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Policy and strategy issues in refiling of traffic – implications for Africa

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Presentation to TAF Group meeting

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Agenda

- Refiling scenarios
- Impact on termination rates
- Investment and competition issues
- Perspectives
- Future trends

Refiling scenarios

- Refiling not the same as transit
- Transit = terminating operator aware of origin of call; CLI preserved
- Refiling = terminating operator *not* aware of origin of call; CLI removed and call re-originated with new CLI
- Refiling not always approved – information not widely available

Public switched voice call

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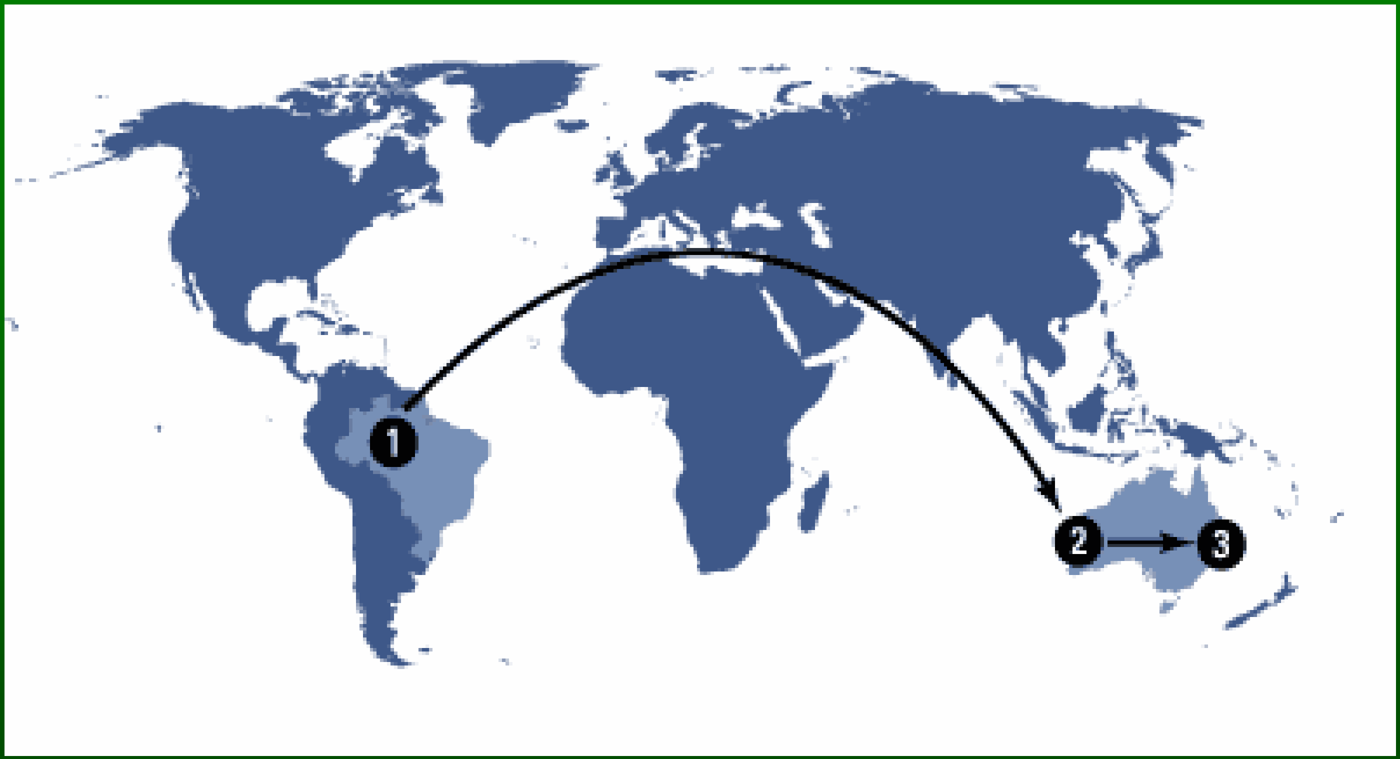

1. Customer dials international number.
2. Call is sent over PSTN by originating carrier, which pays settlement charge to terminating carrier in destination country.
3. Call is delivered to its final destination by terminating carrier.

Refile

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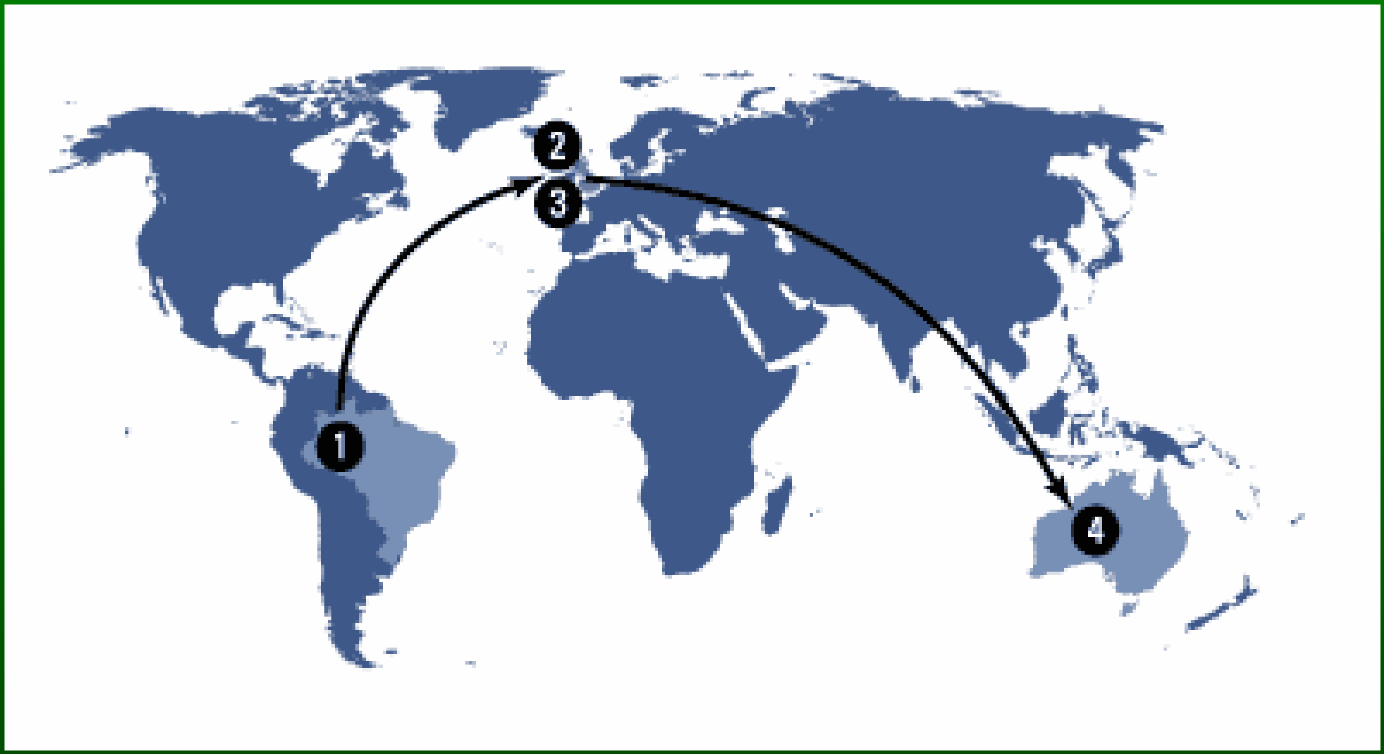

1. Customer dials international number
2. Originating carrier sends call to hub country via PSTN or over international private line - International Simple Resale (ISR).
3. Refile carrier re-originates call over PSTN.
4. Call is delivered to final destination via refile carrier, which pays settlement charge to terminating carrier.

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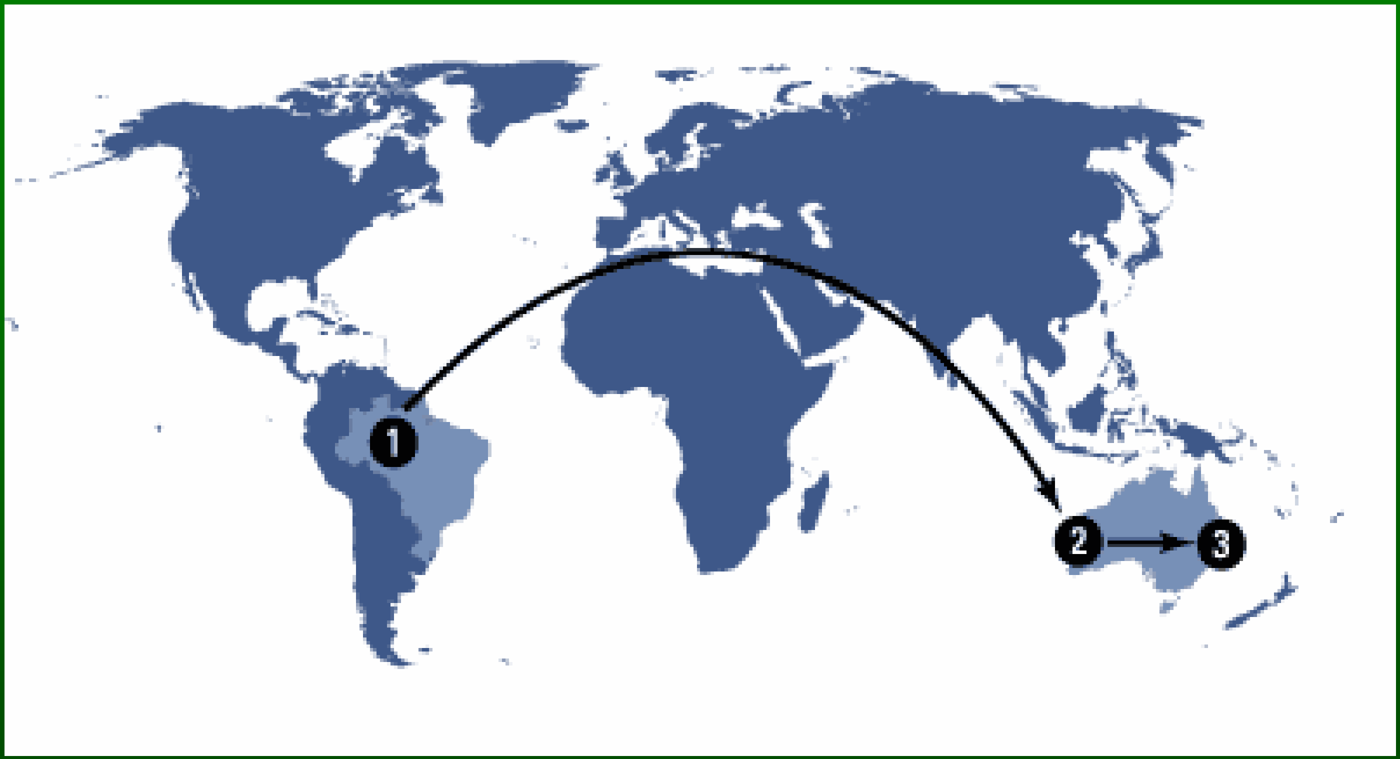
Switched bypass



1. Customer dials international number.

2. Call is routed over international private line to switch in destination country but outside network incumbent telco (e.g., to closed user group or mobile operator).

3. Call is re-routed to incumbent telco's network and completed as a local call on PSTN. No international settlements paid.

VoIP bypass

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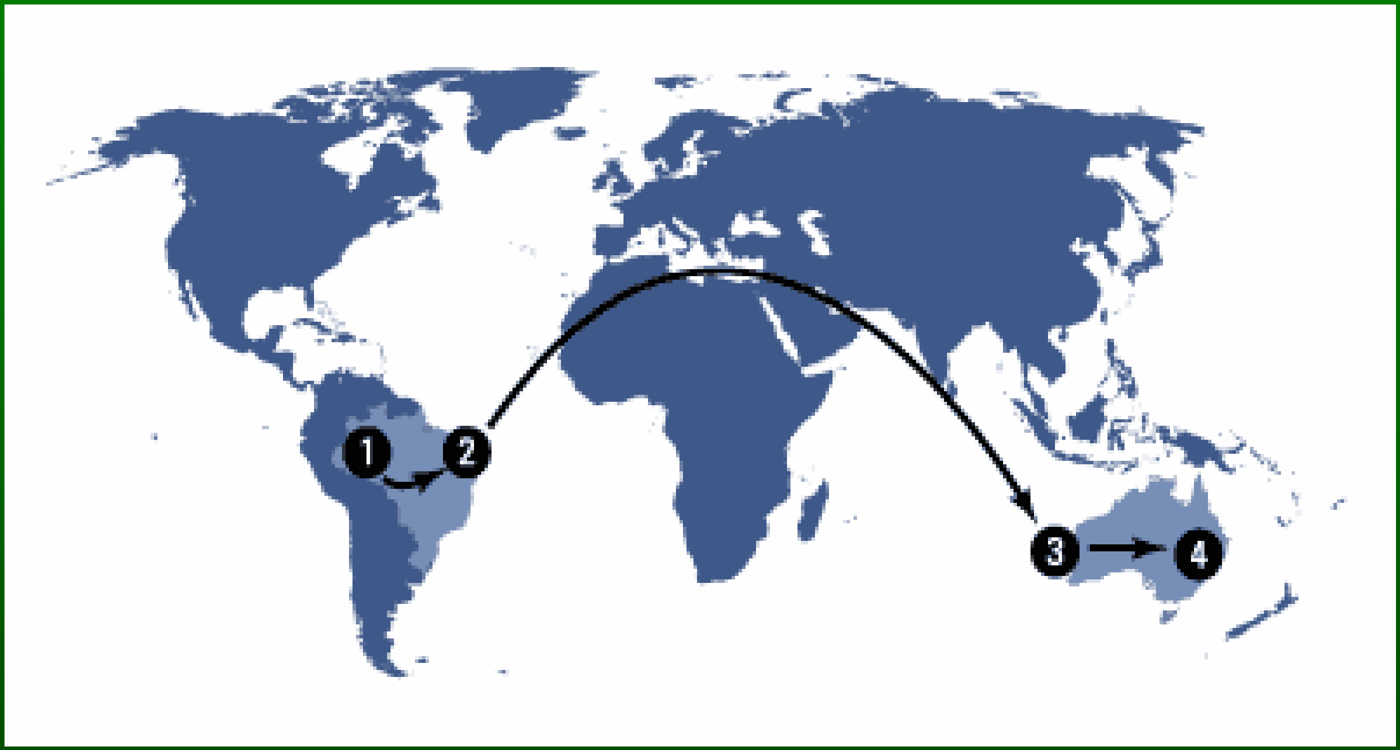

Source of all diagrams: Telegeography

1. Customer dials international number.

2. Call is routed over international private line to switch in destination country but outside network incumbent telco (e.g., to closed user group or mobile operator).

3. Call is re-routed to incumbent telco's network and completed as a local call on PSTN. No international settlements paid by the originating carrier.

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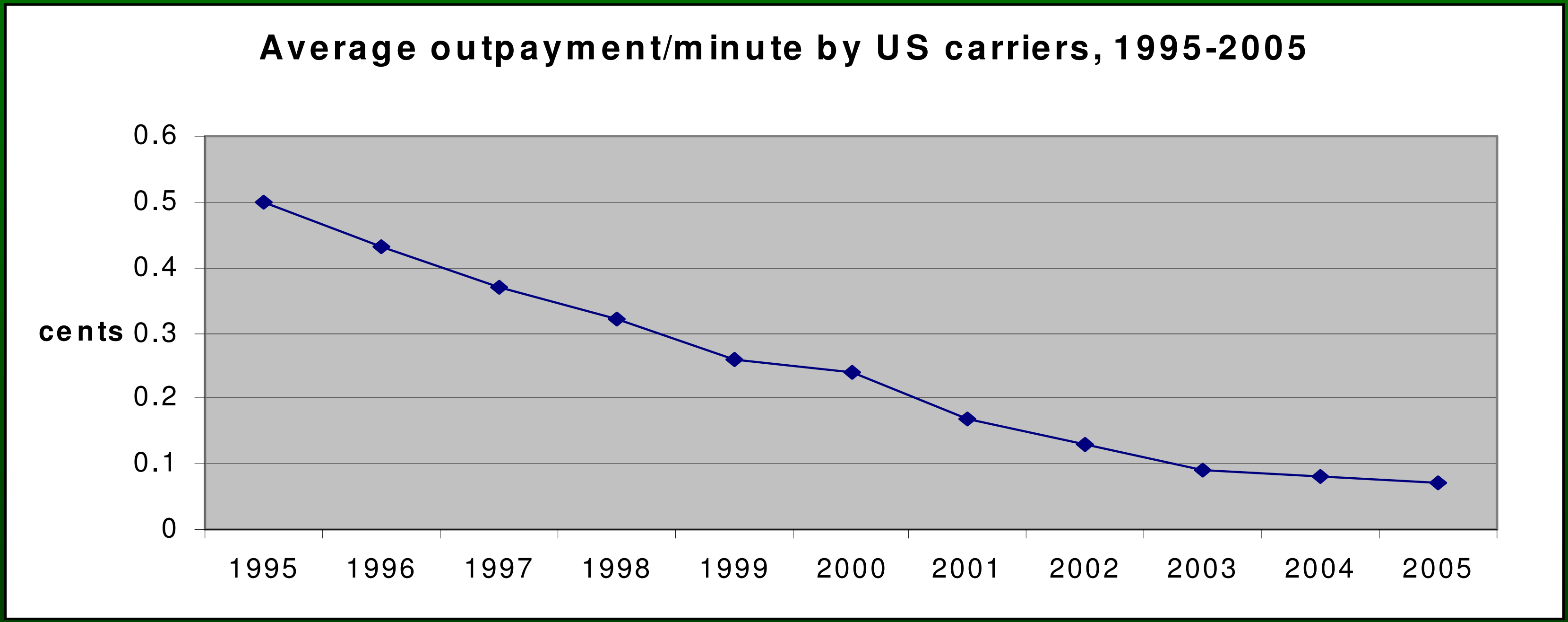
Falling settlement rates world-wide



Source: FCC

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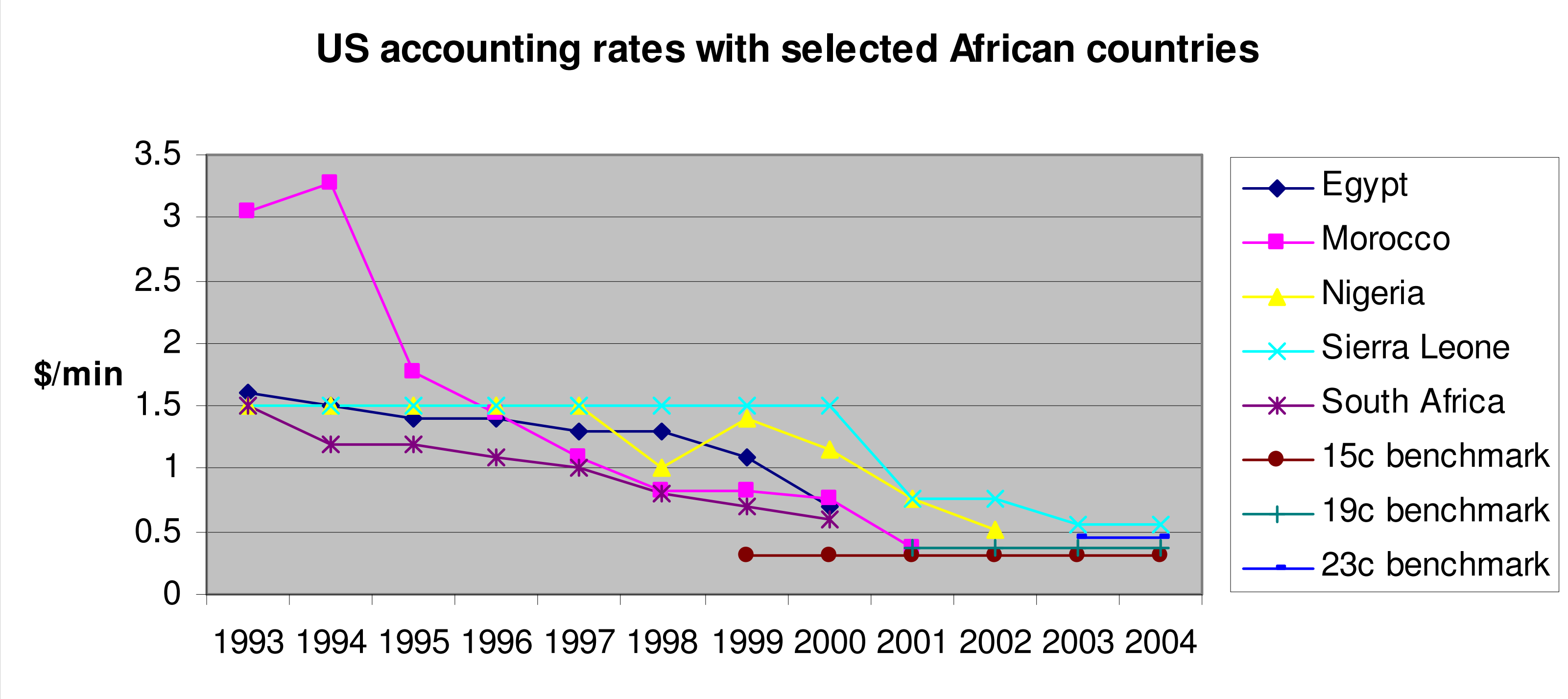
Falling rates US-Africa



Source: FCC

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US non-ISP exempt routes

(routes where US settlement rate > FCC benchmark)

18 of the 38 routes are African:

- Burundi
- Central African Republic
- Chad
- Comoros Islands
- Congo, Democratic Republic of the (DRC)
- Djibouti
- Guinea-Bissau
- Kenya
- Lesotho
- Madagascar
- Mauritania
- Niger
- Rwanda
- Sao Tome & Principe
- Seychelles
- Sierra Leone
- Somalia
- Togo

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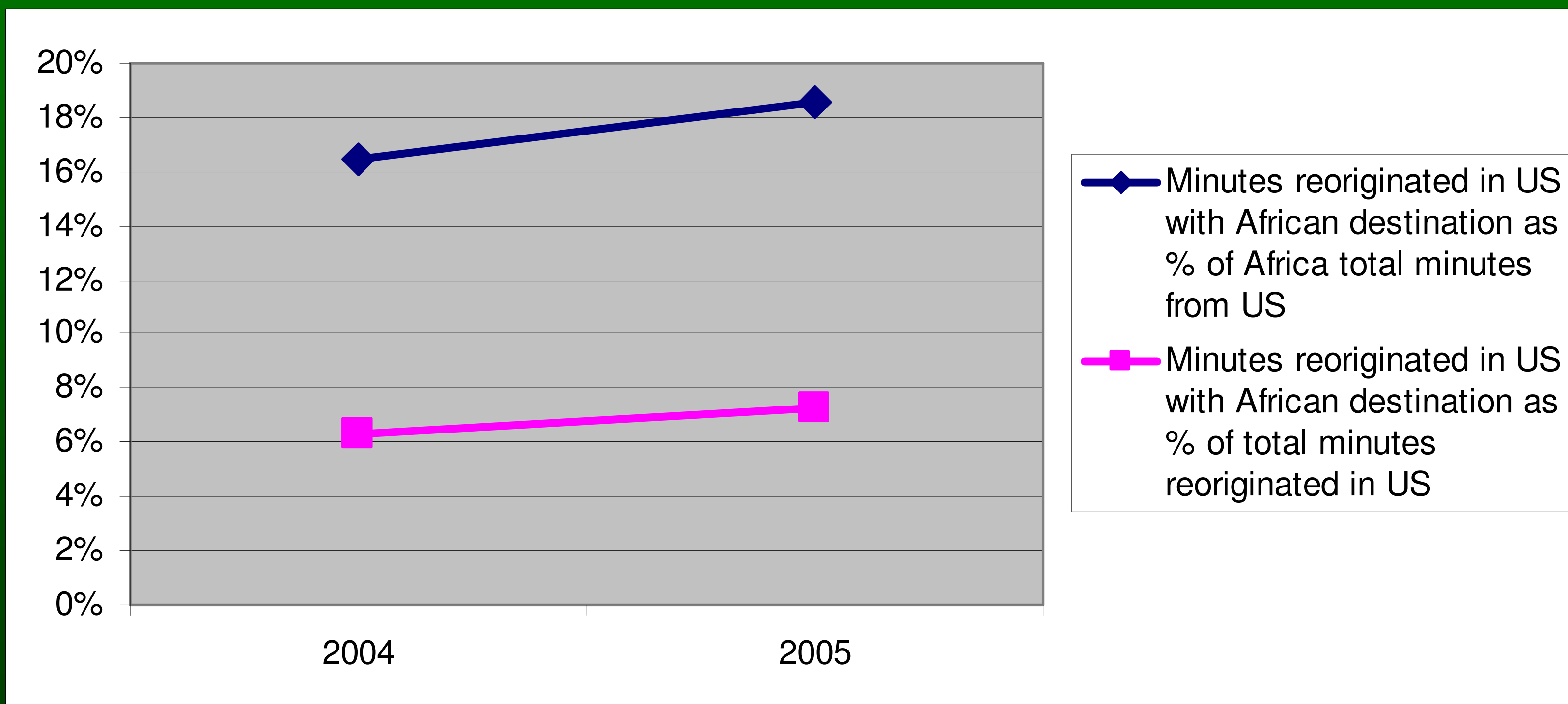
Reorigination in US is growing



Source: FCC

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Refiling – implications for operators

- Incumbent telcos who would otherwise have terminated the incoming call and received the settlement rate lose money, on a per call basis
- But some of the calls might not have been made if the customer had to pay the full tariff from origin directly to destination

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Refiling – implications for consumers

- Consumers get cheaper calls and may make more or longer calls
- Quality may be worse
- Above-cost settlement rates are like a tax on telephone calls – harmful even if paid by foreigners, because call recipients benefit from incoming calls
- How is the “tax revenue” spent?

Impact of refiling on termination rates

- Refiling, and other ways of bypassing the classic accounting rate system, put downward pressure on termination rates
- ITU (D.140): *… accounting rates for international telephone services should be cost-orientated and should take into account cost trends*
- Refiling gives an indication of how low costs could be (allowing for quality differences)
- Refiling exploits opportunities for arbitrage between different prices and costs

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Investment issues

- Reduced incentives to invest in gateways
- Is it worthwhile for incumbents to invest in equipment designed to detect and prevent bypass of the settlement rate?
  - Possibly in short term
  - May make refilers try their luck in another country
  - But refilers etc are ingenious
  - While the settlement rate remains above cost, new operators will always try to find ways round

Competition issues

- Refiling an example of competition
- Difficult to prohibit, even if prohibition were desirable
- Arguably consumers should have a choice between a cheaper, poorer quality service and a more expensive, better service

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Perspectives

- *International telephone traffic is a bit like water; it will always tend to flow downhill. In other words, all other things being equal, the direction of telephone traffic will be dictated by price differentials in the same way that flows of water reflect underlying gradients.*
  (Is there Life for the accounting rate system after 1998? Paper prepared by Dr Tim Kelly, for TeleGeography 1998)
- Settlement rates have declined, but many are still above cost

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Future trends

- Settlement rates will decline further
- Refiling, bypass, Skype etc will put pressure on settlement rates
- Will settlement rates ever be so low as to eliminate other types of telecommunications?
- Traditional system likely to survive alongside refiling etc, but will lose market share

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Challenges

- Cost-orientation for termination rates will deter refiling and other sorts of bypass
- Africa needs to be able to make and receive phone calls which are priced at an efficient level
- Refiling, bypass etc are beneficial for consumers
- Settlement rates will continue to decline
- High settlement rates have not led to much telecoms infrastructure development

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The way ahead

- Redouble efforts to reduce settlement rates to cost-orientated levels
- Get away from monopoly mind-set – incumbents can compete!
- Welcome competition from refile and other forms of bypass
- Growth in market and better prices will generate right incentives for investment

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Thank you!

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