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LRIC Approaches

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How Markets Work℠

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Link to ICT Regulation Toolkit:

http://www.ictregulationtoolkit.org

Methods of Regulating Fixed-Mobile Charges

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Many regulators now control mobile termination charges. There are several forms of such regulation:

- International benchmarking: In the absence of cost based data, regulators are increasingly relying on international benchmarking to set regulated mobile termination charges in their own countries.
- Rounding: Some regulators have introduced regulations requiring mobile operators to round each call to a lower unit of charging (for example rounding to the second when the charging unit is to the minute). The effect of this requirement is to reduce revenue from mobile termination.
- Cost-based termination charges: Regulators are increasingly pressuring operators to base mobile termination charges on long run incremental costs or fully allocated costs.

LRIC Modeling

- The economic cost of interconnection is generally the starting point in establishing economically efficient interconnection prices.
- In many jurisdictions, regulators set interconnection prices based on long run incremental costs (LRIC).
  - New Zealand
  - Australia
  - United Kingdom
  - United States
- There are numerous methods of estimating LRIC.
  - Bottom-up (includes scorched earth or scorched node methods)
  - Top-down

Bottom-up Modeling

- Define services to be modeled
- Determine design of the market
- Determine amount of each equipment type
- Estimate costs of each element
- Convert total investment costs into an annual or monthly amount
- Estimate annual or monthly operational and maintenance costs and non-network costs
- Add investment costs and expenses
- Divide by cost driver

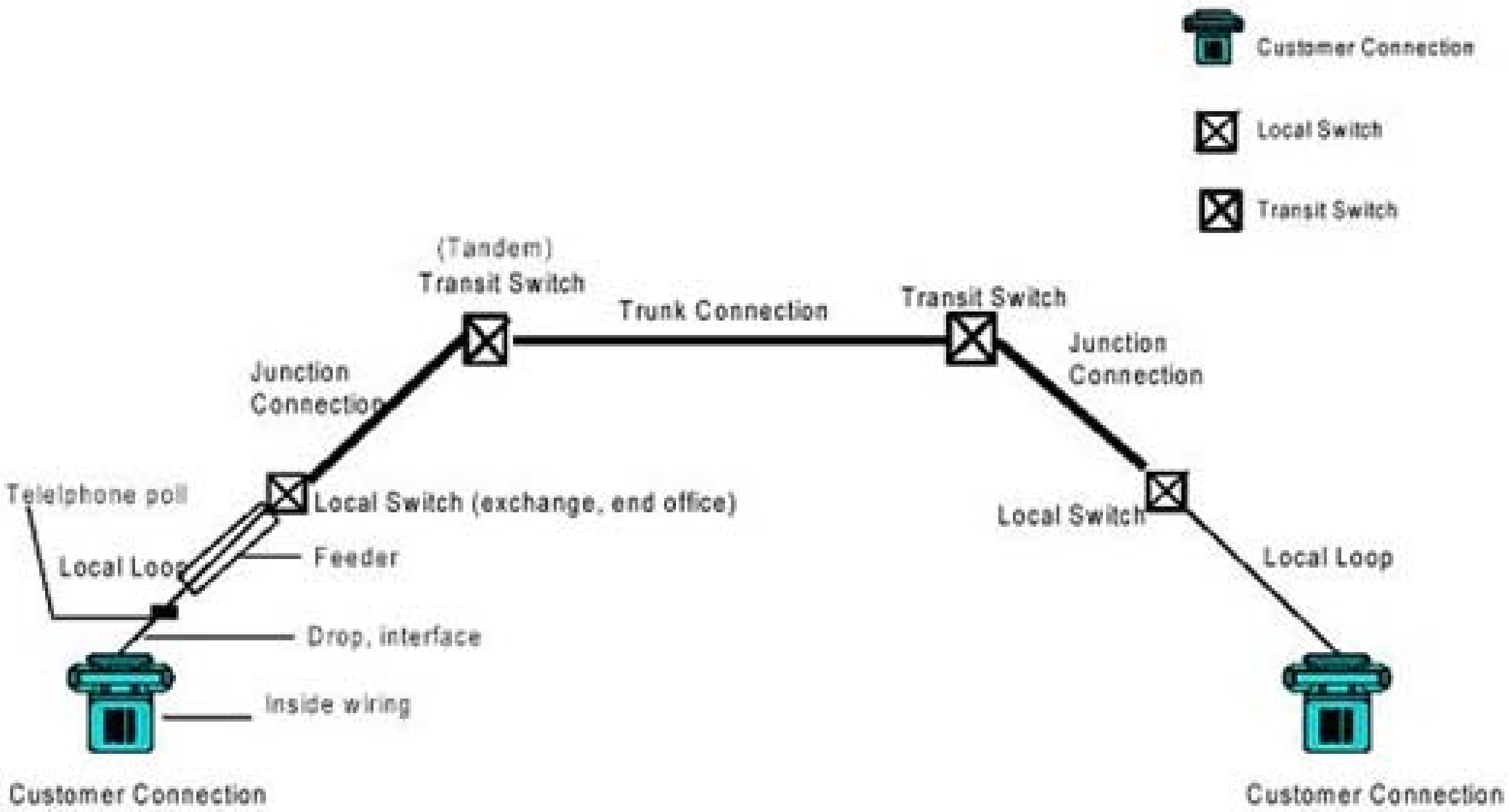
Top-down Modeling

- Identify the firm’s services and separate out interconnection costs
- In the firm’s accounts, identify and separate all costs and assets
- If a cost item is attributable to only one service, allocate it to that service
- Use allocation rules to allocate shared and common costs between services
- Calculate LRIC for each service by adding up the costs allocated to that service, including an appropriate return on assets allocated to that service

Pros and Cons

	Bottom-up	Top-down
Pros	Can model costs that an efficient entrant would face Flexible — can change assumptions readily Transparent — much of the information used is publicly available	Incorporate actual costs Useful for testing results from bottom-up model May be faster and less costly to implement, but this depends on how well categories in the financial accounts match the data required
Cons	May optimize “too much” or omit costs Modeling of operating expenditure is usually based on simple margins instead of real-world costs Data needed for the model may not exist The modeling process can be time-consuming and expensive	Include the firm’s actual costs, and so are likely to incorporate inefficiencies Less transparent — confidentiality issues The parties may dispute the cost allocation rules used Data may not exist in the required form

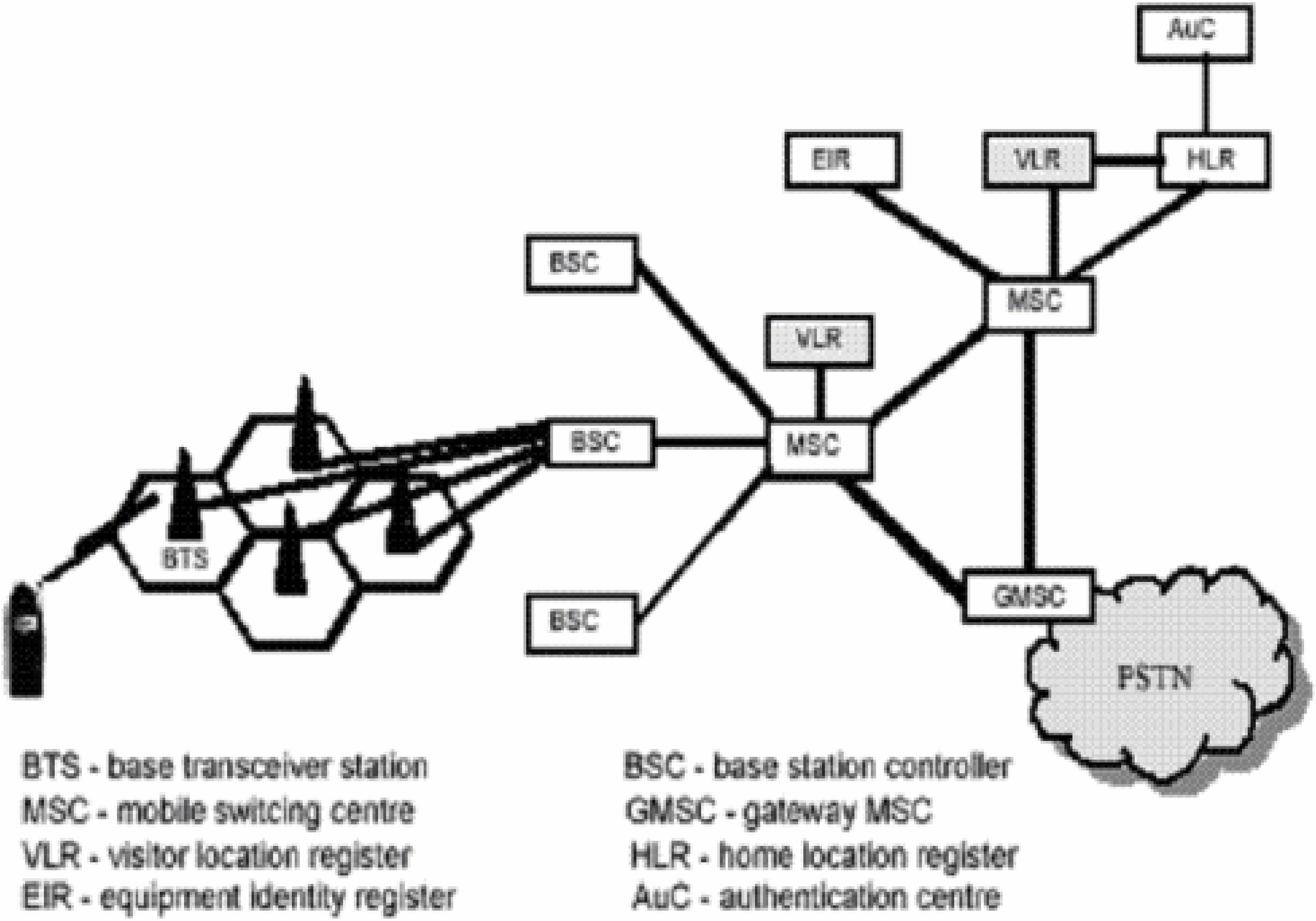
Generic PSTN Network Structure



Cost Measures

- Historic costs
- Sunk costs
- Forward-looking costs
- Fixed costs (service specific, shared and common costs)
- Variable costs: marginal costs, incremental cost (including LRIC and TSLRIC)
- Stand-alone cost, and
- Short and long run cost concepts.

GSM mobile system



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