

How You Communicate Can Impact Your Network Connectivity

Please be thoughtful in your use of the web connectivity tools, as their use impacts not just *your* network experience, but also that of others. While the single use of a tool might seem inconsequential, multiplying that by one hundred users, or more, can be detrimental to everyone. My intent with this document is to inform you of relative impacts to the network by various communication methods. This document is not instructing you to avoid using the available tools. It is providing you with information so that you may compare the potential negative impacts to the positive benefits.

Out-of-band options... As you can imagine, having a conversation through cell phone texting, sent cell to cell, has no impact at all on the network. Similarly, out-of-band phones, such as cell phones, use no bandwidth in calling another out-of-band phone. These out-of-band options have the lowest impact on the network, but have significant restrictions as well. One such restriction would be potential access to personal devices for discovery during court proceedings.

In-band communications impacts... In-band communications will all impact the network to some extent. I am going to simplify this by classifying in-band communications impact levels as one of the following: low, medium-low, medium, medium-high, and high. Low has the least impact, while high has the most. I will not cover file transfers, as these have been covered under other communications. All impact levels of communication listed below require connectivity between the network and server(s).

- **Low** – An email without attachments and Skype Instant Messaging (IM'ing) is similar to text messaging on your cell phone and takes the least amount of resources – both email and Skype IM create a record of a conversation.
- **Medium-Low** - a Skype Call (VoIP) takes the next larger amount of bandwidth. A VoIP phone, like ODOT has deployed uses a similar amount of bandwidth. An email with a small attachment could impact at this level as well. Please remember that when they work, a link to a document is better for bandwidth than an attachment. A Skype audio conference call (this is a special type of Skype account), with almost all of the users calling in on the Skype provided telephone number, will also be fairly low and is similar to the AT&T telephone conferencing that ODOT no longer uses.
- **Medium** - a Skype VoIP Conference Call takes more bandwidth.
- **Medium-High** - Skype Desktop Presentation (audio VoIP + desktop sharing) takes an even larger amount of bandwidth – the audio will get choppy and the desktop sharing will freeze or disconnect if there is not sufficient bandwidth.
- **High** - a Skype Video Call (audio VoIP and a web camera) takes the most bandwidth and a Skype Video Call between multiple people may be similar to a Zoom meeting.

One might suppose that I am trying to stop the use of Skype video calling/conferencing, but this is *not* the case. While there may be little benefit in holding a project development team meeting or a crew meeting so that you can see one another, an interview certainly can benefit from a face-to-face experience. The crew or project team meetings could probably benefit more from screen sharing than video.

Please be thoughtful in the use of the provided tools to ensure that we receive the most benefit with the least impact (cost) to the user experience. If you have questions on appropriate use of tools, please contact your manager or the ODOT Computer Support Desk.

Regards,

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