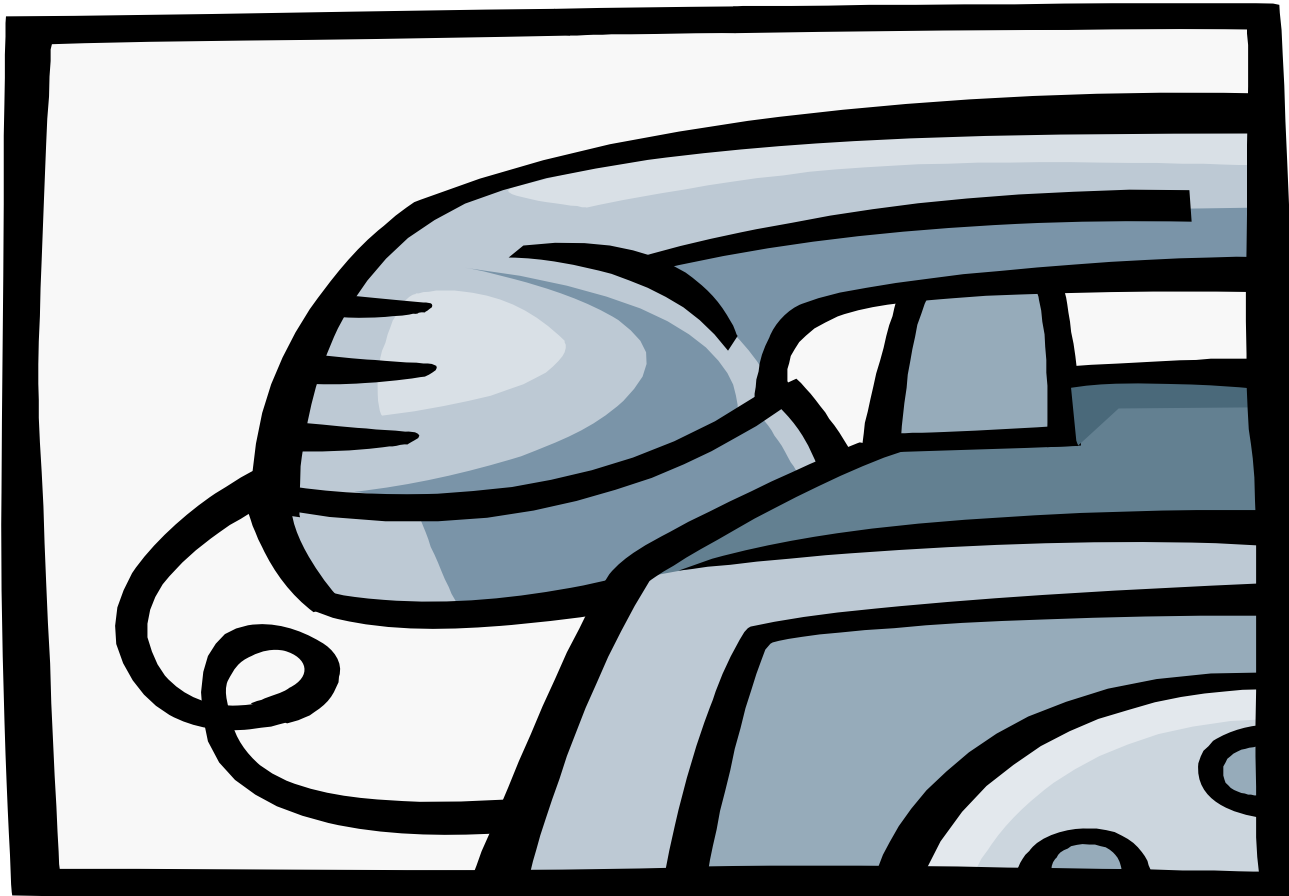


Telecommunications Overview

Presented To the Senate Utilities Committee
by the Kansas Corporation Commission

January 19, 2004



Telecommunications

Types of Carriers

Wireline

Cable

Wireless

Voice Over Internet Protocol (VoIP)

Telecommunications

Types of Services

Basic Local Service

Discretionary Services

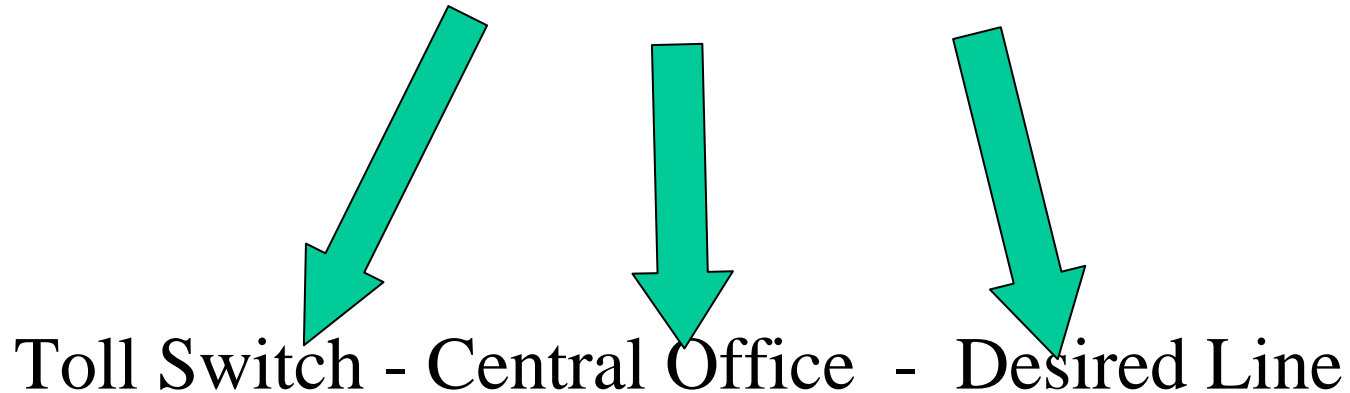
Long Distance Service

Broadband Services

Bundles

The Telephone Number

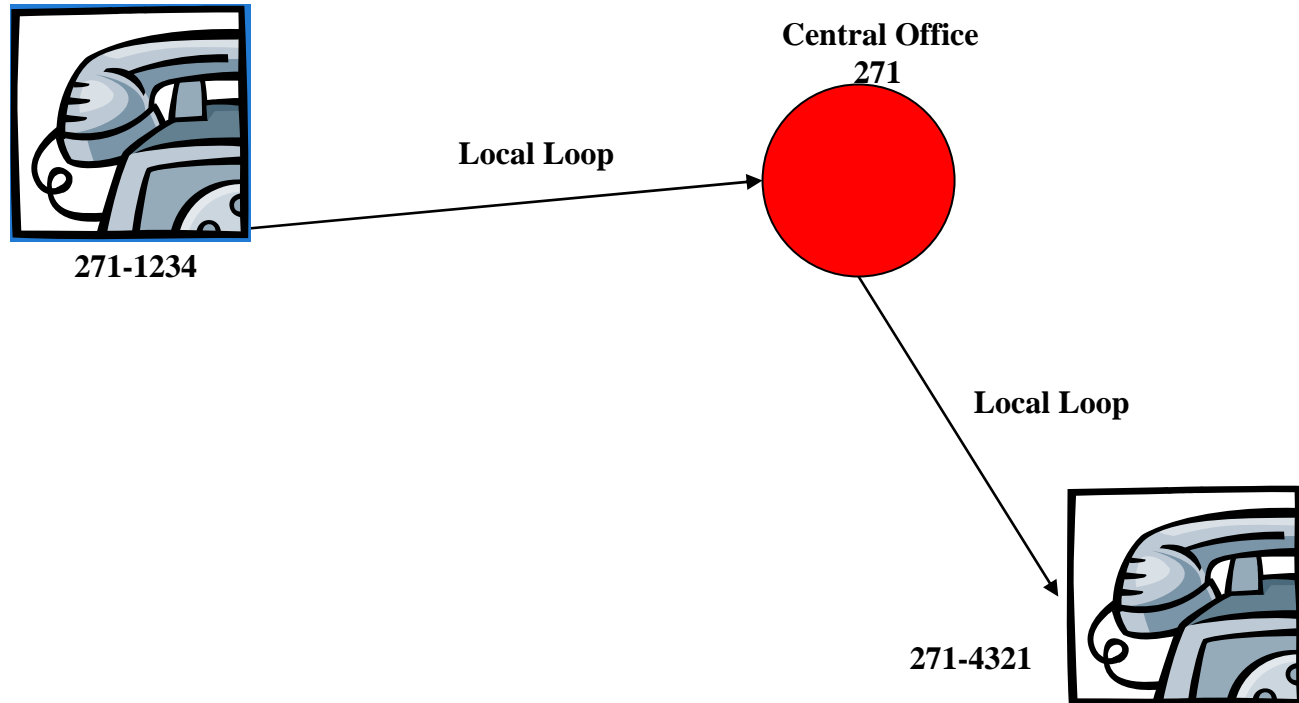
1 - NPA - NXX - XXXX



A "1" indicates a toll call. "N" = 2-9, "X" = 0-9
Total numbers per NPA=7.92 million

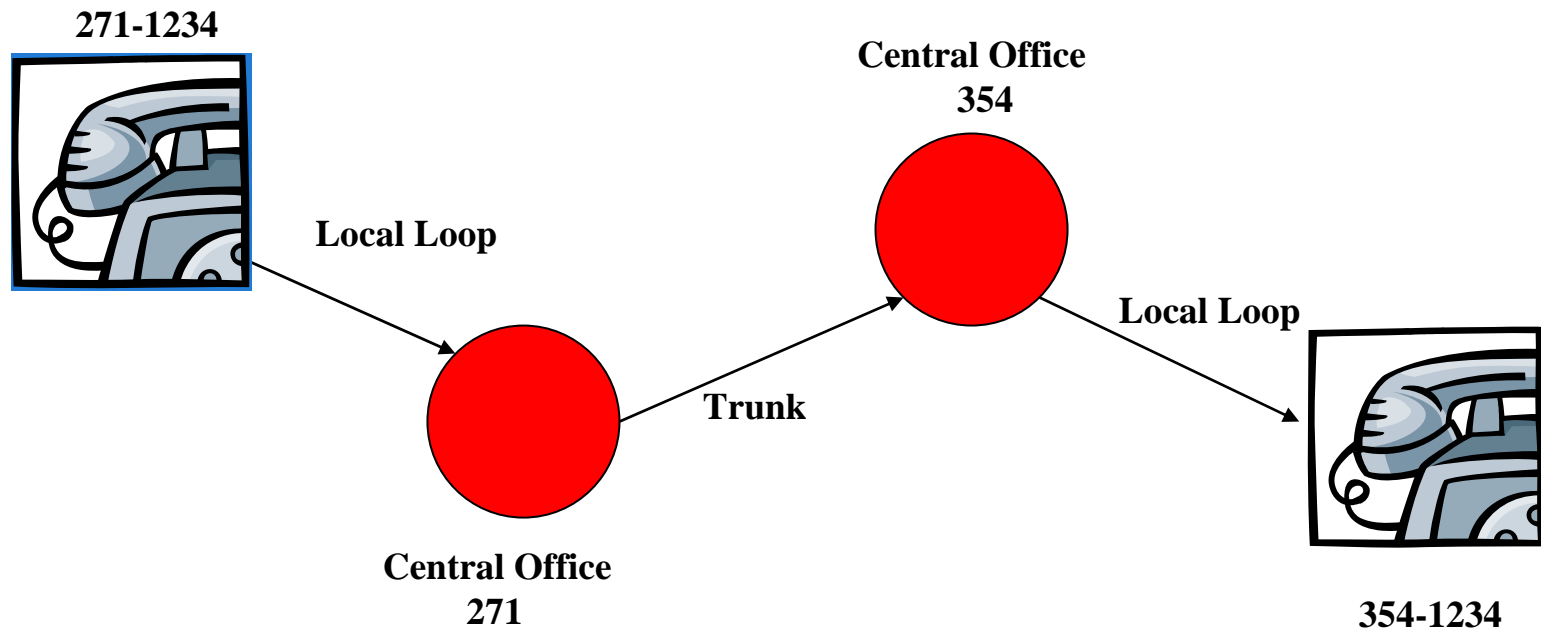
Local Call

Local Call – Same Central Office



Local Call

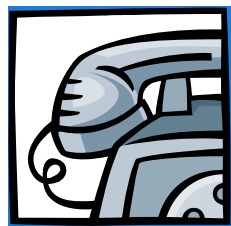
Local Call – Multiple Central Office



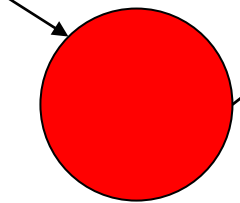
Long Distance Call

IntraLATA Long Distance Call

785-271-1234

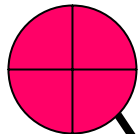


Local Loop



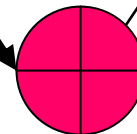
Central Office

Tandem Office



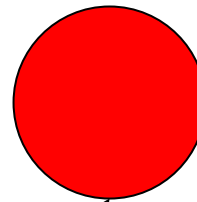
Trunk

Trunk



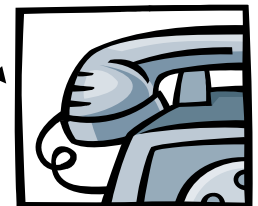
Tandem Office

Central Office



Trunk

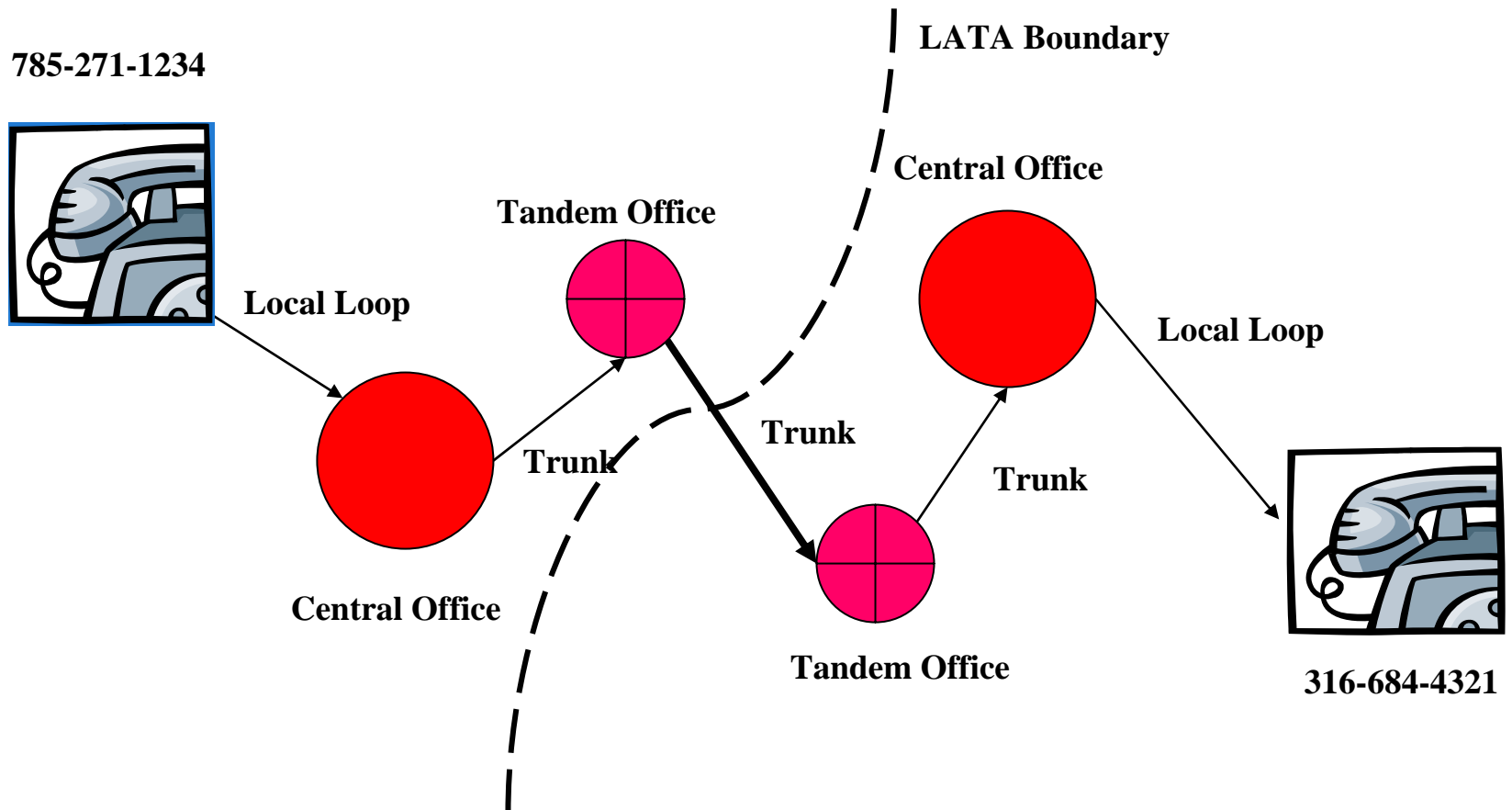
Local Loop



785-841-4321

Long Distance Call

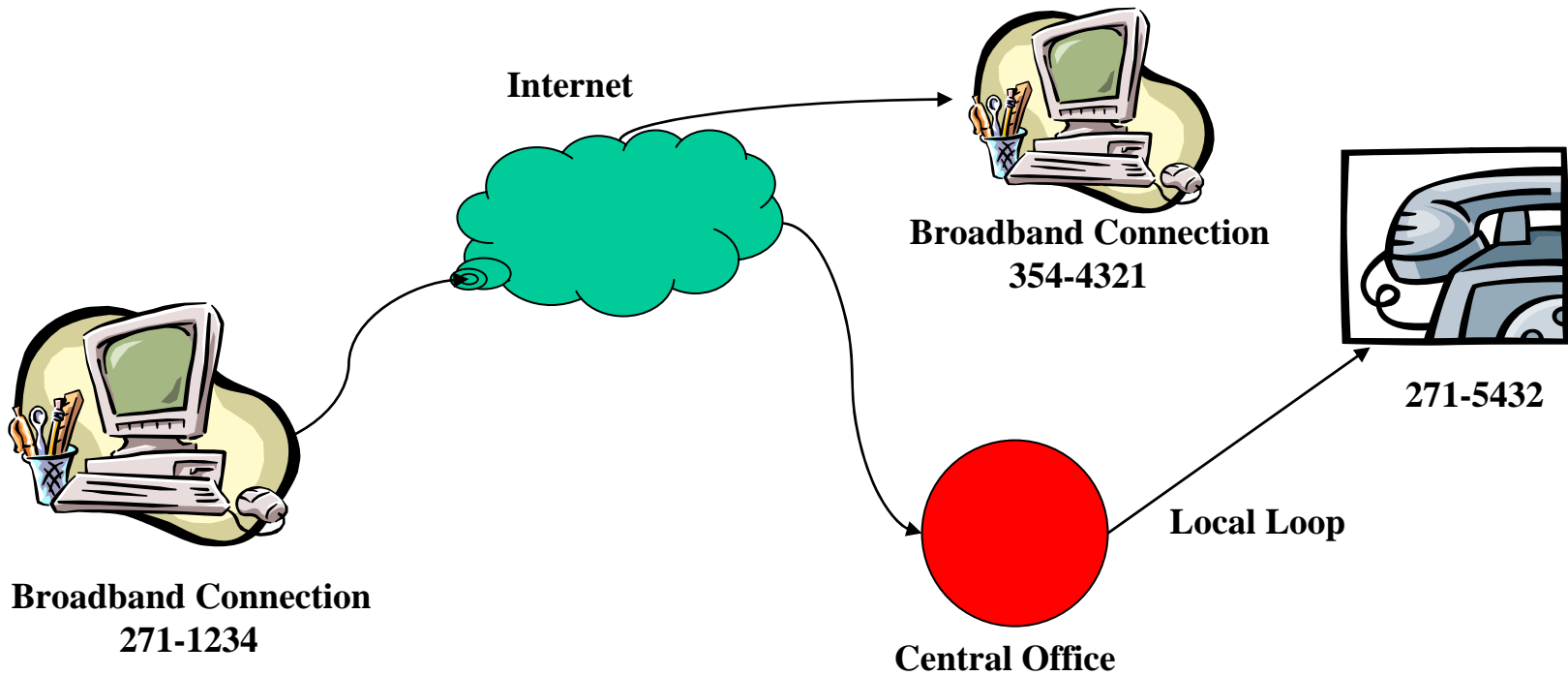
- **InterLATA Long Distance Call**



VoIP Call

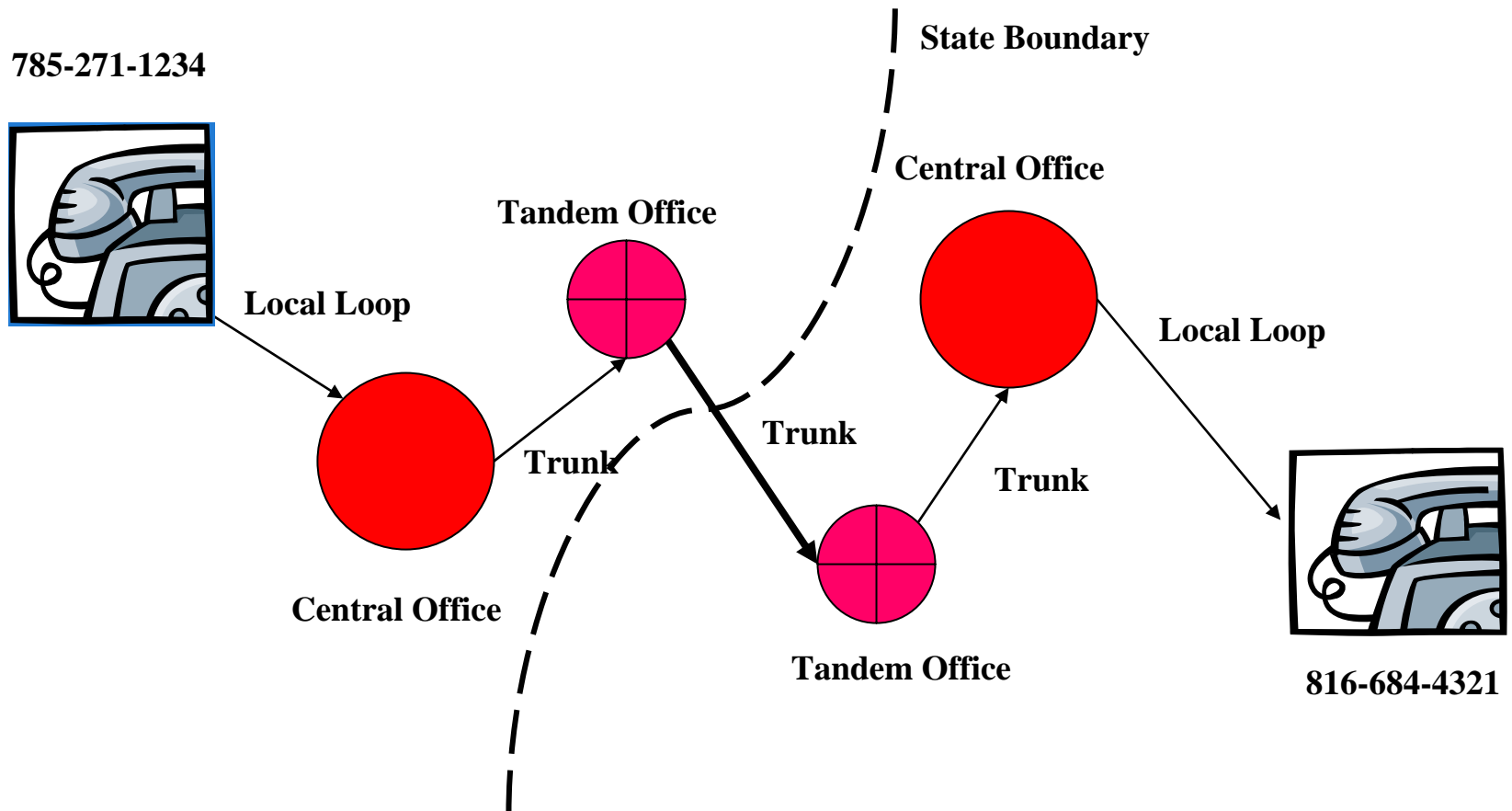
Voice Over Internet Protocol to Landline

Voice Over Internet Protocol to Voice Over Internet Protocol



Jurisdictional Authority

- Interstate Long Distance Call

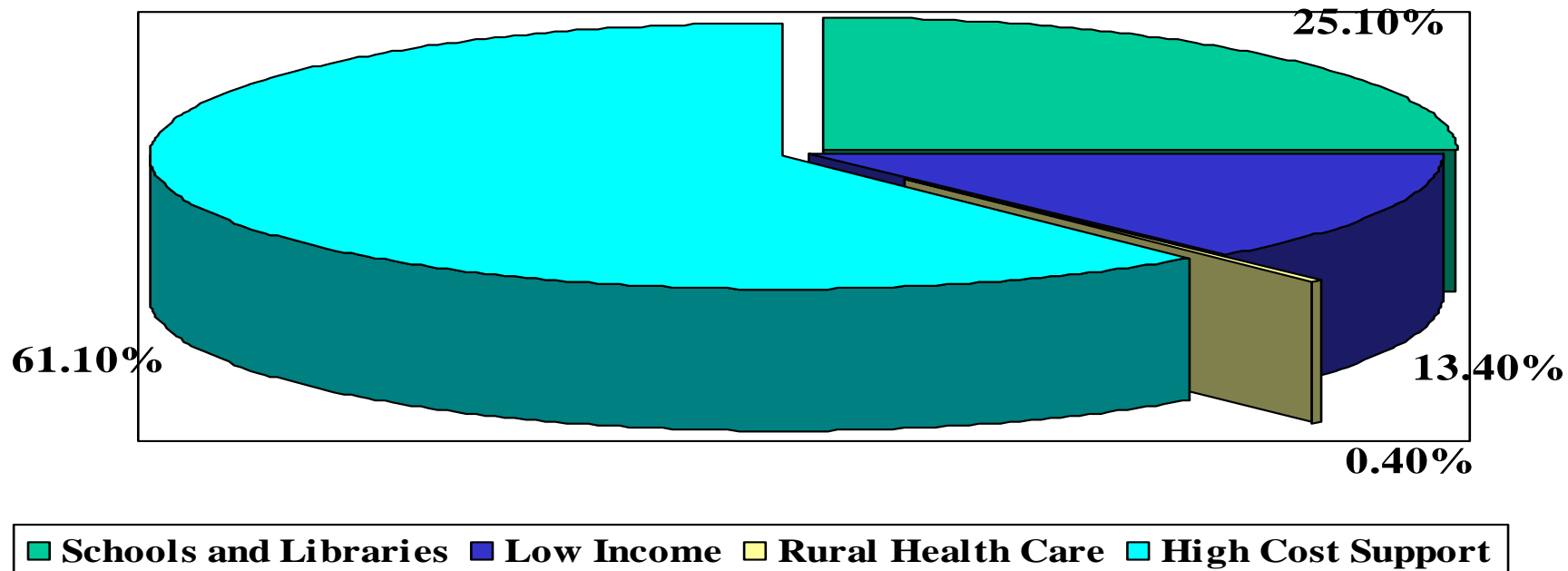


KCC Jurisdiction

- Incumbent Local Exchange Carriers
- Competitive Local Exchange Carriers
- Interexchange Carriers
- Wireless
- Cable
- VoIP

Universal Service

2003 Federal Universal Service Fund - \$5.3 Billion



Universal Service

Federal Universal Service Fund

Kansas is a “net recipient”

\$71 million in 2003

Universal Service

Federal Universal Service Fund

High Cost Support

1996 --- \$1.2 Billion

2004 ---\$3.5 Billion

Universal Service

- Kansas is the 4th largest recipient of High Cost Support
\$126 million in 2004
- Kansas Incumbent Carriers receive 95% of the High Cost Support
\$120 million in 2004
- Kansas average High Cost Support per loop
\$5.96

Universal Service

Kansas Universal Service Fund

- Initially KUSF based on access reductions
- Now moving toward a cost-based KUSF
- All IXC's, ILECs, CLECs, and wireless providers must contribute to the KUSF
- All ETCs are eligible for receiving support from the KUSF

Universal Service

Kansas Universal Service Fund

Gross Fund Size – March 1, 2005

\$61 Million

Rural Companies	\$28 Million
SWBT	\$8.5 Million
Sprint/United	\$11 Million
Western Wireless	\$1.6 Million
Sage	\$672,000
Nex-Tech	\$91,000

Universal Service

Kansas Universal Service Fund

Gross Fund Size – March 1, 2005

\$61 Million

TAP	\$976,000
Kansas Relay Services, Inc.	\$3.8 Million
Lifeline	\$1.8 Million
Kan-Ed	\$3.3 Million
Fund Administration	\$332,000

Universal Service

Kansas Universal Service Fund

Maximum Per Line Assessment

SWBT	\$1.38
Sprint/United	\$1.44
Cass County	\$1.57
Tri-County	\$1.01
All Other Rural Companies	\$0.84

Current Issues

Unbundled Network Elements

- UNEs: Sect. 251(c)(3): ILEC's to provide telecommunications carriers for provision of telecom service "nondiscriminatory access to networks elements on an unbundled basis at any technically feasible point on rates, terms and conditions that are just reasonable and nondiscriminatory"
- Sect. 251(d)(2) standard: Must consider, at a minimum, whether failure to provide would "impair ability of [CLEC] to provide the services it seeks to offer"
- UNEs desired by CLEC's:
 - TELRIC costs based on forward looking model Sect. 252(d)(1), lower than tariffed rates for comparable service, e.g. special access for transport.
 - Right to access charges from IXC's and SLC's, but declining rates and traffic.
 - UNE-P much more economical than resale.

Current Issues

FCC UNE Rules

- Waiting for release of new FCC order determining what UNE's must be provided by ILECs
- August 2003 TRO reversed by DC Circuit Ct. 3rd reversal by courts of UNE rules.
 - Issues include: barrier to entry as natural monopoly costs; intermodal alternatives; regulatory pricing barriers
 - Court wants granular analysis but state determinations unlawful subdelegation
- FCC oral decision December 15th.
- Switching
 - Mass market switching eliminated. 12 month transition for embedded base
 - UNE-P available during transition but \$1 more.

Current Issues

FCC UNE Rules (Cont'd)

- Loops
 - Availability of single line (DSO) loops not disputed previously
 - DS1 available except building with $\geq 60,000$ lines or 4 fiber collocators
 - DS3 available except building with $\geq 38,000$ lines or 4 fiber collocators
 - No access to dark fiber
 - 12 month transition for DS1 & DS3; 18 months for dark fiber
 - Rates to be 115% higher during transition

* A DS-0 line is a single line; DS-1 is equivalent to 24 DS-0's; DS-3 = 28 DS-1's; OC(n) = (n) DS-3's.

Current Issues

FCC UNE Rules (Cont'd)

- Dedicated interoffice transport
 - DS1 available except on routes where both offices have $\geq 38,000$ lines or four fiber collocators
 - DS3 available except on routes where each of connected office have $\geq 24,000$ lines or three fiber collocators
 - No access to entrance facilities (dedicated connection between ILEC and CLEC offices)
 - Same transition as for loops

Current Issues

Intercarrier Compensation

FCC proceeding to move toward unification of intercarrier compensation schemes

Now several different types of compensation

- Access Charges (interstate and intrastate)

- Reciprocal Compensation

- Wireless Compensation

Issues related to different compensation schemes

Current Issues

Intercarrier Compensation

- Several proposed plans for moving toward unified compensation
- Impact on USF and end-user charges
- Impact on Federal and State jurisdiction
- Competitively and Technologically neutral

Current Issues

Universal Service Reform

- The growth in the size of the federal fund has spurred much concern over its sustainability.
- Issues to be addressed
 - Funding of only a primary line
 - Caps on Support
 - Eligible Telecommunications Carrier Criteria
 - Annual Certification of Support

Current Issues

Voice over IP

- FCC opened case in February 2004 to address VoIP issues but piecemeal decisions so far.
 - Although Vonage (and Pulver) decisions indicate that will be interstate preemption, haven't set out criteria for distinction between telecommunication service and information service
 - Open questions about intercarrier compensation and universal service. (DSL exempt from access, limitations on reciprocal compensation. AT&T service that uses IP for transport of LD not exempt from access.)
 - Concerns about safety (loss of power), 911, CALEA, consumer protection.

Telephone Bill

Items that must appear on the telephone bill:

- The billing period
- The date of mailing
- The payment due date, late fee incurred if payment is late
- Itemized charges for local services, equipment, toll charges, excise taxes, sales taxes, franchise taxes, other fees, past due charges
- The total amount due
- The address and phone number of the telephone company and identification of where a subscriber may discuss charges in dispute

Telephone Bill

Federal Subscriber Line Charge or End User Common Line Charge

- Maximum Charge is \$6.50 per residential line and \$9.20 per business line

E911 Tax

- Maximum Charge is \$0.75 per line

FUSF and KUSF

- Charges vary