USD

Price Per Month for 1mbps
$\square$
AVERAGE BROADBAND SPEED IN MBPS

## 70 JAPAN 61mbps

KOREA 46mbps


BROADBAND PENETRATION PERCENTAGE

## The Economic Lift From Broadband

## The Coalition's Policy for E-Government and the Digital EconomyAugust 2013 (Australia)

> The statistical evidence confirms Information and Communication Technologies (ICT) has been a crucial contributor to higher productivity and rising living standards since the early 1990s, although there is debate over how large the contribution has been. ${ }^{13}$ Capital spending on ICT improves labour productivity and assists innovation...
> McKinney Global Institute has calculated that around a fifth of GDP growth in advanced economies over the past five years has arisen from the Internet and associated technologies - with 75 per cent of this growth occurring in sectors not traditionally seen as 'technology' industries, testament to the broad applicability of these technologies. ${ }^{15}$

- ${ }^{12}$ Productivity Commission, 'Annual Report, 2007-08’, p. 16.
- ${ }^{13}$ See OECD, 'Broadband \& the Economy' - Ministerial Background Report, June 2008, pp. 14-

18. 

- ${ }^{14}$ Productivity Commission - 'ICT use and Productivity: A Synthesis from Studies of Australian

Firms' - Productivity Commission Research Paper, Canberra, 2004, Available:
http://www.pc.gov.au/research/commission/ict-use

- ${ }^{15}$ McKinsey, 'Internet Matters: The Net's Sweeping impact on Growth, Jobs \& prosperity', McKinsey Global Institute. May 2011:
http://www.mckinsey.com/insights/high_tech_telecoms_internet/internet_matters


## FCC Broadband Study

- The FCC published its $8^{\text {th }}$ Study on Broadband Deployment 2012
- The country still has 19 million residents completely unable to get broadband
- Says Who? Connect America (Connect Michigan) http://www.connectmi.org/interactive-map
- $23.7 \%$ of the 61 million people living in rural areas have no broadband access at their homes.
- http://transition.fcc.gov/Daily Releases/Daily Bu siness/2012/db0821/FCC-12-90A1.pdf


## EXAMPLES OF MUNICIPAL FIBER SYTEMS \& ALLIES

## Lafayette La. City System

- Comparison of Internet services and costs
- Cox Communications
- Fastest speed available: $50-55 \mathrm{MBs} / \mathrm{sec}$ $15-18 \mathrm{MBs} / \mathrm{sec}$ (download): $\$ 53 /$ month $25-30 \mathrm{MBs} / \mathrm{sec}$ (download): $\$ 65 /$ month 50-55 MBs/sec: (download): \$95/month
- City-owned LUS Fiber
- Fastest speed available: $100 \mathrm{MBs} / \mathrm{sec}$ $15 \mathrm{MBs} / \mathrm{sec}$ (download/upload): \$35/month $40 \mathrm{MBs} / \mathrm{sec}$ (download/upload): \$50/month $75 \mathrm{MBs} / \mathrm{sec}$ (download/upload): \$100/month
- Source: http://www.lusfiber.com/index.php/internet/pricingguide


## Google in Kansas City

- More than 30 percent of homes in Kansas City, Kan., and Kansas City, Mo., have pre-registered for Google's Fiber TV high-speed Internet and digital video
- 1 Gig Internet for $\$ 65 /$ month, Internet and cable/video for $\$ 120$. Slower 5 Mbps package at no monthly cost.
- http://www.fiercecable.com/story/google-fiber-pre-registrations-crack-30-penetration-6-kansas-city-neighborh/2012-08-20


## Michigan Projects

- Sebewaing FTTH
- Traverse City DDA Sponsored WIFI
- Others Being Developed....


## Legal/Regulatory/Political Hurdles

- Legal \& Regulatory
- Dark Fiber (Creating the Infrastructure)
- Telecom Act MCL 484.2252
- Metro Act MCL 484.3114
- Lighting the Fiber (Selling the Service)
- Federal and State Regulation
- Politics
- AT\&T, Comcast, Verizon, Connect Michigan etc.


## The Michigan (Low) Hurdles

- 2002 Metro Act PA 48 MCL 484.3114
- Public hearings
- 3 year segregated cost projections
- Long Term Segregated Accounting Records
- No discrimination in favor of municipal system
- Grandfathering potential
- Pre 2002 systems
- Watch out for "same" service and "within same territory" language
- 2005 Telecom Act PA 235 MCL 484.2252
- Competitive Bid Process
- If 3 Qualified Bids rec'd within 60 days = Obstacle?
- Who defines "qualified"?
- If qualified - Require bidder to build it per govt specs?
- Grandfathering
- Available for pre-November 2005 systems


## Gig U <br> 

37 research universities come together to accelerate the deployment of next generation networks and services.
Partnering with the Aspen Institute and the FCC National Broadband Plan.

In order for the nation to retain technological leadership, our country should create a critical mass of communities with worldleading—not just world class—broadband networks.

- http://www.gig-u.org/
- See Also the Michigan based MERIT Internet System.
http://www.merit.edu/


## World Bank Report

- "Broadband is a ... technology that significantly affects how people live and work. It is a key driver of economic growth and national competitiveness ...Countries in the top tier of broadband penetration have exhibited $\mathbf{2}$ percent higher GDP growth than countries in the bottom tier." (Citing Federal Communications Commission, Industry Analysis and Technology Division Wireline Competition Bureau, High-Speed Services for Internet Access: Status as of June 30, 2008 (July 2009); available at: http://hraunfoss.fcc.gov/edocs public/attachmatch/DOC-292191A1.pdf.
- World Bank Report at:
http://siteresources.worldbank.org/EXTINFORMATIONANDCOMMUNICATI ONANDTECHNOLOGIES/Resources/2828221208273252769/Building broadband.pdf


## References to Consider

- The Future of Broadband by Richard Adler Technology Institute for the Future 2012
- http://www.broadbandforamerica.com/sites/default/f iles/Richard\%20Adler\%20Report\%202.pdf
- The Book of Broken Promises by Bruce Kushnick New Networks Institute 2014
- http://www.huffingtonpost.com/bruce-kushnick/the-book-of-broken-promis b 5839394.html
- Captive Audience: The Telecom Industry and Monopoly Power in the New Gilded Age by Susan Crawford - Yale Press 2013
- Last Week Tonight with John Oliver: The Internet June 2014
- Warning: Coarse Language: http://www.youtube.com/watch?v=fpbOEoRrHyU


## Fiber Deployment - Potential Phases



## Sebewaing Light \& Water Financial Model Summary

- Project Summary Original Mode

| Aerial Miles | 10.5 | 18.8 | Data |
| :--- | :--- | :--- | :--- |

- UG Miles4.5 2.7
- Homes Passed
$\$ 70 / \$ 80$
$900 \quad 9$
Admin / Marketin
0
938
183
50.0\%

542

- Project Budget Original Model
ing


## Maintenance Tech

Install Tech 1
1
Total Resources
1
Voice
\$35

- Businesses Passed

45
50.0\%
.
\$40 Phone
12/17/13 Model Customer Margin Original
Model 12/17/13 Model

- Project Capital Expenditures Margin Per Customer
- Headend Building/Electronics \$150,000 \$123,000
- Remote Cabinets/Electronics
- Plant Materials \& Equipment
\$0 \$0
\$130,800 \$194,702

| Revenue | $\$ 62.9$ |
| :--- | :--- |
| Direct Costs | $\$ 26.9$ |

\$61.64

- Aerial Labor
\$137,340
\$268,255
Total Margin \$20.39
\$28.22
- UG Labor
- Make Ready
\$155,610
\$92,148
- Engineering/Constr. Mgmt
\$93,000
\$0
Direct costs include bandwidth, VoiP costs and customer care. other miscellaneous expenses.
- Drops \$245,700 \$284,655
- Total Project Capital \$942,450
\$1,097,280
- Operating Capital Budget
- Capitalizable Installation Costs $\$ 34,939 \quad \$ 40,478 \quad$ Key Indicators Original 12/6/2013
- Installation Materials \$7,794
- Total Operating Capital \$42,733
- Project Cost per Passing $\$ 1,043$ \$1,023
- Total Capital Budget \$985,183 \$1,146,787


## HB 5016 RELOCATION COST SHIFT

See Tab 4
For 100 years, it has been the law, custom and per written agreements, that utilities granted access to our rights of way, pay their own cost when municipal growth compels changes to those rights of way.
HB 5016 seeks to reverse that and saddle locals with those costs re telecom. Projected Cost? $\$ 100,000,000+$ Year
If passed, when will the electric and pipeline industries ask for the same?

## CABLE/VIDEO UPDATE: MPSC QUITS

See Tab 5

The MPSC was charged with administering PA 480, the Michigan Video Services (Cable) Act in 2007

As of December 31, 2015, the Legislature opted not to fund the MPSC re its PA 480 Oblogations

Where does that leave us?

## Pipelines

## PROTEC Comments Re Proposed Hazardous Pipeline Rules see Tab 6 <br> WHY?

Aging infrastructure is resulting in a crescendo of failures and disasters

- See San Bruno or Kalamazoo River

Industry is setting up local government as a fall guy for its own failures

## Pipelines in the United States

- There are 2.5 million miles of natural gas and hazardous liquid pipelines in U.S. That's enough to circle the earth about 100 times.
- 2,066,000 miles of smaller diameter, low-pressure natural gas distribution mains and service pipelines
- 321,000 miles of onshore and offshore natural gas transmission pipelines
- 175,000 miles of onshore and offshore hazardous liquid pipelines
- These pipelines are operated by over 3,000 companies, large and small
- States play a major role in regulation of pipeline operation


## Transmission Pipelines in the U.S.



## Pipeline Safety Regulations

- Hazardous Liquid and Gas Pipeline Regulations address:
- Materials
- Design
- Construction
- Operations and Maintenance
- Testing
- Personnel Qualification, Drug and Alcohol programs
- Integrity programs
- More...
- PHMSA does NOT have citing authority for new pipelines


## Pipeline Emergencies Training Curriculum

- Brought to you by PHMSA and the National Association of State Fire Marshals
- Provides an overview of pipeline operations and how to safely and effectively respond to pipeline emergencies
- Dedicated Website at www.pipelineemergencies.com
- Online e-Book, Pipeline Emergencies
- iPhone, iPad, iPod Touch, and Android Apps
- Trainer's Instructor Guide
- Interactive Training Scenarios


## ITC v OSHTEMO

This case is headed to the Michigan Supreme
Court. See Tab
Q: What's at stake?
A: Whether local government runs local government or, whether utilities do.

# Michael J. Watza Biography 

Martindale Hubbell AV Rating<br>Super Lawyer Designation<br>Detroit Business Top Lawyer



- Michael J. Watza is Co-Chair of the Governmental and Commercial Litigation Practice Groups at Kitch, a full service Law firm based in Detroit, with offices in Lansing, Marquette, Mt. Clemens, Chicago, III. and Toledo, OH.
- Mr. Watza's practice provides litigated, legislative and regulatory solutions on behalf of municipal, health care and private sector clients concerning legislation, Complex Litigation, Governance Issues, Telecommunications including Cable and Cell Towers, Energy and Insurance.
- Michael has managed multiple legislative initiatives, represented clients in State and Federal trial and appellate courts across Michigan as well as attended to regulatory matters before the Michigan Public Service Commission, Michigan Tax Tribunal, Department of Labor and Economic Growth and the Federal Communications Commission and Department of Transportation (PHSMA).
- Michael has represented clients in the halls of the Michigan Legislature and Congress through negotiation, drafting and testimony regarding legislation on various issues including energy, transmission line siting, telecommunications (cable and cell towers), pipeline regulation, the formation of inter-governmental authorities and tort reform.
- Michael also serves as General Counsel to PROTEC and the Mobile Technology Association of Michigan, the Michigan Gaming Control Board, Covenant House Central School Board in Detroit, Chairman of the Novi EDC, Chairman of Attorney Grievance Commission Grievance Panel \#9, Immediate Past Chairman of the Administrative Law Section of the State Bar and Treasurer/Secretary of the Public Corporation Law Section of the State Bar and Chairman of the International Municipal Lawyers Technology Committee.
- Michael is an adjunct faculty member at Michigan State University College of Law having taught Communications Law and Policy and Ethics and the Practice of Law.
- In 2008, Michael successfully led a coalition of Michigan Cities to Federal Court and Congress to oppose Comcast's effort to move PEG channels to the 900 channel range and digital, at a time when all other cable channels were analog.
- In 2013, Michael provided the legal components to the development of the $1^{\text {st }}$ new Municipal Fiber to the Home and Business (FTTP) project and the development of a DDA sponsored WIFI system in Michigan in the face of legislative impediments

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