

# [NORTH DAKOTA TELEPHONE COMPANY]

## NETWORK MANAGEMENT POLICY

North Dakota Telephone Company or “NDTC” provides this Policy in order to disclose its network management practices in accordance with the FCC’s Open Internet Rules. Information about NDTC’s other policies and practices concerning broadband are available at [www.gondtc.com](http://www.gondtc.com) (“NDTC’s Website”).

NDTC manages its network to ensure that all of its customers experience a safe and secure broadband Internet environment that is fast, reliable and affordable. NDTC wants its customers to indulge in all that the Internet has to offer, whether it is social networking, streaming videos and music, to communicating through email and videoconferencing.

NDTC manages its network for a number of reasons, including optimization, as well as congestion- and security-protocol-management. NDTC’s customers generally will not be impacted by the protocols and practices that NDTC uses to manage its network.

### **NDTC’s Network Management Practices**

NDTC uses various tools and industry standard techniques to manage its network and deliver fast, secure and reliable Internet service. Such management tools and practices include the following:

#### **I. Managing Congestion**

NDTC periodically monitors the connections on its network in the aggregate to determine the rate of utilization. If congestion emerges on the network, NDTC will engage in the re-routing of Internet traffic to relieve congestion. In order to reduce instances of congestion, NDTC adds capacity to its network when utilization has reached a level of at least 80%. On our core and access networks, NDTC may increase capacity by adding FTTH nodes, transport, Internet aggregation routers and bandwidth, as needed.

On NDTC’s network, all customers have access to all legal services, applications and content online and, in the event of congestion, most Internet activities will be unaffected. Some customers, however, may experience longer download or upload times, or slower surf speeds on the web if instances of congestion do occur on NDTC’s network.

Customers using conduct that abuses or threatens the NDTC network or which violates the company’s Acceptable Use Policy, Internet service Terms and Conditions, or the Internet Service Agreement will be asked to stop any such use immediately. A failure to respond or to cease any such conduct could result in service suspension or termination.

NDTC's network and congestion management practices are 'application-agnostic', based on current network conditions, and are not implemented on the basis of customers' online activities, protocols or applications. NDTC's network management practices do not relate to any particular customer's aggregate monthly data usage.

## **II. Network Security**

NDTC knows the importance of securing its network and customers from network threats and annoyances. The company promotes the security of its network and patrons by providing resources to its customers for identifying and reporting such threats as spam, viruses, firewall issues, and phishing schemes. NDTC also deploys spam filters in order to divert spam from an online customer's email inbox into a quarantine file while allowing the customer to control which emails are identified as spam. Customers may access the spam files through the email. Spam files are automatically deleted if not accessed within 30 days.

As its normal practice, NDTC does not block any protocols, content or traffic for purposes of network management except that the company may block or limit such traffic as spam, viruses, malware, or denial of service attacks to protect network integrity and the security of our customers. NDTC also has a port filtering policy aimed at reducing the spread of computer-related viruses and protecting your computer from intruder access.

## **III. Device Attachment Rules/Application Specific Behaviors**

Except as may be provided elsewhere herein, NDTC does not currently engage in any application-specific behaviors nor does it employ device attachment rules for its network. Customers may use any lawful applications or devices with NDTC.

## **IV. Monitoring Schedule**

NDTC checks its usage logs on a weekly basis to determine utilization on its network. When utilization reaches 80%, NDTC adds capacity or reroutes traffic to relieve congestion. NDTC also checks for abnormal traffic flows, network security breaches, malware, loss, and damage to the network. If a breach is detected or high volume users are brought to light by complaint, NDTC provides notification to the customer via email or phone. If a violation of NDTC's policies has occurred and such violation is not remedied, NDTC will seek to suspend or terminate that customer's service.

## **V. Network Management Technology**

NDTC employs a variety of industry-standard tools, applications and devices to monitor, secure and maintain its network, including the following:

- network graphing solutions;
- latency measurement software;
- bandwidth and performance measurement platforms; and
- Rapid Problem Identification (RPI) technologies monitoring endpoint to endpoint interactions

## VI. Service Descriptions

NDTC offers broadband service over ADSL and FTTH facilities. The following is a list of NDTC's service tiers:

<b>Tier</b>	<b>Down</b>	<b>Up</b>
DATA Only Advantage	6 Mbps	1 Mbps
DATA Only Advantage Plus	15 Mbps	3 Mbps
DATA Only Extreme	40 Mbps	5 Mbps
Voice and Data Economy	3 Mbps	512 Kbps
Voice and Data Advantage	15 Mbps	3 Mbps
Voice and Data Advantage Plus	15 Mbps	10 Mbps
Voice and Data Extreme	50 Mbps	25 Mbps

\*Speeds maybe limited by location and are listed as up to.

NDTC also offers Metro-Ethernet service on an individual cases basis.

## VII. Network Performance

NDTC makes every effort to support advertised speeds and will dispatch repair technicians to customer sites to perform speed tests as needed to troubleshoot and resolve speed and application performance caused by NDTC's network. NDTC measures availability, latency, and aggregate utilization on the network and strives to meet internal service level targets. However, customer's service performance may also be affected by one or more of the following: (1) the particular websites being accessed; (2) capacity in the public Internet beyond NDTC's network; (3) customer's computer and equipment (including wireless router); and (4) inside wiring at customer's premise.

NDTC tests each service when installed to demonstrate that the service is capable of supporting the advertised speed. Customers can also test their actual speeds using the speed test found on the company website. NDTC is in the process of developing additional systems that will allow us to measure these indicators out to test points at each major network aggregation site on the edge of our last mile network. Once these systems are developed, NDTC will be able to measure system metrics on a network-wide basis and will disclose the results on its website.

## VIII. Specialized Services

NDTC provides Voice-over-the-Internet-Protocol (VoIP) and Internet-Protocol-Television (IPTV) services to end users. These services, also known as Specialized Services, are separated from the company's best effort Internet services on the network. NDTC uses separate layer 2 Q-in-Q VLAN tags in the access network. Layer 2 P-bits and Layer 3 DSCP markings are used to prioritize Specialized Services traffic over best effort broadband Internet traffic for the purpose of congestion management. Since Specialized Services traffic is separated from best effort

broadband Internet traffic, our broadband customers will experience no impact on broadband services resulting from Specialized Services traffic.

## **IX. Commercial Terms**

In addition to this Network Management Policy, patrons may also find links to the following on the NDTC Website:

- **Acceptable Use Policy**
- **Internet Service Agreement**
- **Broadband Service Offerings and Rates**
- **Privacy Policy**

For questions, complaints or requests for additional information, please contact NDTC.