



Administration of Interconnection between Networks and Faced Issues

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Goals of Network Interconnection

- To **interconnect** transmission networks and services, allowing customers of one operator to communicate with customers of another operator and enjoy the services provided by another operator
- To **create** a pro- industrial development, national macro-policy compliant and fair competition environment
- To **achieve** the goal of smooth interconnection, unimpeded flow between networks, and high quality



Success Factors for Network Interconnection and Interwork

- Basic elements for interconnection and interwork
- Technical elements for interconnection and interwork
- An understanding of interconnection and interwork



Basic Elements of Interconnection and Interwork

- Powerful legal support
- Fair, strict and uncorrupted government supervisory bodies
- Complete administrative system and supervisory means
- Philosophy changing of Incumbent telecom operators
- Mutual understanding, communication and cooperation between the two interconnected parties



Technical Elements of Interconnection and Interwork

- Advanced physical platform for interconnection
- Reliable account settlement system for interwork
- Complete quality index of communications between networks
- Scientific communications quality supervision means
- Strong technical support teams



An Understanding of Interconnection and Interwork

- Basic understanding
- Advocated ideas
- Operators should keep interconnection in mind



Basic Understanding

- The necessary conditions for market opening, industrial development and enterprise development
- The basic judgement of the success or failure of telecom reform
- An important proof on the concept transformation of incumbent telecom enterprises.
- The major responsibility of regulation departments



Advocated Conception

- Equality---every enterprise is equal in spite of its size and seniority in the market
- Communication---advocate that enterprises communicate and negotiate with each other
- Cooperation---advocate to seek cooperation and development in competition for mutual benefits
- Supervision---advocate to supervise each other among the enterprises and strengthen self-discipline, solve inherent issues in the enterprises



Keep Interconnection in mind I

- Customers First, Advanced Services, Effective Management, Excellent Brands and Legal Competition
- Establish legal consciousness firmly , observe disciplines and obey laws, build nice images of the enterprises
- Change the philosophy of the staff of all levels from top to the bottom and deal with interconnection and interwork positively
- Change the conception that users are enterprises' intrinsic resources
- Interconnection and interwork are another kind of service for customers



Keep Interconnection in mind II

- Interconnected operators have a relationship of being each other's large customers
- Interconnection and interwork are the obligation of an operator and maintaining the quality of communications between networks is the inherent requirement for maintaining the operator's image
- Establish the idea of fair competition as well as cooperation among operators
- The deep understanding of the concept of interconnection is a sign that operators, especially incumbent telecommunications operators are moving to maturity



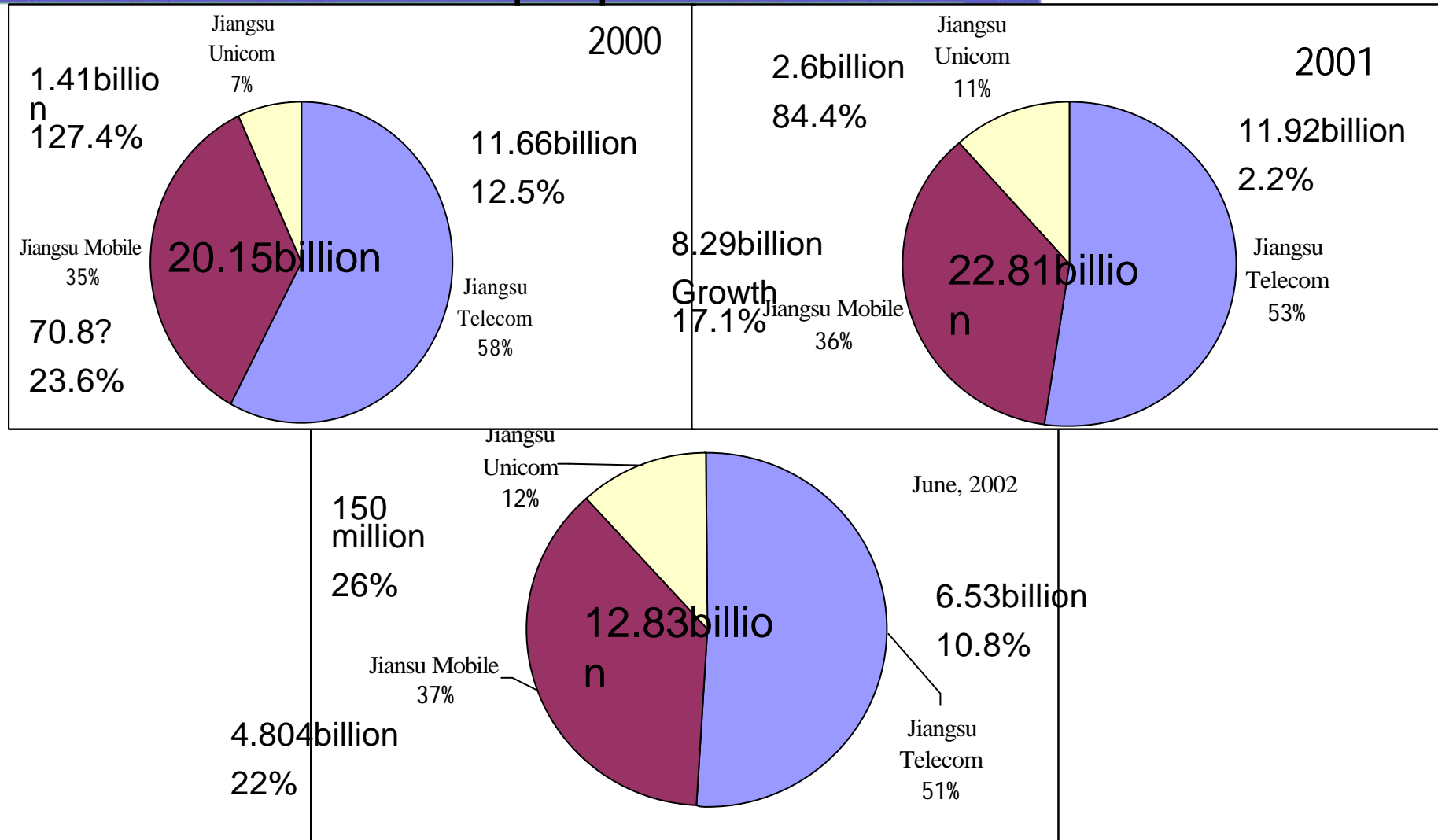
Current Situation of Telecom Development and Interconnection in Jiangsu Province



- Revenues and occupied shares of telecom services
- Total number of telephone subscribers and proportions by different operators
- Prices of telecom services
- Quality of communications between networks
- Conditions of interconnection

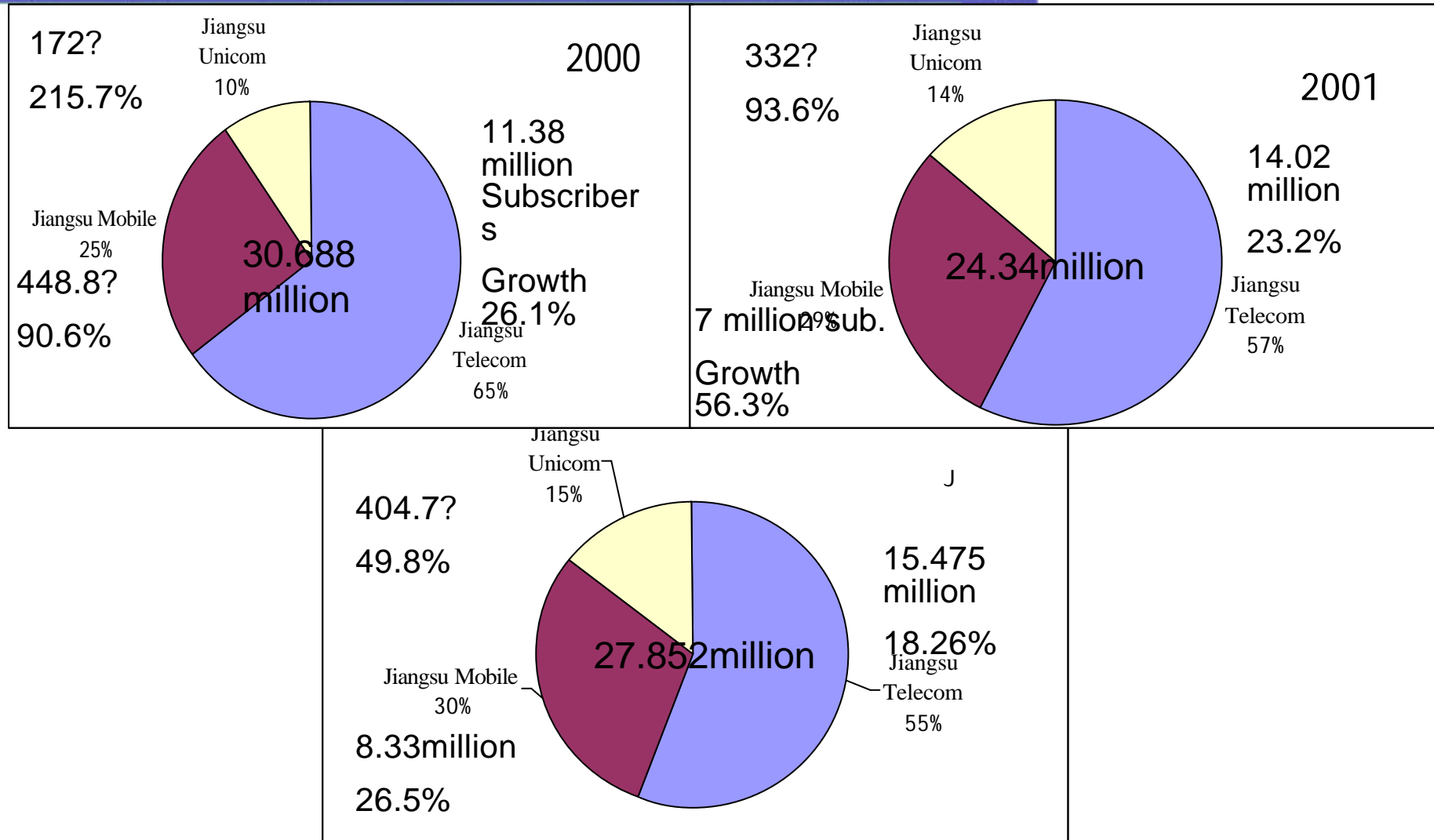


Telecom service revenue and proportion





Total number of telephone subscribers and proportions by different operators





Price Status of Telecom Services (I)

- Current situation:
 1. The prices of the basic telecom services follow the ministerial standards and the prices of the value added services are relatively stable.
 2. The enterprises have a deeper understanding to the bad "price war", and the society, news media and enterprises supervise with each other, so "price war" has no market in Jiangsu.



Price Status of Telecom Services (II)

- Regulatory system
 - Relatively perfect procedures of price examination, approval, and “putting on record”
 - Marked prices
 - Strengthen the administration and law-enforcing work



Communications Quality between Networks (I)

- Key indexes

“Commitment on Ensuring Communications Quality between Networks”
--2002.3.7

----Proportion of effective internetwork services in local services is
greater than 90%

----Busy hour traffic per line between gateways is lower than 0.7ERL

“Administrative Approaches on the Operation and Maintenance of the
Interconnected High-level Transmission Ring Network ” 2002.3.7

---upper limit busy hour traffic per line is 0.6ERL and the lower limit is
0.4ERL



Communications Quality between Networks(II)

	No. of Circuits	Total Traffic (ERL)	Busy Hour traffic Per line (ERL)	Attempt Ratio
Telecom--- Mobile	70491	24398	0.34	95%
Telecom--- Unicom	16888	8291	0.49	95%
Unicom--- Mobile	11636	5469	0.47	90%



Status of Interconnection

- The relation of physical connection between networks is clear.
- The pattern of opening services on an equal basis takes shape basically
- The interconnection bodies and relevant regulation are ready
- The relationship of competition and cooperation is being established
- The issue of communications quality is increasingly obvious
- The laws and regulations still remain to be improved



Measures to reach the Goal of Interconnection

- Follow the successful factors for interconnection and interwork
 1. Basic guideline
 2. Definitive regulation principles
 3. Perfect organization and working system
 4. Recommend proper interconnection technology
 5. Deal with the relations between interconnection and market competition behavior



Basic Guideline

- Organization must put in effect
- Make procedures clear
- Make the system perfect
- Strengthen the investigation
- Grasp the key points
- Move forward steadily
- Continuous innovation



Definitive Regulation Principles(I)

- Follow the principles of exploding monopoly, encouraging competition, promoting development and being open, fair and just
- Conduct interconnection rationally, open services reciprocally, support new enterprises in participating market competition, and streamline and systemize interconnection and interwork
- Interconnection involves in economic relations among enterprises. While interconnection is implemented as a compulsory measure, the economic benefits of different operators should also be considered.

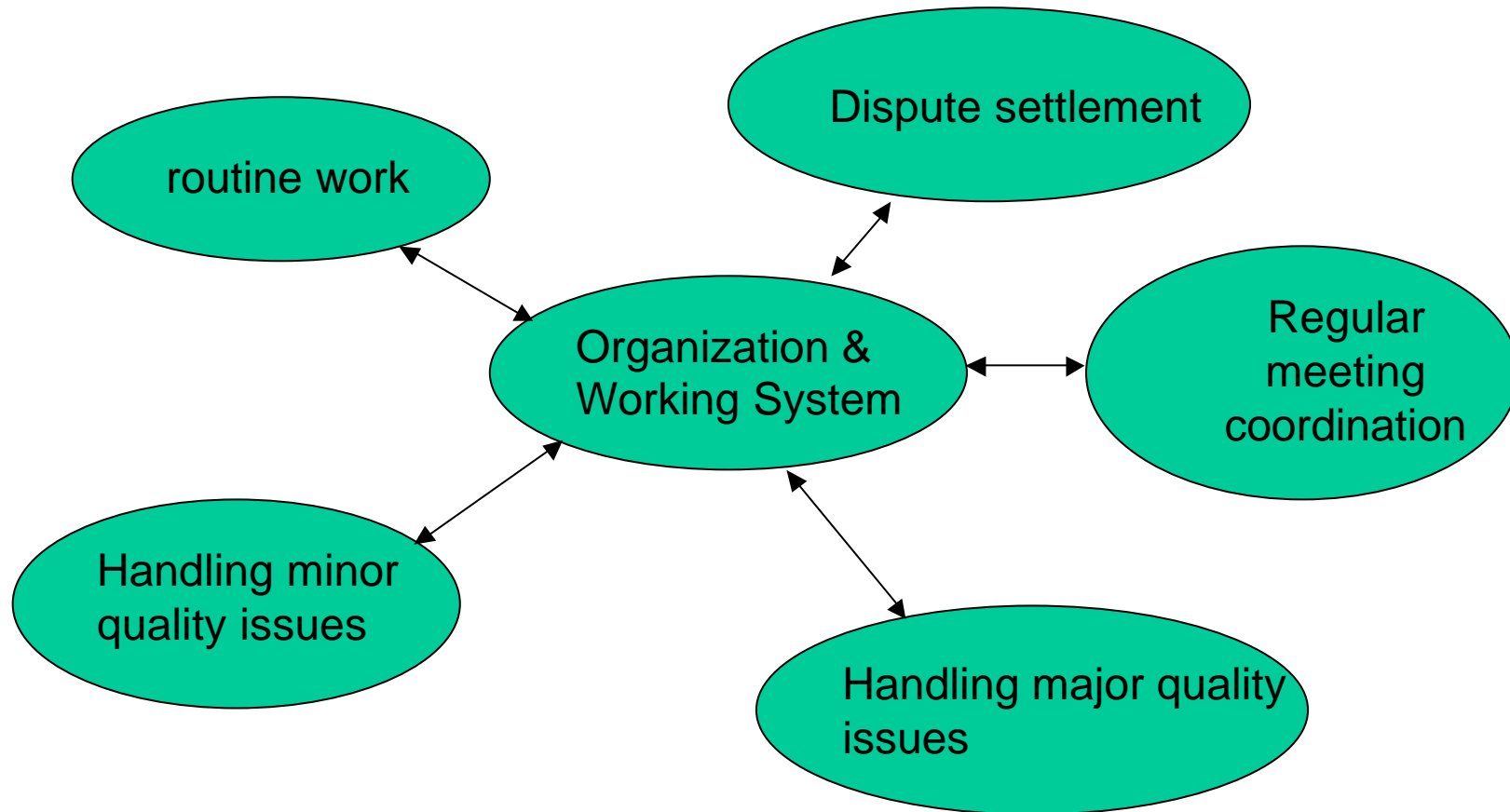


Definitive Regulation Principles (II)

- Raise industrial service level, accelerate technical progress, rational use of resources, facilitate the common development enterprises and market prosperity
- The general development level of the industry and the environment of competition and cooperation are the measure of evaluating work of regulatory departments
- Strengthening research, exploitation and innovation, accumulate experiences, and promoting development are the philosophy of government regulation



Systematic Organization Structure and Working System



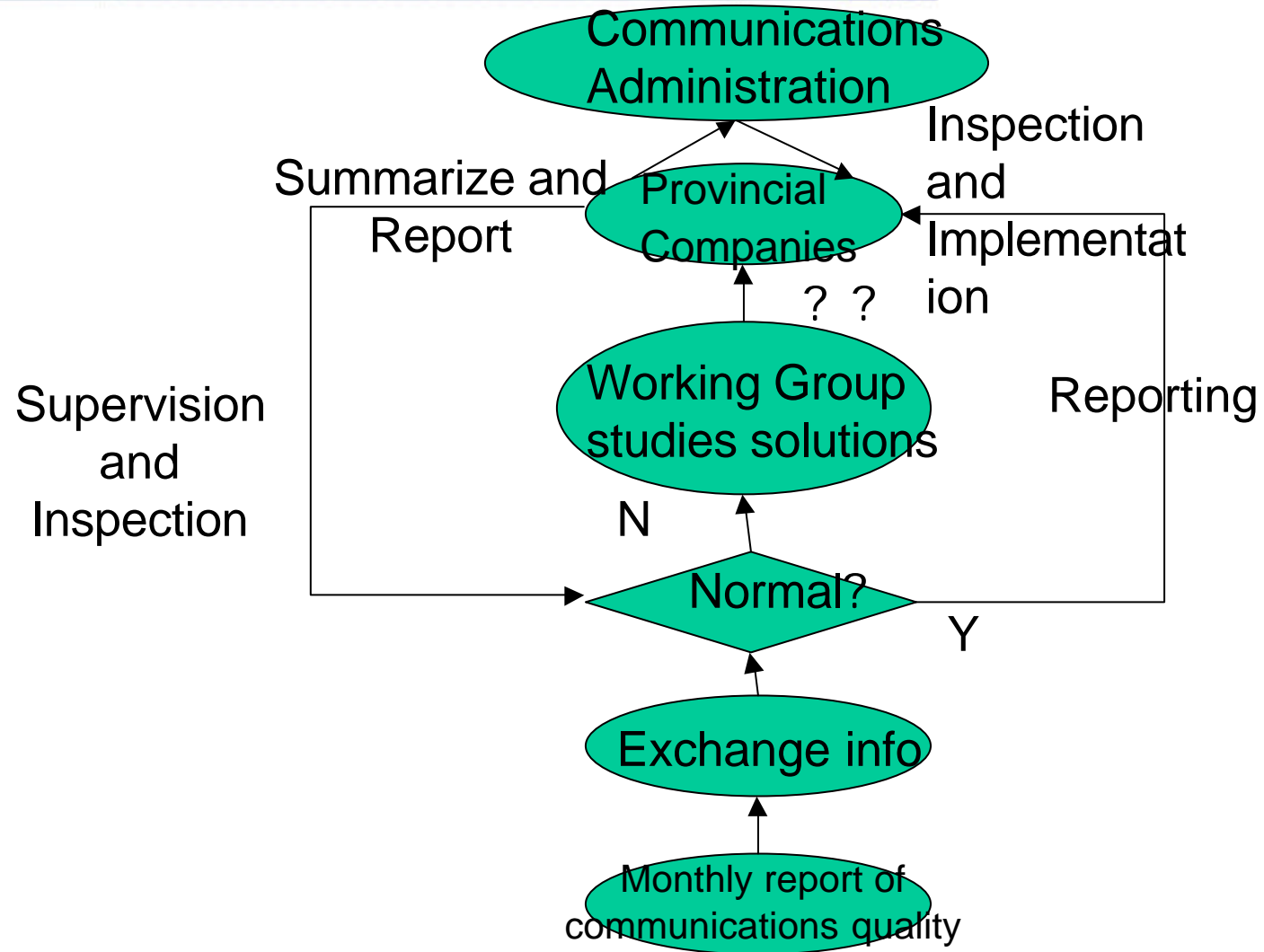


Organization Structure

- Leading Group of Interconnection and Interwork
- Working Group of Interconnection and Interwork
- **Regular Communication System between the government and enterprises and between enterprises and enterprises**
- **A system of joint test and handling of communications quality issues**
- A system of dictation and guidance for equipment maintenance
- A high-level regular meeting system for interconnection
- A system of announcing or reporting on major issues

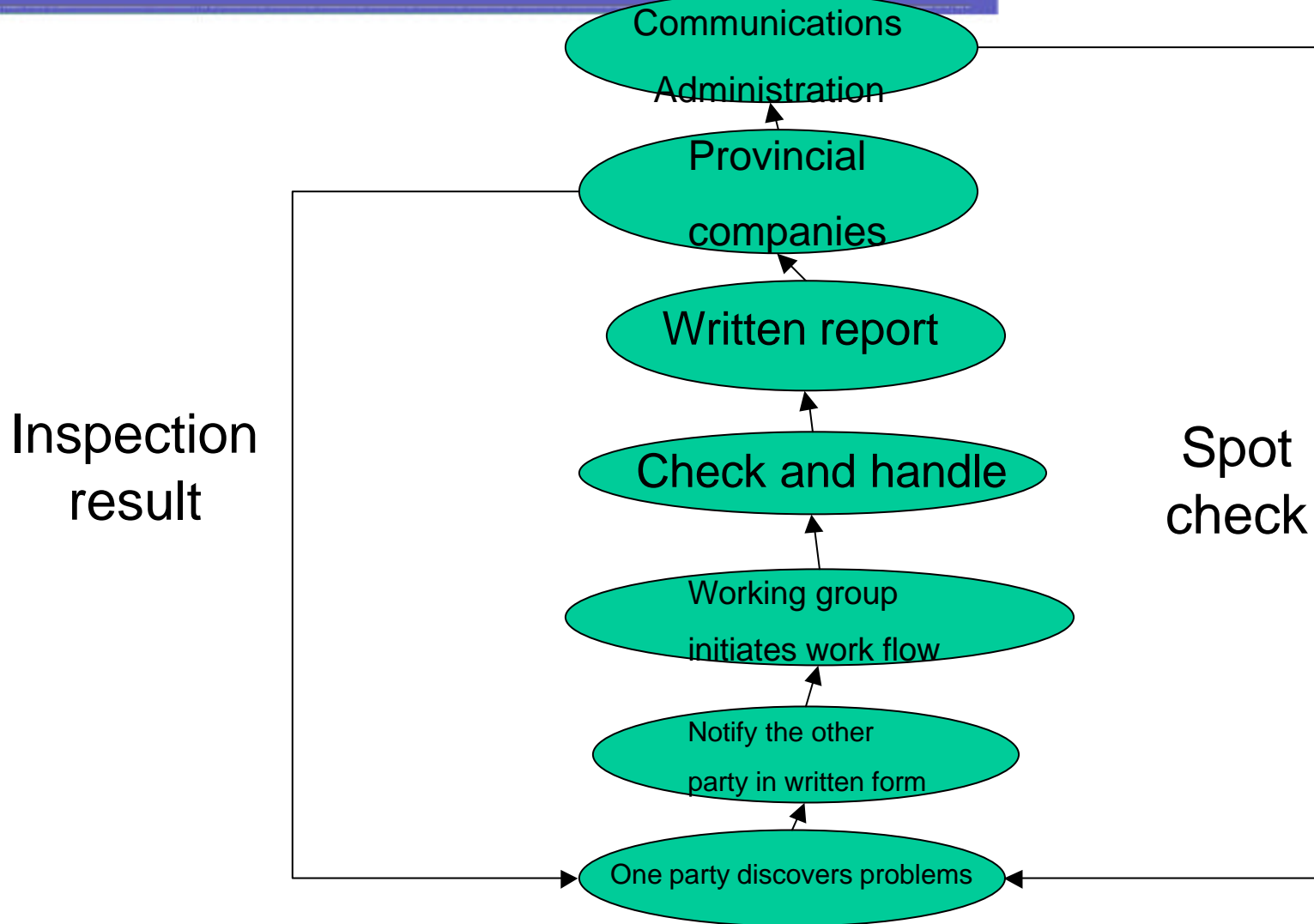


Routine Work





The Handling of General Quality Issues





The Handling of Major Quality Issues





Regular Meeting Harmonization

Purpose: Communication, understanding, negotiation, handling and summarization

Major participants: Director General and Deputy Director, and Division Chief of General of Provincial Communication Administration, General Manager, Deputy Vice Manager and Division Chief of provincial companies

Before the meeting: participants gather interconnection issues; the Communications Administration summons working groups to have a pre-meeting and clarify the meeting topics

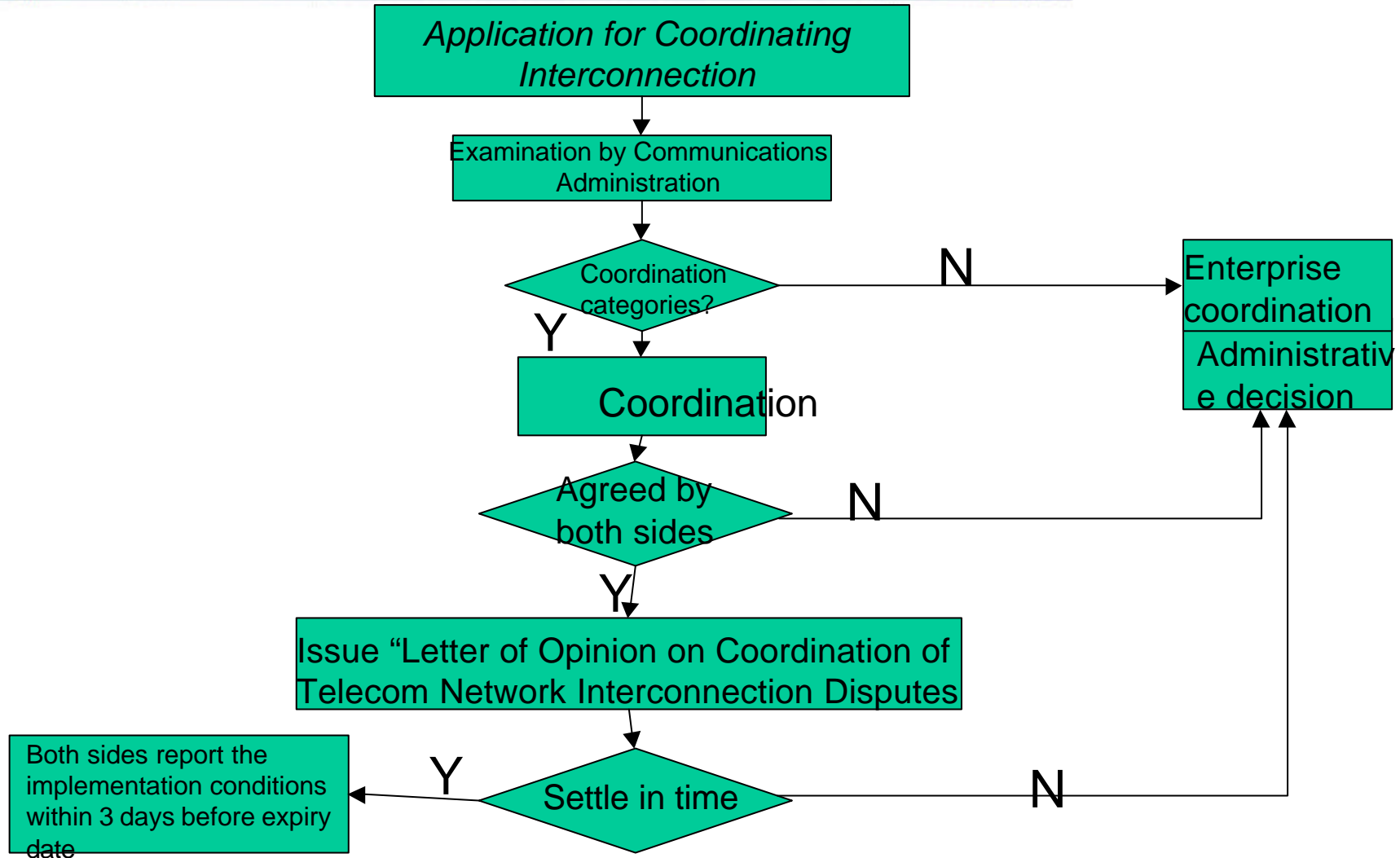
In the meeting: Make negotiations, unify the viewpoints, strive for effectiveness and complete meeting conclusion

After the meeting: implement, inspect and check

Report how to implement the last “meeting conclusions” at the next regular meeting



Dispute Handling



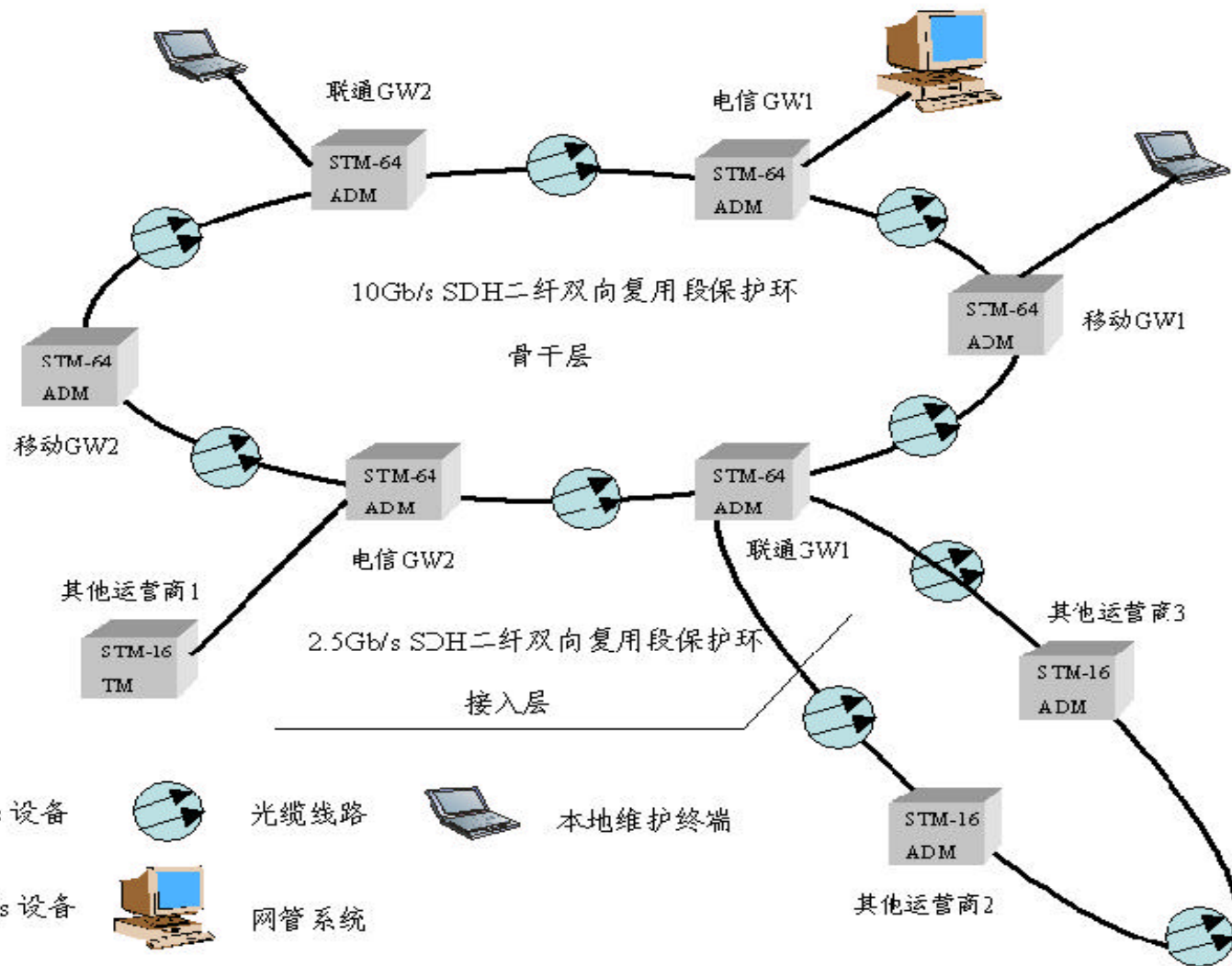


Recommend proper Interconnection Technology

- Building of dedicated interface office
 - Build dedicated interface office in peer-to-peer mode
- High level transmission ring network
 - Joint investment, resource sharing and concerted management
- Inter-network Settlement Management
 - Find the problems, and check and deal properly with them in time



High Level Transmission Ring Network --- the sketch map





High Level Transmission Ring Network – Advantage Analysis

- Rational network architecture
- Full utilization of resources
- Secure and scalable
- Economical engineering investment
- Easy Interconnection implementation
- Centralized and unified management



Deal with the relationship between Interconnection and Market Competition Behavior

	Phenomenon	Property	Handling
Communications Quality	General faults	Violation	According to rules and regulations
	Man-made faults	Illegal	According to Law
Market Competition	General Behavior	Allowed	-
	Vicious Behavior	Violation	According to Stipulations



New Issues and Ideas (I)

- Interconnection becomes diversiform and complicated
- The phenomenon of being connected but blocked and unstable is spreading
- The national macro policy of introducing competition is challenged severely
- The function of the government regulatory department faces with proof
- It is extremely urgent to specify market behavior

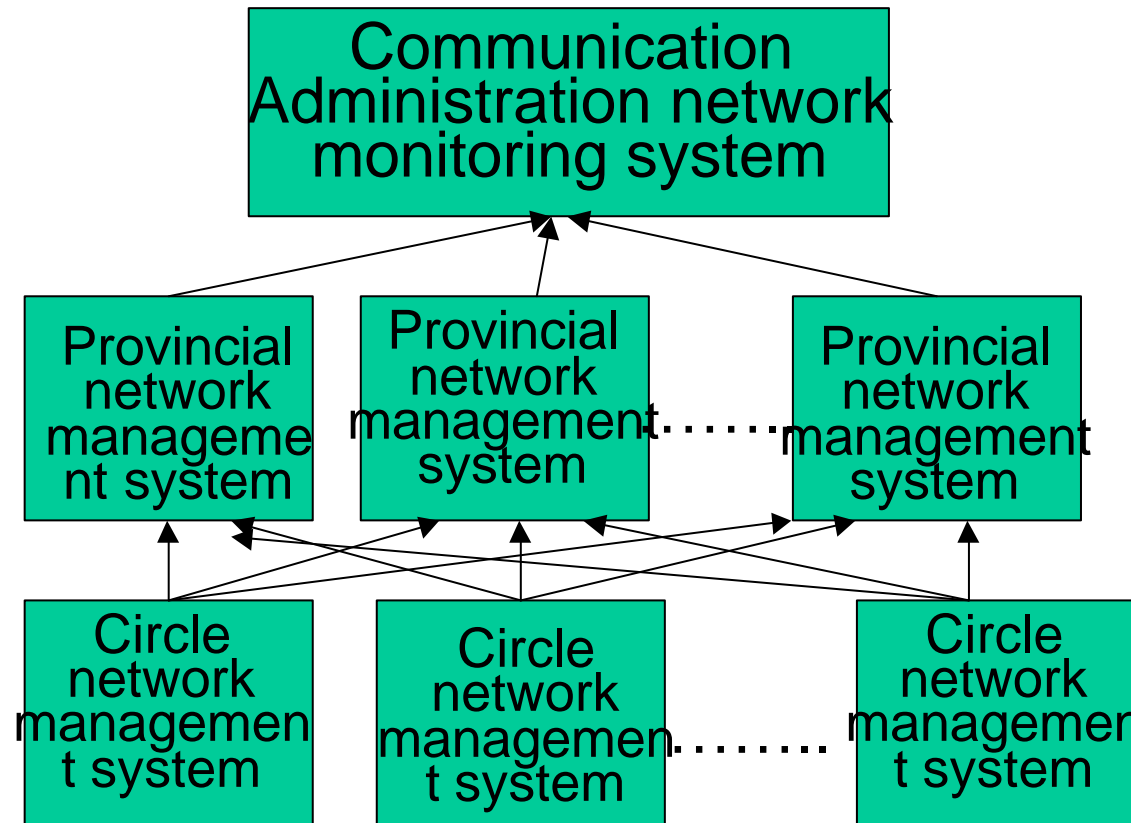


New Issues and Ideas (II)

- Call upon the Telecommunication Act to be issued
- Change old concepts, and create a good environment with legal system
- Set up a management system with distinct Chinese characteristics
- Deepen the reform, and accelerate the paces of competition and opening-up
- Set up the quality supervision system of the network
 - Technical measures
 - Necessary organizations



Technical Measure – Establishing Network Quality Supervision and Measurement System

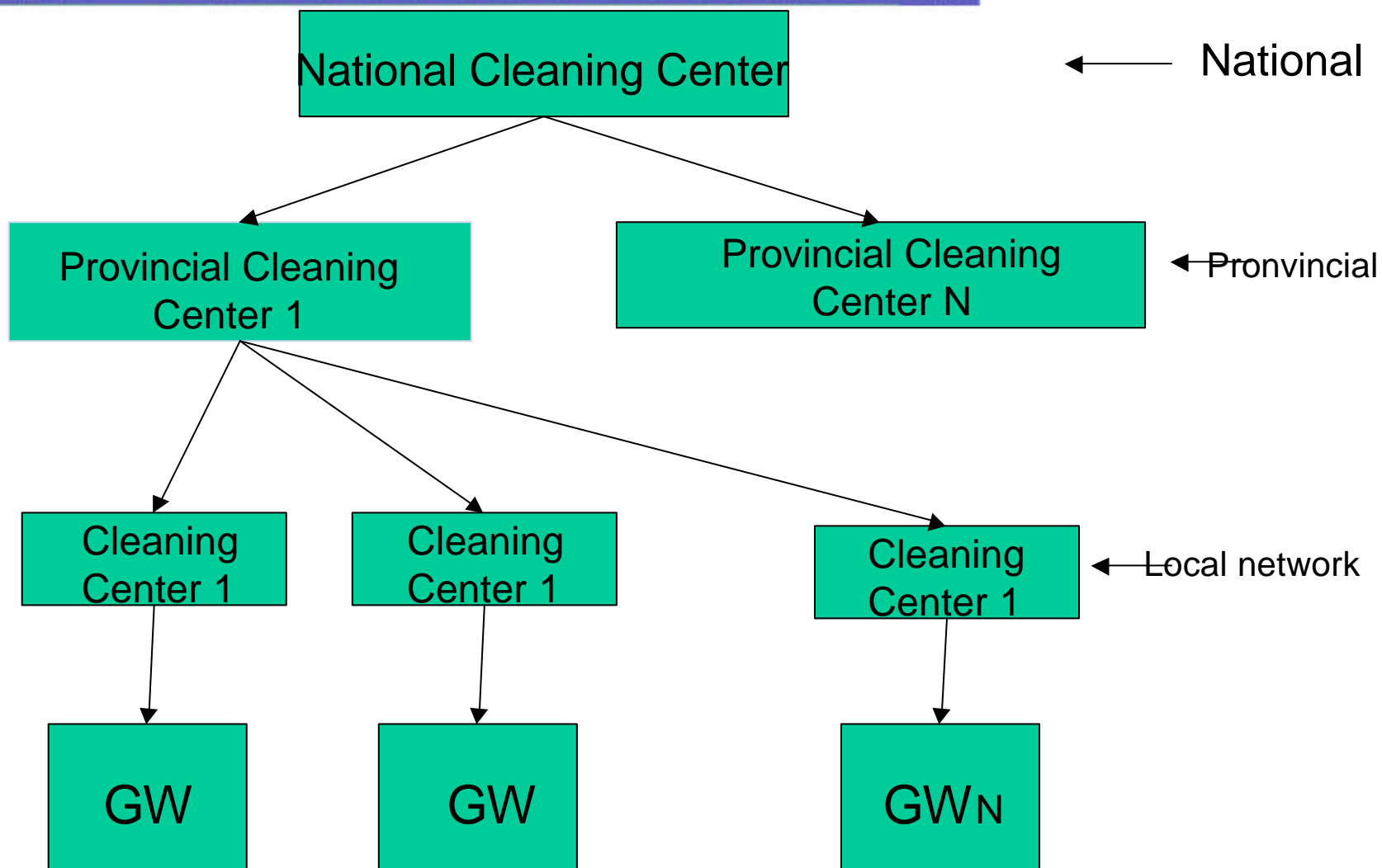


Provincia
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Local
Network



Technical Measure – Establishing Internetwork Billing and Clearing Centers





Organizational Construction

- Supervise each other among enterprises
- Give play to the role of specialist groups
- Strengthen the work of 12300 Customer Complaint Center
- Introduce public opinion and social supervision
- Strengthen the self-regulating function of industrial associations

A blue-tinted landscape of rolling hills and mountains covered in dense evergreen forests. The text "Thank you!" is overlaid in the center in a white, italicized serif font.

Thank you!