

**Government of the District of Columbia**



**Office of the Chief Technology Officer**

**Testimony of  
Rob Mancini  
Interim Chief Technology Officer**

**Public Oversight Roundtable  
on  
The Office of the Chief Technology Officer's DC-Net Fiber Optic Network**

**Councilmember Mary M. Cheh, Chairperson  
Committee on Government Operations & the Environment**

**Monday, January 31, 2011**

**John A. Wilson Building  
Room 500  
1350 Pennsylvania Avenue, NW  
Washington, DC 20004**

**STATEMENT OF ROB MANCINI, INTERIM CHIEF TECHNOLOGY OFFICER,  
BEFORE THE COMMITTEE ON GOVERNMENT OPERATIONS  
AND THE ENVIRONMENT  
DISTRICT OF COLUMBIA COUNCIL  
Monday, January 31, 2011**

**Introduction**

Good morning, Madam Chair. I am Rob Mancini, Interim Chief Technology Officer (CTO) for the District of Columbia. I appreciate the opportunity to testify today on the DC-Net program of the Office of the Chief Technology Officer (OCTO). With me is Tegene Baharu, the Director of DC-Net, who has served in that role since 2007. I will briefly review DC-Net's history and then describe the program's current services and benefits. Ward-level benefits, in terms of the specific sites DC-Net serves in each Ward, are shown in the Attachment to my testimony. Finally, I will outline future plans for the DC-Net program to serve a broader customer base and support OCTO's mission to leverage the power of technology, improve service delivery, drive innovation, and bridge the digital divide. Following my testimony, Mr. Baharu will give a short presentation that visually depicts DC-Net operations.

**DC-Net Purpose and History**

DC-Net is the "first mile" for all District government networking and is the first building block of any economic development or digital divide initiative that requires a network. It delivers Internet and network services to public schools, public libraries, community centers, hospitals and clinics, public safety agencies, administrative offices, and publicly-available Wi-Fi networks.

DC-Net was conceived during the early days of OCTO with two distinct purposes:

1. Provide the District government with a dedicated, secure, reliable, high-capacity network that would ensure ubiquitous bandwidth availability, even in the most severe and catastrophic emergencies;

2. Ensure continuous telecommunications cost savings to the District government through the growth and expansion of the DC-Net platform coupled with strict expense control.

On September 11, 2001, the District government incurred significant telecom isolation as commercial carrier networks were completely saturated. The need for a secure, available network dedicated to public safety and critical government operations drove the initial deployments of DC-Net in 2004.

### **DC-Net Today**

Today DC-Net's infrastructure has grown to over 350 miles of fiber running through all Wards of the District. The redundant network design, coupled with the availability of back-up power, provides automatic service restoration in the event of a fiber cut, equipment failure, or power outage. With this robust and reliable backbone, the DC-Net program currently operates over 27,000 phone lines and 400 data circuits spanning 355 locations. DC-Net currently serves 90 District entities, with a priority on education, public safety, and health care. DC-Net also carries all wireless traffic associated with OCTO's 262 wireless "hotspots" throughout the city, including the National Mall.

DC-Net's voice, video, and data service portfolio includes the latest unified communication and group interactive learning through the introduction of state-of-the-art web and teleconferencing capabilities. DC-Net provides 24/7 customer support with consistent 99.999% network availability and service level agreements that surpass industry standards.

DC-Net runs all call center routing for 911, 311, the Child and Family Services Administration (CFSA), the Department of Mental Health (DMH) (including the new St. Elizabeths Hospital), the Department of Employment Services (DOES), and IT ServUS (desk top support), processing 8 to 11 million calls annually. In partnership with the Office of Unified

Communications (OUC), DC-Net is currently developing standards for “next generation 911” applications, which, among other innovations, will allow 911 users to alert operators via text messaging and videos.

DC-Net supports cellular dual-band capability for government-issued wireless devices. Government users may place calls leveraging in-building wireless connections instead of using minutes from their cellular providers. DC-Net is using this technology to promote contract renegotiations for District cell phone services.

DC-Net also makes significant contributions to the success and cost-effectiveness of local economic development and public safety initiatives. For example, in 2010: DC-Net expanded a fiber loop linking several downtown venues to support the Microsoft Worldwide Partner conference at the DC Convention Center. The fiber loop was essential for the Convention Center to secure the convention, and the loop remains available to provide broadband services on-demand. DC-Net provided the loop at a cost avoidance of 95% compared to what a private provider would have charged. DC-Net helped the DC Homeland Security Emergency Management Administration (HSEMA) and the District Department of Transportation (DDOT) install 85 cameras in the 3<sup>rd</sup> Street tunnel in just one week. DC-Net installed the cameras at a cost avoidance of 75% compared to what a private provider would have charged.

DC-Net provides high customer satisfaction and significant cost savings. Our most recent customer survey found 94% of customers would strongly recommend DC-Net services to their colleagues. DC-Net’s average landline charge is about \$19 per month, as compared with an average landline charge of \$23.60 per month for the services the District still purchases.

Since DC-Net’s restructuring in 2007, the program has developed into a self-sustained entity and maintains financial solvency. DC-Net invests its revenues in the network to finance maintenance, expansion, and upgrades. Electronic equipment will continue to need maintenance

and replacement over the years, but the fiber itself will likely not need to be replaced for at least 25 years. Fiber replacement is expected to take less time and labor than the original deployment.

### **Benefits of DC-Net**

As a high-performance, high-bandwidth fiber-optic network, DC-Net provides numerous benefits to its government customers. As demonstrated during the 2009 Presidential Inauguration, the network assures virtually unlimited dedicated capacity for government operations and emergency response. DC-Net provides substantial cost savings over commercial services (over 24% on landline charges), and protection from future commercial rate increases. DC-Net's infrastructure has permitted DC Public Schools (DCPS) to improve phone and data services to the schools and maximize federal E-Rate grants. Since 2007, DC-Net has furnished DCPS over \$5.7 million in E-rate-eligible services. DC-Net's support for schools, libraries, and OCTO's free wireless hotspots also helps bridge the digital divide by bringing free high-speed broadband to adults and children who do not have broadband in their homes. By 2008, even before the Federal Communications Commission's (FCC) 2010 National Broadband Plan, DC-Net met the plan's standard of 1 gigabit per second (Gbps) access for schools and libraries, which is 1000 times faster than the service most U.S. schools and libraries have even today. Finally, and especially important in this economy, DC-Net provides jobs as well as work for District Certified Business Enterprises (CBEs).

### **Future Directions for DC-Net**

With the Council's support, the FY 2011 Budget Support Act (BSA) included a provision authorizing DC-Net to serve not only District and federal agencies, as in the past, but also other state and local governments and other governmental-purpose entities such as charter schools. In September 2010, the District and federal governments signed a Memorandum of Understanding (MOU) under which DC-Net will provide service to the federal Office of Personnel Management (OPM). Under the MOU, DC-Net will provide \$1.6 million worth of telephony and data services

annually over three years. Other government and governmental-purpose organizations have expressed interest in engaging DC-Net. The service expansion will maintain the benefits of DC-Net without additional cost to the DC government, without compromising DC-Net's performance, and without altering DC-Net's original mission. The bulk of DC-Net's customers will remain DC government agencies. All customers will be government or governmental-purpose entities. All customers will benefit from the expansion because it will yield economies of scale that can lower fees for all.

Finally, DC-Net is now poised to play an even greater, and in fact pivotal, role in OCTO's strategy to bridge the digital divide. Thanks to the Obama administration's robust commitment to national broadband access, in July 2010, OCTO secured a \$17.4 million American Recovery and Reinvestment Act (ARRA) stimulus grant to help build the \$25 million DC Community Access Network (DC-CAN). DC-CAN will leverage DC-Net by augmenting and upgrading its 350-mile fiber network to create a 500-mile high-speed middle-mile broadband network supporting speeds at the highest range of fiber-optic capability—up to 40 Gigabits per second. (The “middle mile” is the bulk of a broadband network, while the “last mile” is the remainder joining the middle mile to the home or business customer.) The DC-CAN network will create 10 points of interconnection available to 291 community anchor institutions, as well as all last-mile service providers. The anchor institutions—schools, community colleges, libraries, public safety entities, and health care facilities—will be able to use DC-CAN to provide next-generation broadband applications to enhance education, health care, and public safety. Last-mile service providers will be able to connect to DC-CAN's access points instead of having to build or buy middle-mile infrastructure. Consequently, we anticipate that DC-CAN will encourage existing Internet Service Providers (ISPs) to buy lower-cost wholesale bandwidth, enabling them to pass savings on to customers. New ISPs are expected to enter the market, increasing competition and further reducing prices. The result can be a dramatic

expansion of affordable Internet access in the District’s underserved communities—and a significant contribution to the President’s stated goal of “connecting every part of America to the digital age.”

The ARRA grant and DC-Net’s status as the most extensive city fiber network in the U.S. led the National Association of Telecommunications Officers and Advisors (NATOA) to honor DC-Net in October 2010 with its award for Community Broadband Fiber Network of the Year.

### **Private-Sector Concerns**

Finally, Madam Chair, I want to address concerns commercial providers express about DC-Net. Many of the concerns expressed apply more readily to those municipal networks throughout the United States that provide fiber all the way to homes and businesses, so let me first stress that DC-Net’s scope is strictly limited to government and government-purpose customers. Thus, complaints about unfair competition with the private sector, unfair government subsidies, and deterrence to private-sector broadband deployment are misplaced in this case: Government is, and should be, able to serve compelling government interests that the private sector has not. In the case of DC-Net, these compelling government interests are: dedicated government telecommunications capacity, cost savings, and bringing affordable broadband to District communities, mainly in Wards 5, 7, and 8. Regarding claims that DC-Net deprives the city of tax revenues on commercial services, DC-Net provides up-front savings on telecom costs that outstrip the foregone tax revenues, as well as tax revenues from the CBEs that DC-Net employs. Concerns that DC-Net escapes the scrutiny that regulated commercial telecom providers receive are also misplaced, given the scrutiny regularly applied to DC-Net by the City Administrator and this Council. Finally, as to claims that government telecommunications networks “always fail,” a growing number of other successful municipal networks have disproved this claim—and so has the success story of DC-Net.

## **Conclusion**

Thank you for the opportunity to testify. Following Mr. Baharu's brief presentation, we will be happy to answer any questions you may have.

**Attachment A**

**DC-NET INSTALLATIONS BY DC WARD**

Ward	Schools	Libraries	Police Stations	Fire Stations	Government Offices	Health Facilities	Recreation Centers	Other
1	15	1	1	4	3	-	4	-
2	13	4	-	7	24	2	3	9
3	10	3	1	3	5	-	3	2
4	14	3	2	5	4	-	4	-
5	19	2	2	3	11	-	2	-
6	23	4	1	6	24	-	2	1
7	21	4	3	3	4	-	3	-
8	28	3	6	5	13	2	10	-