

MINUTES OF THE  
MARICOPA ASSOCIATION OF GOVERNMENTS  
TECHNOLOGY ADVISORY GROUP

September 18, 2008  
MAG Office  
302 North First Avenue  
Phoenix, Arizona

MEMBERS ATTENDING

Randy Jackson, Surprise, Chair	*David Boynton, Maricopa County
*Kevin Hinderleider, Avondale	**Dale Shaw, Mesa
**Dee Hathaway, Buckeye	**Duncan Miller, Paradise Valley
**Jim Keen, Carefree	**John Imig, Peoria
**Patrick Hait, Chandler	**Greg Binder, Phoenix
**Pat Timlin, El Mirage	*Lester Godsey, Queen Creek
*Mike Ciccarone, Fountain Hills	*Kevin Sonoda, Scottsdale
** Aja Joshi for Shawn Woolley, Gilbert	**Dave Heck, Tempe
**Kenneth Arnold, Glendale	*Arkady Bernshteyn, Valley Metro Light Rail
**Cindy Sheldon, Goodyear	

\*Members neither present nor represented by proxy.

OTHERS PRESENT

Lydia Warnick, ADOT	Craig Chenery, MAG
Pier Simeri, Avondale	Audrey Skidmore, MAG
Dan Davis, Avondale	David Worley, MAG
**Brian Craig, Carefree	Russell Miles, MAG
Galen Updike, GITA	Sharon Sanders, Maricopa County Community Development
**Mike Molsey, Glendale	Jonce Walker, Maricopa County Planning and Development
Joanne Toms, Glendale	Wahid Alam, Mesa
John Miner, Intel Corp.	Chuck Skidmore, Scottsdale
Alex Toth, Intel Corp	
Mike Cartsonis, Litchfield Park	

\*\*Participated via telephone conference call.

+ Participated via video conference call.

1. Call to Order

The meeting was called to order at 10:02 a.m. by Chairman Randy Jackson. Voting members Greg Binder, Dee Hathaway, Jim Keen, Patrick Hait, Pat Timlin, Ajay Joshi (proxy for Shawn Woolley), Kenneth Arnold, Cindy Sheldon, Dale Shaw, Duncan Miller, John Imig and Dave Heck, attended via telephone conference call. All members introduced themselves.

2. Call to the Audience

No comments were made by the audience.

3. Welcome

Randy Jackson welcomed the TAG membership. He stressed the importance of attending TAG and reaching a quorum, especially in regards to taking future actions relating to the Regional Community Network (RCN).

4. Approval of the March 15, 2007 Meeting Minutes

A motion to approve the March 15, 2007 meeting minutes was moved by Dale Shaw, seconded by Dee Hathaway and unanimously approved by the committee.

5. Regional Community Network (RCN) Update

Randy Jackson thanked the guest speakers for attending the meeting. Mr. Jackson introduced Lydia Warnick of ADOT Transportation Technology Group. Ms. Warnick gave a presentation on the current status of the Regional Community Network (RCN) Phase IA program. She provided a brief background on the RCN program. Ms. Warnick stated that funding has been allocated for Phase IA and bid opening for the first project of the Phase IA program of PS&E fiber and conduit was July 11<sup>th</sup>, 2008. Paramount Designs Inc. was awarded the PS&E fiber project on August 15<sup>th</sup>, 2008. A partnering and preconstruction meeting was held on September 2<sup>nd</sup>, 2008.

Ms. Warnick stated that the Active Electronics kick-off meeting was held on April 22<sup>nd</sup>, 2008 and FHWA obligated funds on August 12<sup>th</sup>, 2008. Representatives of MAGTAG and MAG ITS Committee member agencies were invited to join the Active Electronics selection team. After seven meetings, Foundry was selected as the active electronics standard. Ms. Warnick stated that the next RCN Working Group meeting will be held at 8:30 a.m. October 8<sup>th</sup>, 2008 at MAG. Randy Jackson invited TAG members to attend the RCN Working Group. Audrey Skidmore explained the role of the RCN Working Group and TAG in the future development of the RCN.

A motion was called to appoint Randy Jackson as the co-chair of the RCN Working Group. Ajay Joshi moved the motion, Kenneth Arnold seconded and the motion was unanimously approved.

6. Green Initiatives

Randy Jackson introduced the discussion on Green Initiatives and he read a paragraph from the book "*Hot, Flat, and Crowded: Why We Need a Green Revolution - and How It Can Renew America*" by Thomas L. Friedman.

Mr. Jackson introduced Chuck Skidmore, Certified Energy Manager with the City of Scottsdale.

Mr. Skidmore thanked Mr. Jackson and presented three points for discussion. The first was the benefits in investing in new, more energy efficient technology. The second was that data centers, server rooms, etc. should be isolated from the building HVAC system. Finally, the best cooling for computing equipment is when it is as close to the component level as possible.

Mr. Skidmore provided statistics on the costs involved using 3,000 older model PCs that are less efficient and compared them to newer PCs that utilize Energy Star technology. He showed that the cost savings over a five-year span justified immediate, rather than staged replacement.

He stated that desktop computers and the various forms of networks that serve them consume enormous amounts of electrical energy and heat, and require large amounts of energy to remove that heat. Mr. Skidmore added that data centers are concentrated, thermally heavy loads that are difficult to adequately cool. They should ideally be isolated thermally, mechanically, and electrically from the main building. They are often located in rooms that were never intended for that sort of use and are simply not equipped to handle the load.

Mr. Skidmore stated that Scottsdale must often run an entire facility 24/7 just to keep one room cool. He added that older buildings often don't have the electrical capacity for the computers and the extra cooling needed and that switching power supplies produce harmonics that overheat the electrical infrastructure. He observed that overheated equipment will fail at the most inopportune time. He proposed racks running off building chillers as an appropriate solution for cooling servers and reducing energy footprint.

Mr. Skidmore emphasized the importance of getting cooling as close to the component level as possible. Ideally cooling should be accomplished with coolants that have a large heat carrying capacity such as water. He related that a thimble full of water has more heat capacity than a cubic foot of air and that it is much more energy efficient to move small quantities of water with small pumps than to move huge quantities of air with big fans.

Randy Jackson thanked Mr. Skidmore for his presentation and stated that the City of Surprise has recently moved to a new server room with water cooled racks because of previous issues cycling the hot air out of the room.

Mr. Jackson read the biographies of Alex Toth, Business Development Manager and John Miner, Systems Analyst, from Intel, Inc.

Mr. Toth presented the changes that Intel is making internally to further green their environment and product line. He addressed energy efficiency and enterprise manageability as the challenges motivating the information technology industry. He stated that the average desktop PC wastes nearly half the power delivered and that servers lose approximately one-third of their power. He added that 90% of deployed desktops do not utilize power management settings.

Mr. Toth discussed Intel's two-fold strategy to increase computing energy efficiency and increase use of power management. He stated that Intel's goal is to improve computing energy efficiency by 50% and collectively save an estimated \$5.5 billion in global energy costs. Intel aims to reduce global CO<sub>2</sub> emissions from computing platforms by 54 million tons per year. This is the equivalent of removing 11 million autos, 20 coal plants from the planet and planting 25,000 sq. miles (~65,000 km<sup>2</sup>) of trees.

Mr. Toth presented the specifications of numerous Intel chipsets and how chips are getting smaller and highlighted the ability of the chips to turn off inactive cores to conserve power. He discussed the reduction in power over the span of recent chips. He stated that going green includes reducing hazardous waste and with Intel's high-k 45nm process technology, Intel is 100% lead-free, and moving to be halogen-free in 2008. Mr. Updike asked how lead was used. Mr. Toth said lead was used in the interconnects.

Mr. Toth stated that every two years Intel has a new technology and in the off years has a new architecture. The latest architecture is more efficient and provides manageability so Information Technology Administrators can control the power settings on PC's remotely for power conservation purposes. He added that Intel aims to control costs by improving manageability.

John Miner provided an overview of Intel's IT practices and infrastructure that included 243,000 LAN nodes, 95,000 e-mail boxes and 166 Terabytes of WAN traffic per month.

Mr. Toth discussed vPro™ technology which enables remote client management, regardless of system health or if the PC is powered on or not. This reduces the necessity of leaving systems on for network management. Additionally, vPro™ can remotely deploy security patches, collect PC Hardware/Software inventories and diagnose and fix problems. He added that while Intel has not reduced overall power demand, it is doing more processing without increasing power.

Randy Jackson thanked Mr. Miner and Mr. Toth for their presentation and read the biographies of Pier Simeri, Community Relations and Public Affairs Director and Dan Davis, Director of Parks, Recreation & Libraries Department, both from the City of Avondale.

Ms. Simeri gave a presentation on the change that the City of Avondale made to its work week. In June 2008, the City of Avondale switched to a four day work week. Ms. Simeri stated that this decision came from an idea proposed by the Employee Retention & Recruitment Committee. Staff wanted to provide a different kind of alternative work schedule; an innovative, “thinking outside the box” proposal. It was determined that 60% of City Hall employees were already working some form of alternative work schedule before implementation.

Ms. Simeri mentioned that the four day week has already been implemented by North Las Vegas and Utah. She stated that the committee came up with term “Green Friday” because of a heavy focus on environmental stewardship at Avondale. Green Fridays allow Avondale to conduct business in an environmentally friendly manner, while expanding customer service opportunities on the remaining days of the week.

Ms. Simeri listed some of the benefits including enhanced customer service with longer City Hall hours Monday through Thursday, a reduced carbon footprint at City Hall, increased web services and a guarantee that Avondale meets its trip reduction goal. Ms. Simeri also noted that this change in shift is not possible across the organization and that some city facilities need to be available to the community on Friday.

Galen Updike asked if there any additional steps being taken to address digital divide issues since the City of Avondale is using the Internet as part of its mitigation plan for being closed on Fridays. Dan Davis thanked Mr. Updike for the question and stated that there currently are not steps across the board, but there is Internet available at the libraries. Ms. Simeri added that there are a number of citizens who prefer to come into City Hall in person instead of using the Internet and the extended hours have helped accommodate those citizens.

Ms. Simeri discussed the public outreach and marketing efforts to ensure the public were aware of the changes. Ms. Simeri stated that the program has taken 200 cars off the road during peak hours and has been able to service additional customers during the extended hours of 7-8 am and 5-6 p.m. When Avondale surveyed its residents, 82% of responses said to keep Green Friday. Mr. Davis presented the annual savings of \$33,833 that the City of Avondale will see based on the pilot program.

Ms. Simeri concluded her presentation and stated that “Green Friday” is catching on. Queen Creek, the State of Utah and Birmingham, AL have all switched to a four day work week. Audrey Skidmore asked if any other towns and cities are looking into following Avondale’s example. Chuck Skidmore from Scottsdale and Dee Hathaway from Buckeye both stated that their municipalities have examined the option. Mr. Skidmore stated that due to the age of some

of the municipal buildings, it is difficult to keep heat out and power consumption is high even in off peak hours. Mr. Hathaway indicated Buckeye is still examining the option.

Randy Jackson introduced Jonce Walker, Planner with Maricopa County Planning and Development. Mr. Walker thanked Randy for the introduction. Mr. Walker presented on Maricopa County's Green Government program. He listed the issues that the program addresses including energy efficiency, renewable energy and eco-friendly economic development strategies. He also listed the departments which are participating, including Department of Transportation, Equipment Services and Facilities Management.

Mr. Walker listed five measures that the county is implementing. Measure one, states that by July 2009, Planning and Development will establish a program to reduce paper use by 5% by July 2012. Beginning in July 2010, Planning and Development will provide an annual report that measures progress in achieving and maintaining the target reduction and identifies overall program results.

Measure two states that by July 2009, Maricopa County agencies will prepare reward and incentive programs for employees and/or groups of employees that demonstrate leadership in furthering Maricopa County's recycling goals. Beginning in July 2010, each county agency will provide an annual report that identifies the recipients of such rewards.

Measure three states that by July 2010, Planning and Development Department will complete an analysis regarding the feasibility of expedited permitting for buildings that meet "Green" building standards. If deemed feasible, by July 2011, Planning and Development will complete a time frame for implementation. Beginning in July 2009, Planning and Development will prepare an annual report that measures progress towards completion of the feasibility study and implementation and identifies overall program results.

Measure four states that by July 2009, Maricopa County agencies and departments will prepare reward and incentive programs for employees and/or groups of employees that demonstrate leadership in furthering Maricopa County's energy reduction goals. Beginning in July 2010, each county agency will provide an annual report that identifies the recipients of such rewards.

Finally, Maricopa County will develop and implement a program whereby Maricopa County agencies and departments will reduce overall energy use by at least 5% between July 2008 and July 2013. Beginning in July 2009, each county agency and department will provide an annual report that measures progress towards achieving and maintaining the target energy savings goals, identifies these and other strategies employed to date and identify overall program results for their agency.

Mr. Jackson thanks Mr. Walker for his presentation.

7. MAGTAG Working Group Projects

Randy Jackson acknowledged the Information Sharing Working Groups efforts to gather working group projects, but in the interests of a timely conclusion to the meeting, they were not listed.

8. Announcements and Public Input

No announcements were made.

9. Date of Future Meetings

The next meeting of the MAGTAG is scheduled for 10:00 a.m. on Thursday November 20, 2008 in the MAG Palo Verde room. The meeting was adjourned at 12:25 p.m.