

ITU Interconnection Workshop

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Role of the Regulator

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Interconnection

- **Preparation**
- **Regulatory Guidance**
- **Negotiation**
- **The agreement - terms and conditions**
- **Dispute resolution**

Preparation

- **Telecommunications policy**
- **Legislation**
- **Regulator**

Telecommunications Policy

- **Industry structure** → **monopoly** **duopoly** **Multi operators**
- **Institutional arrangement** → **single agency** **multi agencies**
- **Interconnection regulation** → **full intervention** **light handed**

Legislation

- **Appointment & powers of regulator** → **explicit** **administrative**
- **Power to issue licence** → **regulator** **other agencies**
- **Interconnection** → **detailed provisions** **general provisions**
- **Numbering** → **detailed provisions** **general provisions**
- **Sharing of facilities** → **detailed provisions** **general provisions**

Regulator

Industry specific

→ **yes**

no

Resources

→ **in-house**

outside consultants

Independent

→ **yes**

no

Regulatory Guidance

- **Type of interconnection**
- **Carrier-to-carrier relationship**
- **Carrier-to-carrier charging principles**
- **Accounting principles**

Type of Interconnection

Carrier-to-carrier

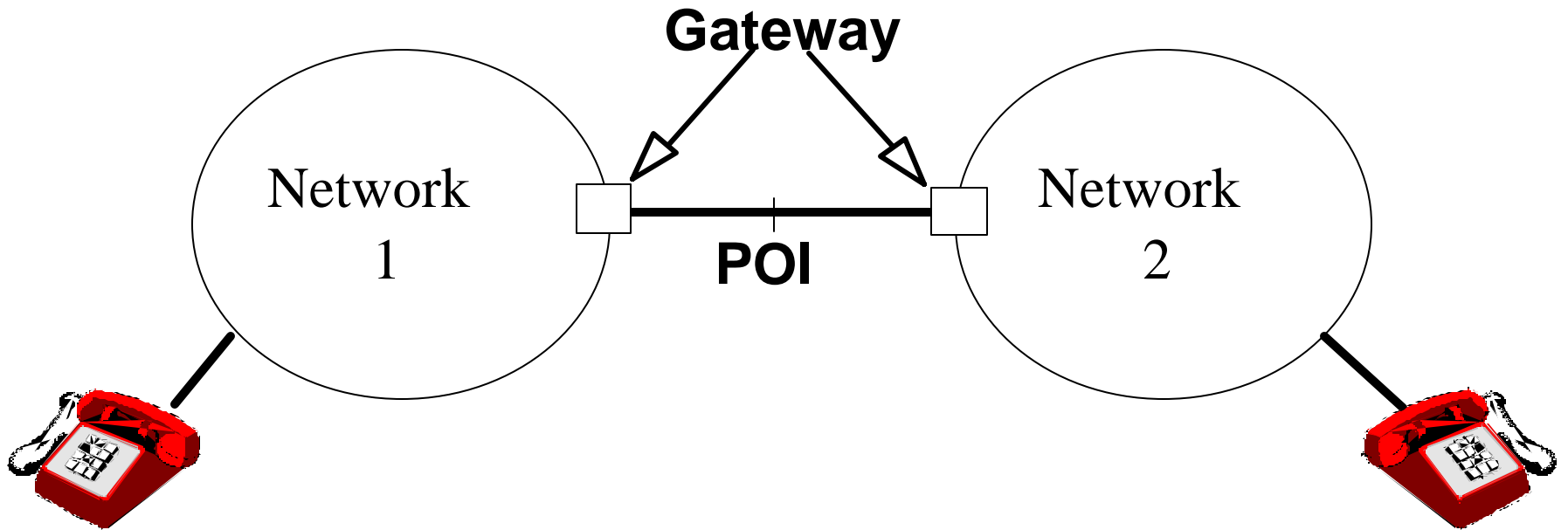
- International to long distance
- International to local
- International to mobile
- Long distance to long distance
- Long distance to local
- Long distance to mobile
- Local to mobile
- Local to local
- Mobile to mobile

Type of Interconnection

Carrier-to-non carrier

- International/long distance/local/mobile
to value added networks

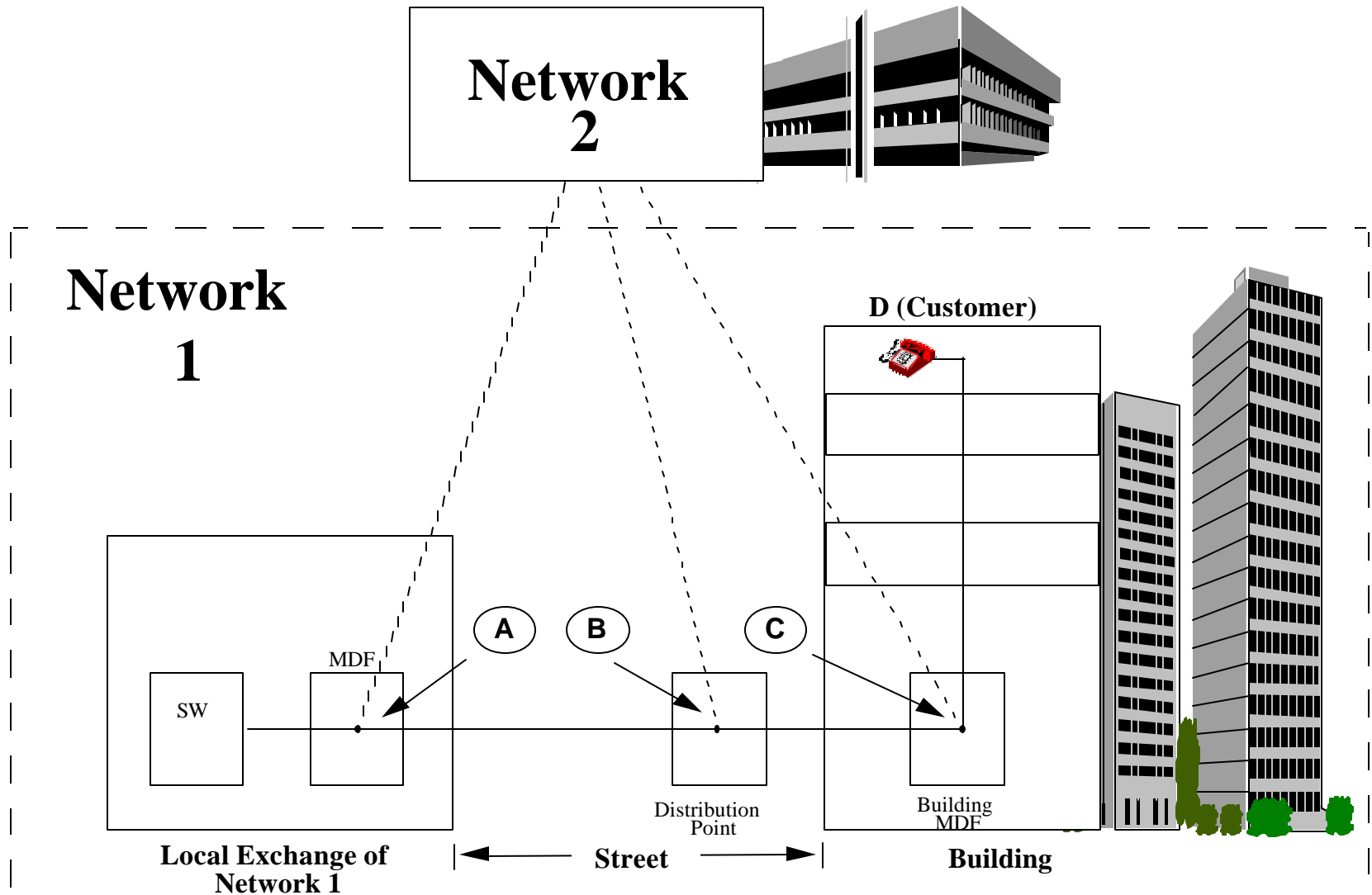
Type I - Interconnection between Network Gateways



Main Characteristics of Type I Interconnection

- Gateways can be toll exchanges, tandem exchanges, local exchanges or dedicated interconnect gateways
- A point of interconnection (POI) is a notional point in the mid-point of the link interconnecting the gateways of two networks
- Interconnection in this configuration should be made on the request of any network operator

Type II - Interconnection at Points in the Local Loop



Main Characteristics of Type II Interconnection

- **Interconnection of Network 2 to Network 1 is possible at any of the points A, B or C**
- **Interconnection in this configuration is only permissible upon the request of the customer at point D to become a direct customer of Network 2**
- **After interconnection, the customer at point D becomes a direct access customer of Network 2**
- **After interconnection, the operator of Network 1 continues to own, maintain and support the local loop**

Carrier-carrier Relationship

- **Carrier to carrier basis - equal rights and obligations**
- **Principle of cost causalty - the carrier which causes the cost to be incurred by another carrier pays the other carrier**
- **Principle of benefiting party - the carrier using (receiving benefits from) the interconnect service to pay the provider of the service**

Carrier-carrier Relationships (continued)

- **Principle of 'any-to-any' - any customer of any carrier should be able to call any other customer of another carrier**
- **Non-discrimination**
 - **equal opportunity to supply service e.g. equal access, portable number**
 - **equal treatment of services supplied to other carriers and own operation**

Carrier-carrier Relationship (continued)

- **Unbundling - carrier entitled to negotiate with another carrier for the provision of services or facilities on an unbundled basis**
- **Exchange of information**
 - **to exchange essential information for planning, establishing and maintaining its networks and services**
 - **information to include that required for establishing interconnection**

Accounting Principles

- **Separate accounts for different segments of service**
- **Clear allocation of cost on which interconnect charges should be based**

Negotiation

- **Operator to operator alone; no industry specific regulatory intervention**
- **Operators to negotiate first; regulator to intervene if requested by either party**
- **Operators to negotiate first; regulator to intervene if requested by either party or in the public interest**

Negotiation (continued)

- **Operators to negotiate first; regulator to approve agreement or to intervene if no agreement after a reasonable period of time**
- **Regulator to approve tariff for some or all interconnections**

Pros

Cons

- **Negotiation by operators only**
 - **Faster if fewer operators each of same or similar power**
 - **minimum resources on regulator**
 - **Regulator to approve tariff for some or all interconnections**
 - **certainty for new entrants and more transparent**
 - **faster in most cases**
 - **Negotiation by operators first; regulator to intervene if requested or necessary**
 - **market solution**
 - **medium resources on regulator**
- **Slower if more operators, one or more are very dominant**
 - **uncertainty for new entrants**
 - **heavy resources on regulator**
 - **may not be optimum solution**
 - **slower in some cases**
 - **less transparent**

Terms and Conditions

- **Scope of agreement** → **services covered**
- **Interpretation** → **definitions**
- **Interconnect specifications**
 - **point of interconnection**
 - **transmission capacity**
 - **interface standards**
 - **quality of service**
- **Operational aspects**
 - **testing and maintenance**
 - **traffic forecast**
 - **network changes**

Terms and Conditions (continued)

- **Interconnect charges**
 - charges for links
 - charges for usage
 - charges for co-location
 - charges for other services
- **Payment arrangement**
 - recording and billing
- **Customer access and billing**
 - responsibilities of contracting parties
- **Other normal terms**
 - liabilities, assignment, etc

Dispute Settlement - Option 1

- **No agreement between operators**
- **Dispute settled by arbitration by a body to be appointed by operators**
- **Further dispute settled by court of law**

Dispute Settlement - Option 2

- **No agreement between operators**
- **Tariff for some or all interconnections approved by regulator**
- **Enforcement of tariff and terms - e.g. financial penalty**
- **Further dispute settled by another agency or court of law**

Dispute Settlement - Option 3

- **No agreement between operators**
- **Determination by regulator if requested or necessary**
- **Enforcement of determination - e.g. direction, financial penalty**
- **Judicial review of regulator's decision**

Interconnection cases

- **Agreements by operators** **134 cases**
- **Determined by regulator** **14 cases**