# WK&T NETWORK TRANSPARENCY STATEMENT

West Kentucky and Tennessee Telecommunications Cooperative ("WK&T" or "Company") provides this Network Transparency Statement in accordance with the FCC's Restore Internet Freedom Rules to ensure that you have sufficient information to make informed choices about the purchase of broadband services. Information about WK&T's other policies and practices concerning broadband are available at <a href="http://www.mywkt.net">http://www.mywkt.net</a> ("WK&T Website").

WK&T engages in network management practices that are tailored and appropriate for achieving optimization on the network considering the particular network architecture and technology of its broadband Internet access service. WK&T's goal is to ensure that all of its customers experience a safe and secure broadband Internet environment that is fast, reliable and affordable. WK&T 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.

WK&T's network management includes congestion- and security-protocol-management and customers generally will not be impacted by the protocols and practices that WK&T uses to manage its network.

## A. <u>WK&T's Network Transparency Disclosures</u>

WK&T uses various tools and industry standard techniques to manage its network and deliver fast, secure and reliable Internet service. WK&T believes in full transparency and provides the following disclosures about its network management practices:

- 1. Blocking: WK&T does not block or discriminate against lawful content.
- 2. Throttling: WK&T does not throttle, impair or degrade lawful Internet traffic.
- 3. Affiliated Prioritization: WK&T does not prioritize Internet traffic.
- **4. Paid Prioritization:** WK&T has never engaged in paid prioritization. We don't prioritize Internet for consideration to benefit particular content, applications, services or devices.
- 5. **Congestion Management:** WK&T monitors the connections on its network in the aggregate on a daily basis to determine the rate of utilization. If congestion emerges on the network, WK&T will take the appropriate measures to relieve congestion.

On WK&T'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 WK&T's network.

Customers using conduct that abuses or threatens the WK&T 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.

WK&T'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. WK&T's network management practices do not relate to any particular customer's aggregate monthly data usage.

WK&T monitors its network on a daily/weekly basis to determine utilization on its network. WK&T 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, WK&T provides notification to the customer via email or phone. If a violation of WK&T's policies has occurred and such violation is not remedied, WK&T will seek to suspend or terminate that customer's service.

- 6. **Application-Specific Behavior:** Except as may be provided elsewhere herein, WK&T does not currently engage in any application-specific behaviors on its network. Customers may use any lawful applications with WK&T.
- 7. Device Attachment Rules: Customers are required to use a WK&T supplied ONT (optical network terminal) to ensure compatible delivery of the FTTH service to the end user premise. As a default only one public IPv4 address will be assigned to a customer. All other devices at the location must be secured behind a NAT capable router/firewall. Customers are encouraged but not required to use the router embedded in the WK&T supplied fiber ONT. If the customer chooses to use a different router the built-in router can be bypassed or an ONT without router functionality can be installed at WK&T's discretion. Customers may attach devices of their choosing to the router, including additional wired or wireless routers, laptops, desktop computers, video game systems, televisions, or other network-enabled electronic equipment. However, customers are responsible for ensuring that their equipment does not harm WK&T's network or impair the service to other customers. WK&T is not responsible for the functionality or compatibility of any equipment provided by its customers. Customers are responsible for securing their own equipment to prevent unauthorized access to WK&T's broadband network by third parties and will be held responsible for the actions of such third parties who gain unauthorized access through unsecured customer equipment. Only one device is allowed direct connection to the public facing interface of the ONT.

8. Network Security: WK&T 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 implementing protections from such threats as spam, viruses, firewall issues, and phishing schemes. WK&T 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 email. Spam files are automatically deleted if not accessed within 30 days.

In the course of normal practice, WK&T does not block any protocols or traffic from lawful content for purposes of network management, but WK&T 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. As part of "Good Neighbor" network practices, the following common ports are filtered at the core of the public network facing upstream internet access to limit nuisances and known port use for malicious traffic.

Port(s): netbios-ns, netbios-ss, netbios-dgm, chargen log, 19, 1900,tcp 135, udp 135, tcp 138, tcp 139, udp 445, tcp 445, tcp 707, udp 995, udp 996, udp 997, udp 998, udp 999, udp 1349, tcp 1349, tcp 1025, tcp 1900, tcp 2745, tcp 5000, tcp 5554, udp 8998, udp 13155, tcp 13155, tcp 25532, udp 25532, udp range 54320 54321, udp range 54320 54321

The following features are enabled on access-profiles to protect customers, the transport network and the WK&T core network.

1. ARP proxy, to reduce arp traffic on the network and drop packets not destined for an IP or mac listed in the association table.

2. DHCP Relay, to help prevent MAC and IP spoofing.

3. Blacklisting, enabled to shut a customer facing port down if ARP, DHCP and IGMP packets are excessive, to prevent DOS attacks and protect the network.

4. Ingress broadcast and Unicast rates are applied to customer ports as well.

## B. Network Performance

## 1. Service Descriptions

WK&T deploys Internet access to its subscribers through hardwired broadband access (Fiber to the home).

## 2. Network Performance

WK&T 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 WK&T' network. WK&T measures availability, latency, and aggregate utilization on the network and strives to meet internal service level targets.

However, the bandwidth speed at which a particular distant website or other Internet resources may be downloaded, or the speed at which your customer information may be uploaded to a distant website or Internet location is affected by factors beyond WK&T's control, including the speed of the connection from a distant web server to the Internet, congestion on intermediate networks, and/or limitations on your own computer equipment, including a wireless router. In addition, your service performance may be affected by the inside wiring at your premise. Accordingly, you, the customer, must consider the capabilities of your own equipment when choosing a WK&T broadband service. Your computers and/or wireless or other networks in your homes or offices may need an upgrade in order to take full advantage of the chosen WK&T broadband plan.

For Fiber and T1 service, WK&T measures traffic every 5 min. All services are best effort. WK&T tests each service for actual and expected access speeds at the time of network installation to demonstrate that the service is capable of supporting the advertised speed. Customers may also test their actual speeds using the speed test located at <u>http://flitetest1.wktelecom.coop/</u> on WK&T' website and may request assistance by calling our business office at 270-856-1000 or by email at csr@wk.net.

Based on the network information WK&T receives from its monitoring efforts, WK&T's network is delivering data transmission rates advertised for the different high-speed Internet services. To be sure, WK&T has implemented a program of testing the performance of its network by using a test protocol similar to the one sanctioned by the FCC. We installed specific network performance monitoring equipment at aggregation points across our network and conducted a series of tests using this equipment. WK&T reports the results of this testing below. This result applies to both upload and download data rates, and applies for measurements made both at peak times and over a 24-hour period:

#### **DOWNLOAD & UPLOAD SPEEDS**

ADVERTISED	(Local) ACTUAL	PERCENTAGE	(**) ACTUAL	PERCENTAGE
	SUSTAINED	DIFFERENTIAL	SUSTAINED	DIFFERENTIAL
50 Mbps	50	0%	50	0%
100 Mbps	100	0%	100	0%
250 Mbps	250	0%	250	0%
500 Mbps	500	0%	500	0%
1 Gig *	950	5%	950	5%

#### **Download Speeds**

#### Upload Speeds

ADVERTISED	(Local) ACTUAL	PERCENTAGE	(**) ACTUAL	PERCENTAGE
	SUSTAINED	DIFFERENTIAL	SUSTAINED	DIFFERENTIAL
50 Mbps	50	0%	50	0%
100 Mbps	100	0%	99.9	0.1%
250 Mbps	250	0%	250	0%
500 Mbps	500	0%	500	0%
1 Gig *	949	5.1%	935	6.5%

\*1Gig service delivery subject to throughput capability of existing commercial routers. At present current commercial routers are unable to support full 1000Mbps delivery to the end user and rates will vary from 920Mbps to 970Mbps on the private interface of the CPE. \*\* Second test using commercial speedtest.net

#### 3. Impact of Non-BIAS Data Services

The FCC has defined Non-Broadband Internet Access Services (Non-BIAS) to include services offered by broadband providers that share capacity with Broadband Internet Access Services (BIAS) (previously known as "Specialized Services") also offered by the provider over the last-mile facilities.

Real time services, such as Non-BIAS services, include Voice over Internet Protocol (VoIP) and Internet Protocol (IP) video services, command optimal bandwidth. Because non-BIAS traffic is combined with general Internet traffic on WK&T's network, broadband customers could experience service delays, although very unlikely, if there is an occurrence of congestion on WK&T's network. In any such event, the Non-BIAS traffic is given priority over general Internet traffic.

#### C. Commercial Terms

Pricing and additional service information may be found <u>here</u>.

In addition to this Network Transparency Statement, patrons may also find links to the following on the WK&T Website:

- Privacy Policy
- Terms and Conditions
- Acceptable Use Policy

For questions, complaints or requests for additional information, please contact WK&T at:

Business Office at 270-856-1000 Email at csr@wk.net