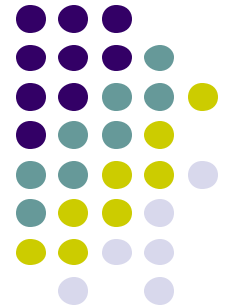


# Telecom Reforms in Indonesia: Current Achievements & Challenges

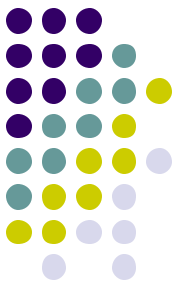
*Presentation at Seminar Bhakti POSTEL  
2006, Jakarta, September 21, 2006*

**Divakar Goswami**

**LIRNEasia**

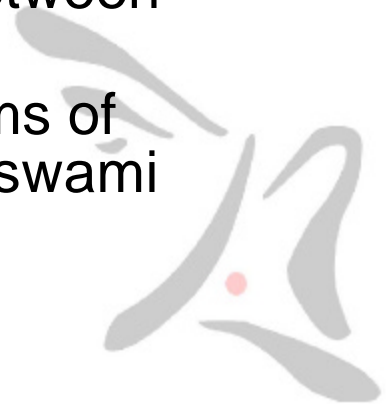


# Indonesia Leads in Bridging Digital Divide Says ITU Report

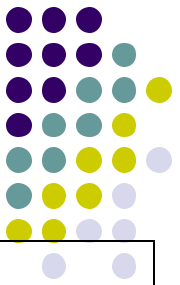


	<b>Economy</b>	<b>DOI 2001</b>	<b>DOI 2005</b>	<b>Change 2001-2005</b>	<b>Drivers (+,-,0)</b>
1	India	0.17	0.29	73%	0
2	China	0.29	0.42	46%	I
3	Russia	0.32	0.44	41%	I
4	Hungary	0.40	0.55	37%	I,U
5	Peru	0.28	0.38	37%	0,I,U
6	Indonesia	0.24	0.33	36%	0

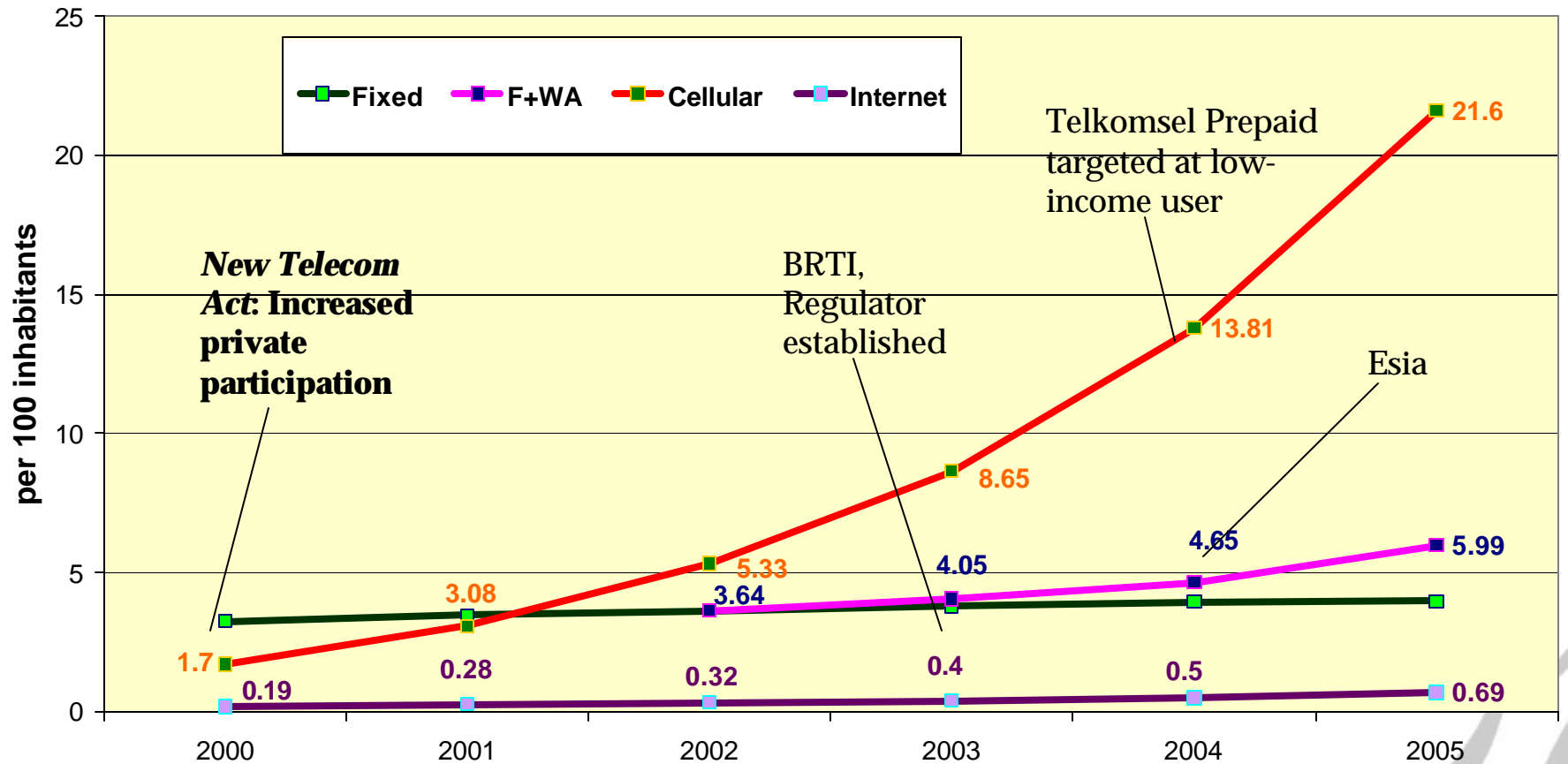
- Major gains by Indonesia in bridging digital divide between 2001-2005 according to Digital Opportunity Index.
- Driving factor is performance of mobile sector in terms of affordability & access thanks to COMPETITION (Goswami 2006)



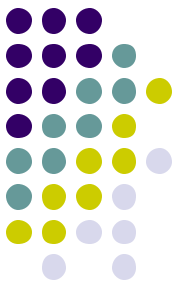
# Indonesia's ICT Sector Performance



Telecom growth in Indonesia

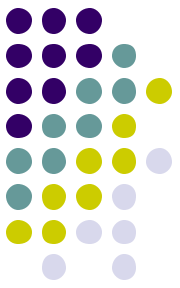


# Significant Policy Action Not Yet Captured in Data



- Well-received auction of 3G licenses, public consultations conducted.
- New Interconnection regime introduces greater transparency, mandates cost-oriented interconnection, provides “teeth” to regulator, promotes fixed-line competition.
- If price ceiling on domestic leased lines properly implemented will lead to progressive lowering of tariffs & may help Internet prices and diffusion.





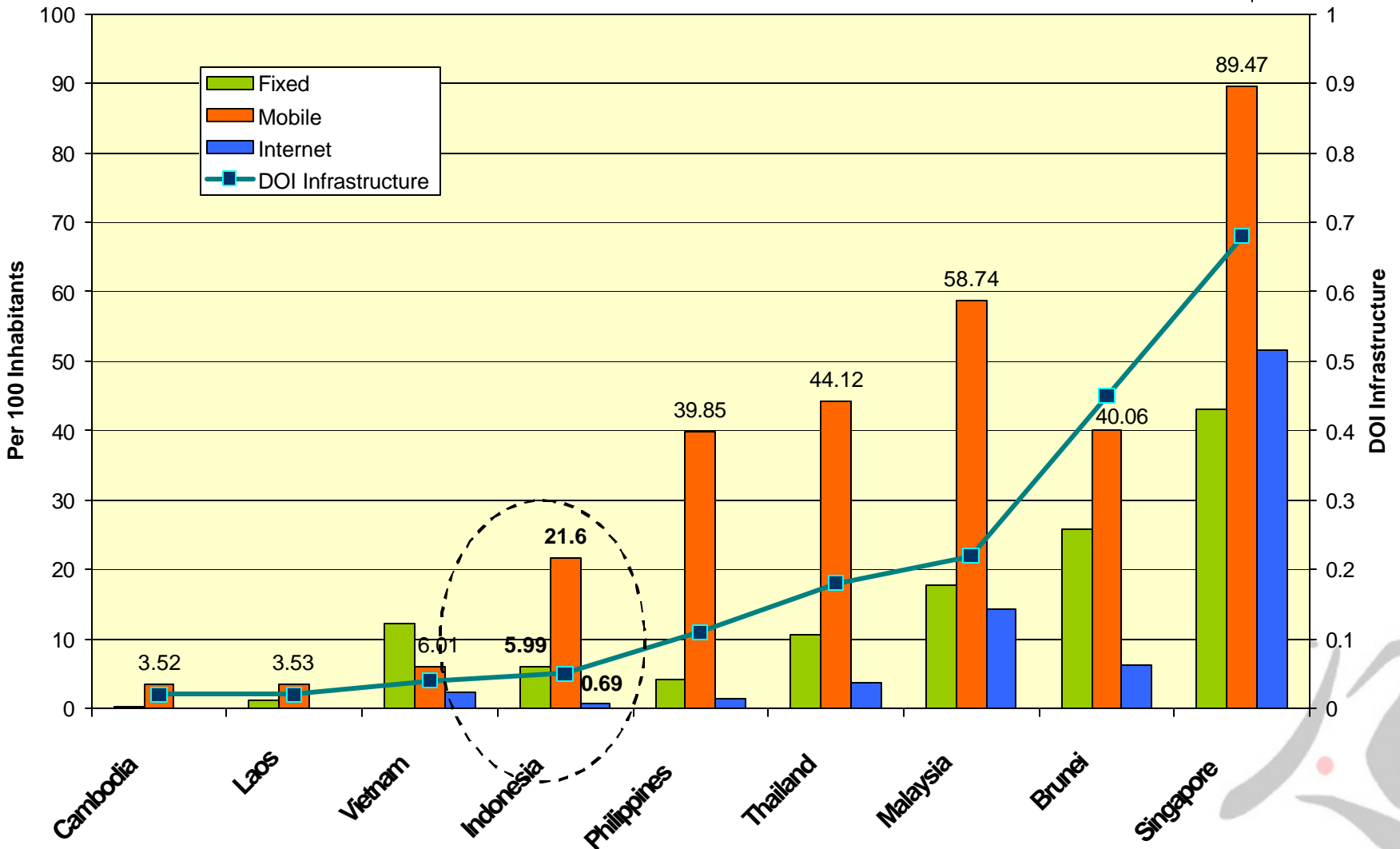
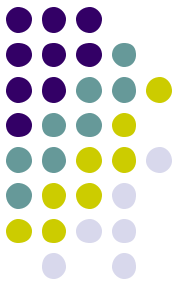
# Many Miles to Go...

- Indonesia ranks 105 out of 180 countries in DOI 2005 ranking.
- Ranking brought down by:
  - Slow growth of fixed-line affecting fixed teledensity & Internet services.
  - In 2005, nearly 60% of villages in Indonesia lacked a telephone, rural teledensity estimated at 0.2%.
  - Poor broadband penetration due to lack of competition.

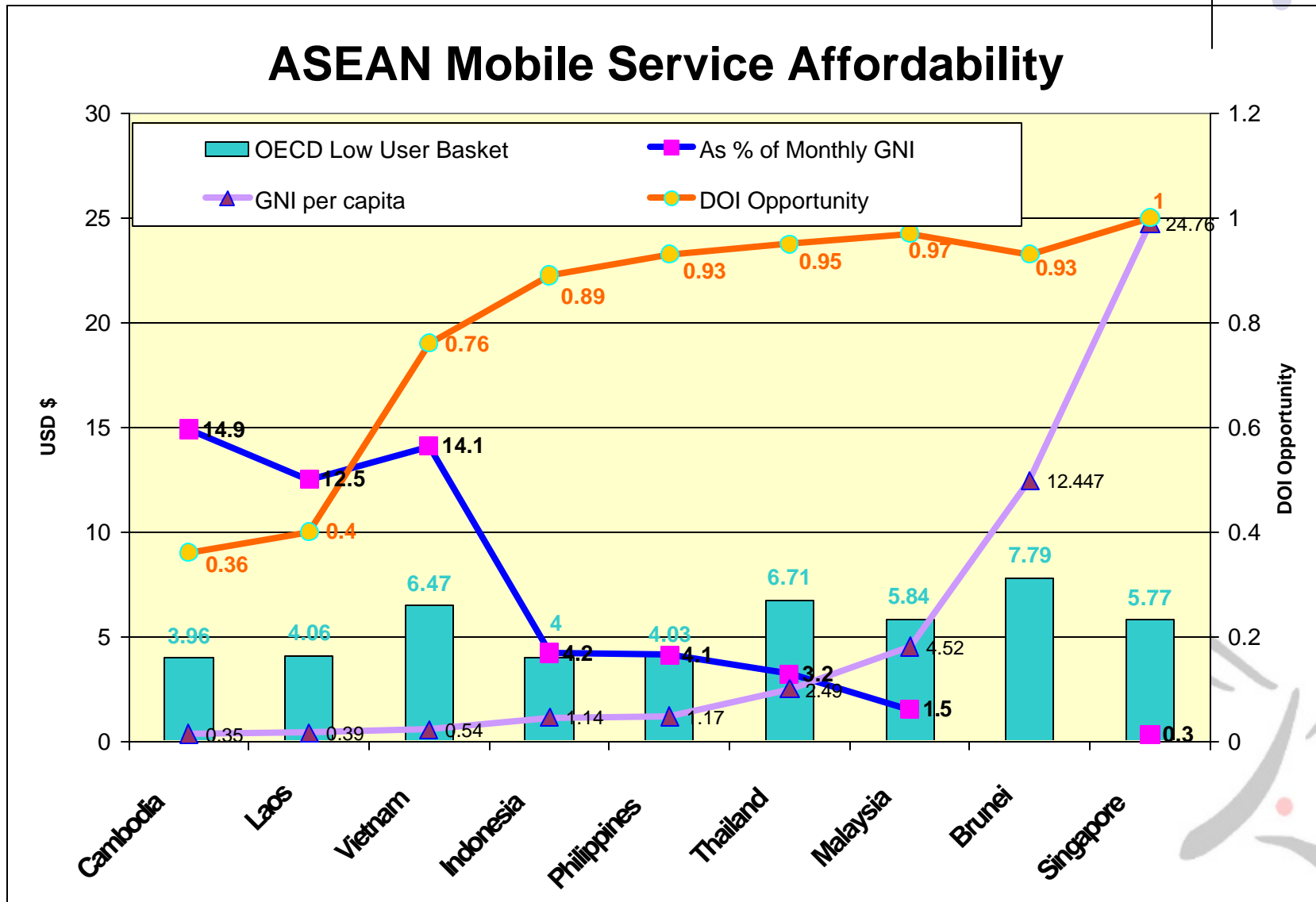
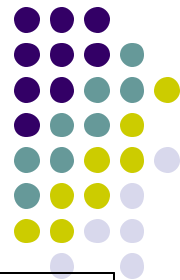


# Indonesia Benchmarked with ASEAN

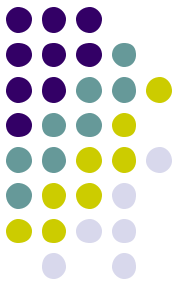
## ASEAN ICT Infrastructure



# Indonesia Benchmarked with ASEAN



# Strategies for Extending Access: Least-Cost Subsidy Auction (LSA)



- Inverse-bidding allows considerable cost saving: In Chile, six private dollars invested for each dollar of subsidy. In Peru, each subsidy dollar attracted two private dollars (Samarajiva 2002).
- When not properly designed there may be little savings, i.e., India where firms bid exactly the benchmark in many cases (Malik & De Silva 2005).





# Examples of Incumbent's Dominance in Poorly Designed LSA

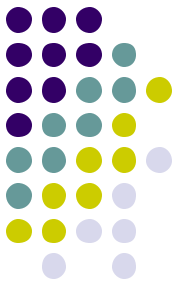


Comments
This includes support for 9171 VPTs installed by the Six Private BSO and remaining 5,09,775 VPTs installed by BSNL. This provides coverage of more than 90% of the villages where VPTs are to be provided. Firms participating in this auction bid exactly the benchmark.
Since the VPTs were mainly BSNL's, the subsidy went to BSNL with a zero cost reduction, bid exactly the benchmark

BSNL emerged successful for 12 service areas where six companies participated, BSNL had one-to-one competition with Bharti Cellular Ltd (BCL) in three service areas –Andhra Pradesh, Orissa and UP (West), comprising 6,221 VPTs (village public telephones), As a result of the competition in these three service areas, there was a reduction of 15-20 per cent in the overall subsidy to be given for VPTs. in the nine service areas BSNL was the sole bidder. Hence, BSNL emerged the winner in all the Service Areas



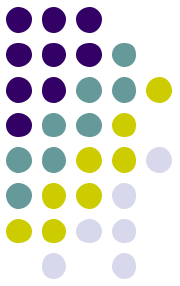
# Designing Effective LSAs



- May be difficult to get sufficient bids against incumbent in absence of transparent Access Regime that mandates cost-based access to backbone.
- Restricting participation to fixed line means bidding not open to competing, lower-cost technologies.
- India changed rules to allow USO fund to support GSM & CDMA services.
- Aug 31 2006 Indian Ministry has invited bids from mobile operators to install 10,000 towers in specified sites using LSA.



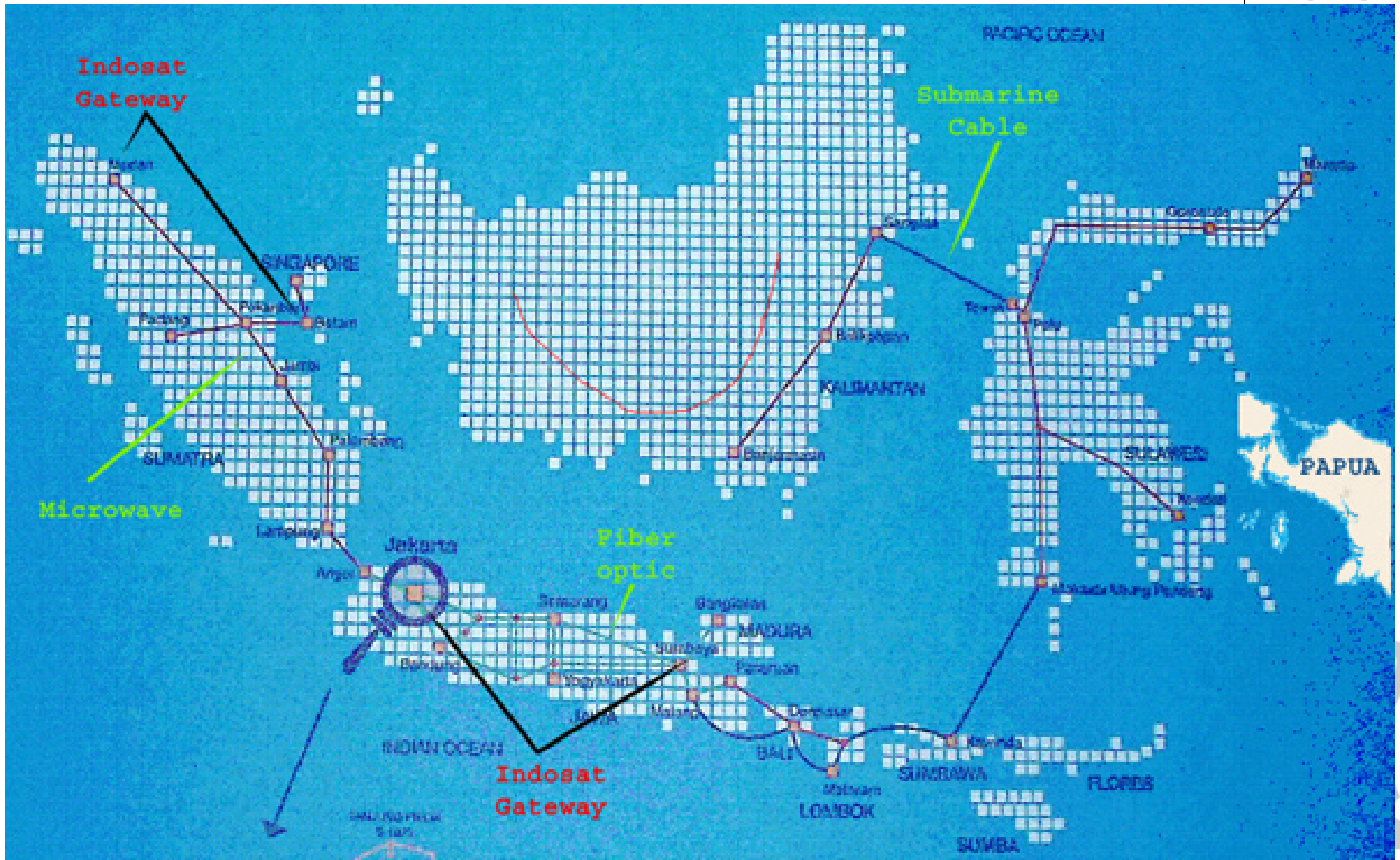
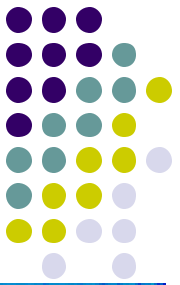
# LSA for extending Access



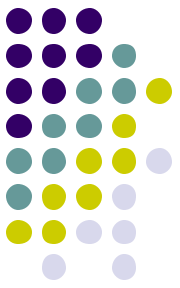
- Mobile subscribers outnumber fixed by nearly 4 times in Indonesia and offers lower-per-line cost.
- Indonesia's policymakers must allow existing FWA and Mobile operators to participate along with new entrants (cooperatives, regional firms etc.) in LSA.



# Indonesia's Uneven Infrastructure Development



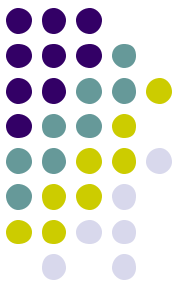
# Strategies for Extending Backbone: LSA



- Government funding of backbone may be financially unviable under current budgetary conditions.
- Indonesian Communication Minister, proposed to open up the backbone market to private investment using LSA.
- Access regime needs to be in place that specifies modalities for access to the new backbone infrastructure that would be rolled out.
- The license should also specify conditions and procedures for raising backbone access fees.
- Access Regime key to network development and competition.



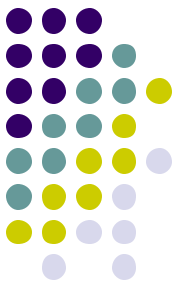
# Unified Licensing Regime (ULR): Strategies for Greater Competition



- Traditionally telecom regulation has provided different licenses for different services.
- Under convergence, regulatory regime must facilitate dynamic development of technology and product markets in technologically neutral manner (e-mail, SMS, etc)
- In India WLL was fixed by license but allotted spectrum provided unlimited mobility (Singh 2004). Mobility by “Stealth” introduced by operators via roaming.
- Tariff convergence between fixed and cellular gave rise to product substitution (Singh 2004).
- TRAI realized that convergence of markets and technologies was realigning industry and called for a new regulatory regime.
- ULR simplified licensing, provided level playing field and made entry easier

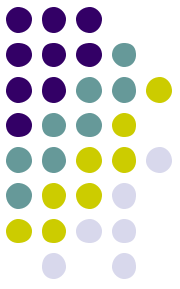


# Unified Licensing Regime (ULR): Strategies for Greater Competition



- In 2003, after extensive consultative process India adopted two phased regime starting with Universal ACCESS licensing regime for basic fixed & cellular.
- The second phase would involve full transition of all services to the ULR: national long distance, international long distance, Internet telephony etc.
- License fee, service area, rollout obligations under ULR same as for existing cellular service providers.
- Fixed operators paid difference between the last GSM entry fee and what they paid for fixed license.





# ULR for Indonesia

- If implemented in Indonesia, will lift significant barrier to fixed infrastructure development and foster greater competition in both fixed and mobile markets.
- Transition to Unified Licensing will allow CDMA operators full-mobility and introduce greater competition in mobile sector and allow GSM operators to offer innovative fixed wireless services.
- Will allow small operators to cover niche areas in particular rural, remote and less developed areas.

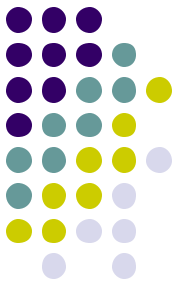
## Challenges:

- One Phase or two?
- Where will additional spectrum come from?
- Changes will required in existing law and Telecom Policy.



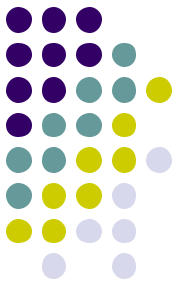


# References



- Divakar Goswami “DOI Applied to Indonesia: Assessing ICT Policy and Regulatory Environment,” Paper presented at the Digital Opportunity Forum, Seoul, Korea, August 31-September 1, 2006. Available here: [http://www.dof.or.kr/pdf/FPW-session6\(1\)-DivakarGoswami.pdf](http://www.dof.or.kr/pdf/FPW-session6(1)-DivakarGoswami.pdf)
- Rohan Samarajiva “Redefining universal service: Policy and regulatory actions,” ITU paper, 2002. Available: [www.itu.int/TELECOM/ast2002/cfp/pap\\_5195.doc](http://www.itu.int/TELECOM/ast2002/cfp/pap_5195.doc)
- Payal Malik & Harsha De Silva “Diversifying Network Participation: Study of India’s Universal Service Instruments,” WDR Paper 504, 2005. Available: <http://www.regulateonline.org/content/view/575/31/>
- Rajendra Singh “Unified Licensing Regime in India,” Workshop on convergent regulation, ITU, Geneva, 2005. Available: [http://www.itu.int/ITU-T/worksem/conreg/abstract/conreg\\_0504\\_sapna\\_sharma\\_abs.pdf](http://www.itu.int/ITU-T/worksem/conreg/abstract/conreg_0504_sapna_sharma_abs.pdf)





# Divakar Goswami

[goswami@lirne.net](mailto:goswami@lirne.net)

**Research on Indonesia's ICT sector, Least-cost  
subsidy auction studies of India & Nepal, Asian  
Backbone Study:**

**<http://www.lirneasia.net/projects/>**

