

Network-based Speech-to-Speech Translation

National Institute of Information and Communications Technology, Japan

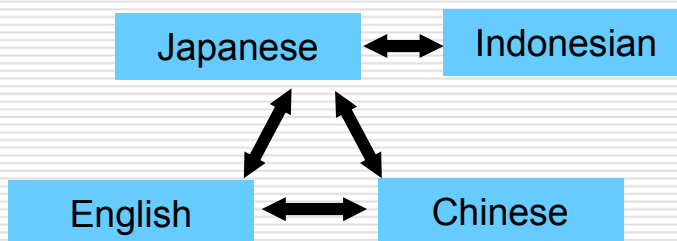
Chiori HORI, Sakriani SAKTI, Michael PAUL, Satoshi NAKAMURA

Stand Alone and Client-server S2ST Systems

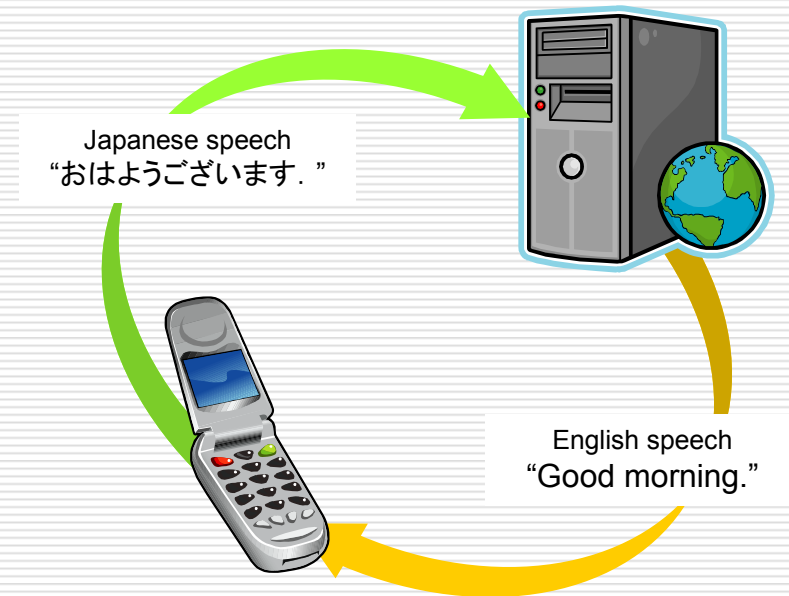
Stand alone system



Packages the entire speech translation functions into a handheld PC



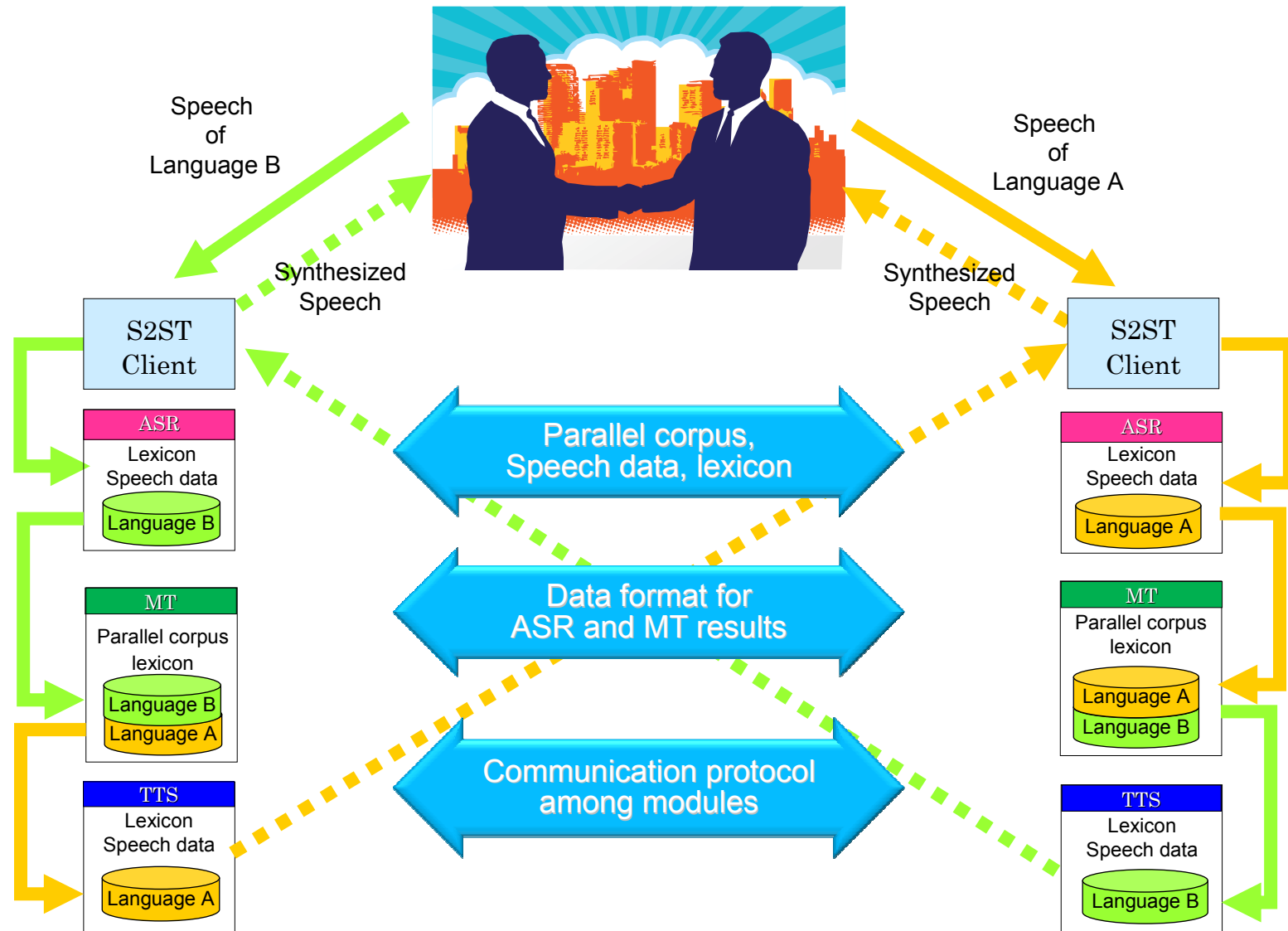
Client-server system



Why Network-based?

- ❑ Resource limitation in stand alone systems and language pairs are limited.
 - ❑ ASR/MT/TTS systems for many languages are available and needs to be maintained by each country.
 - ❑ Broadband network is available.
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Common Protocols on Network-based S2ST



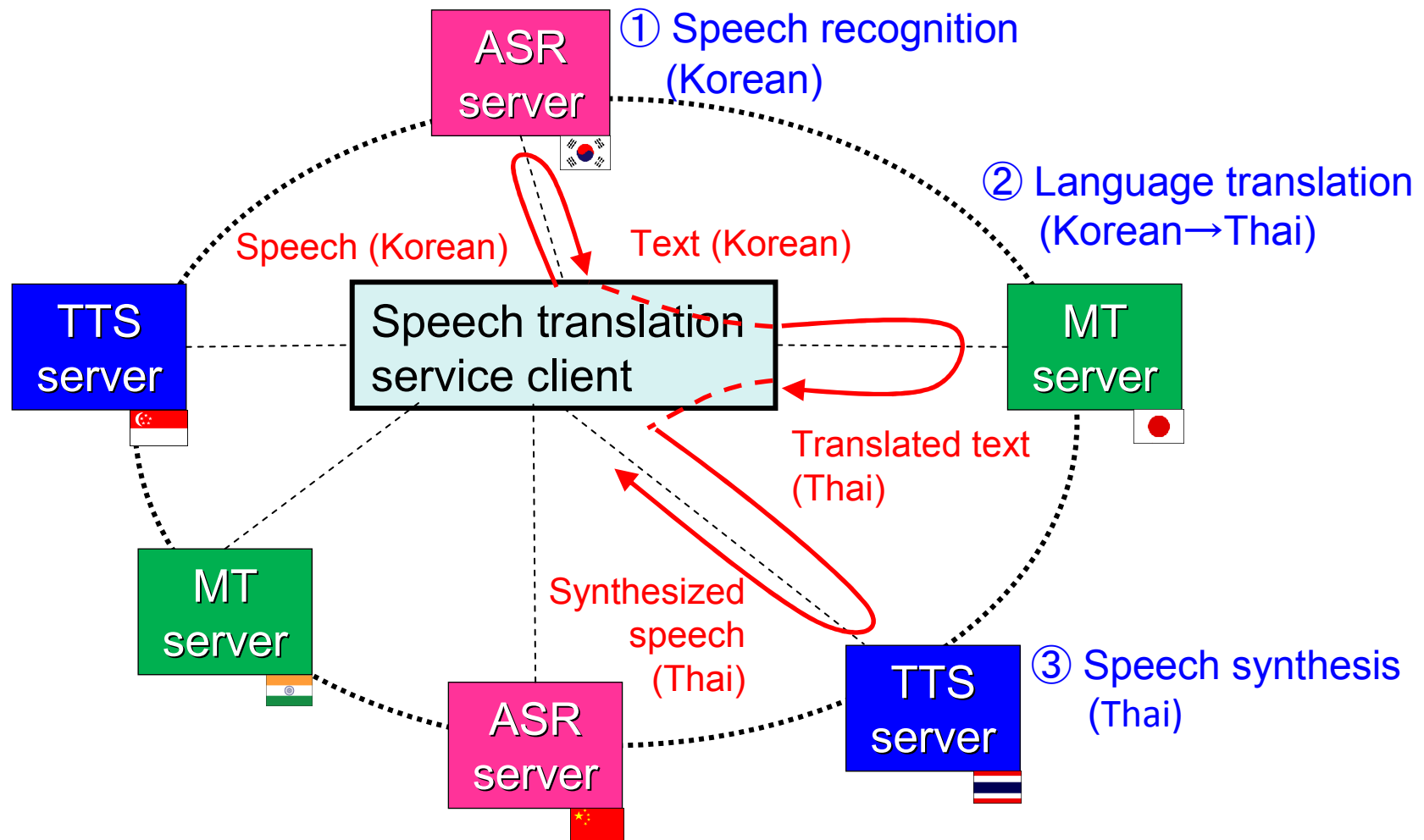
Lexicon for overall S2ST systems

An example of a lexicon for overall modules in S2ST systems

Entry	Language				Attribute
	Japanese	Korean	Chinese	English	
Osaka	大阪 おおさか  4モーラ0型	오사카 Osaka ..	大阪 ダーバン Daban Da4ban3 四声三声	Osaka Ōsaka o : s a k a	Surface Pronunciation Accent
Tokyo	東京 とうきょう	東京 トンジン Tong1jing1 ..	Tokyo Tōkyō ..	Surface Pronunciation Accent

Speech Translation using Distributed Service Servers

Example: From Korean to Thai Speech Translation



Asian Network-Based S2ST System by **A-STAR Consortium**

¹National Institute of Information and Communications Technology (NICT), Japan

²Electronics and Telecommunications Research Institute (ETRI), Korea

³Chinese Academy of Sciences (CASIA), China

⁴National Electronics and Computer Technology Center (NECTEC), Thailand

⁵Agency for the Assessment and Application of Technology (BPPT), Indonesia

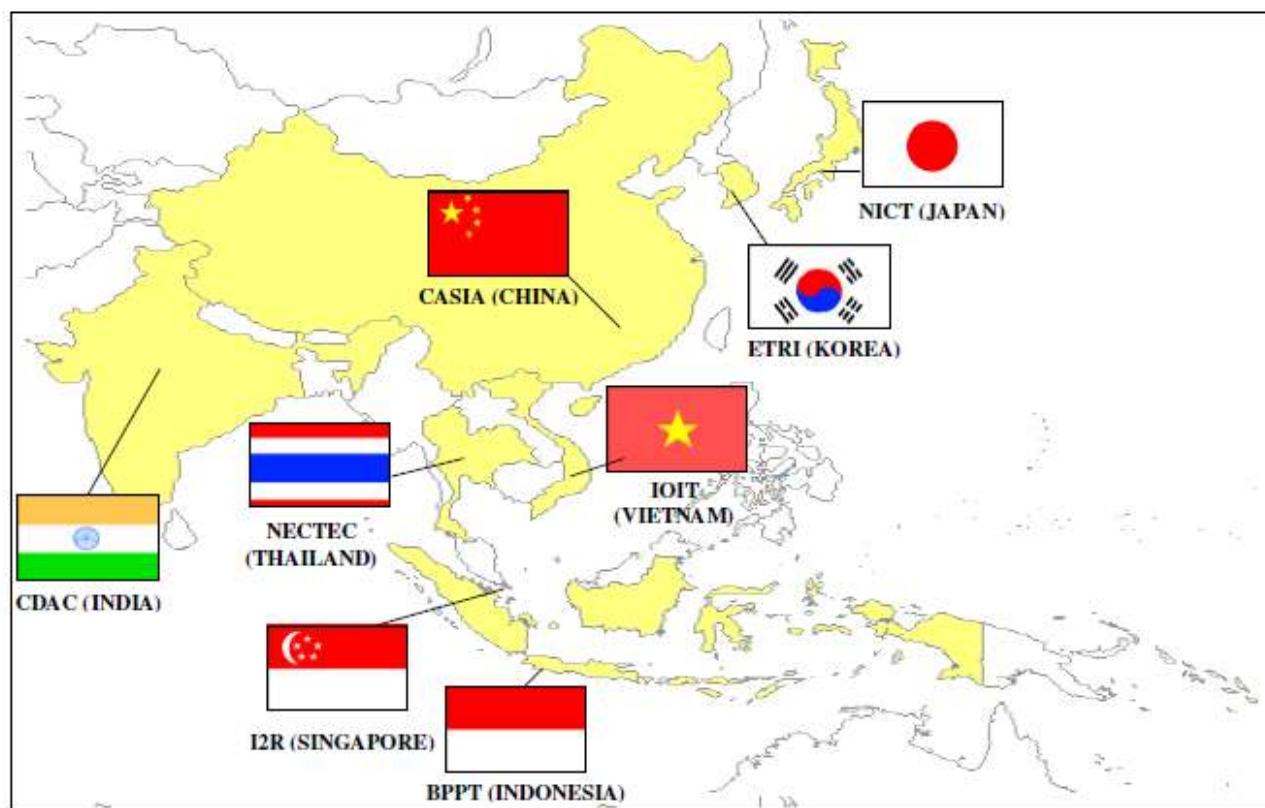
⁶Center for Development of Advance Computing (CDAC), India

⁷Institute of Information Technology (IOIT), Vietnam

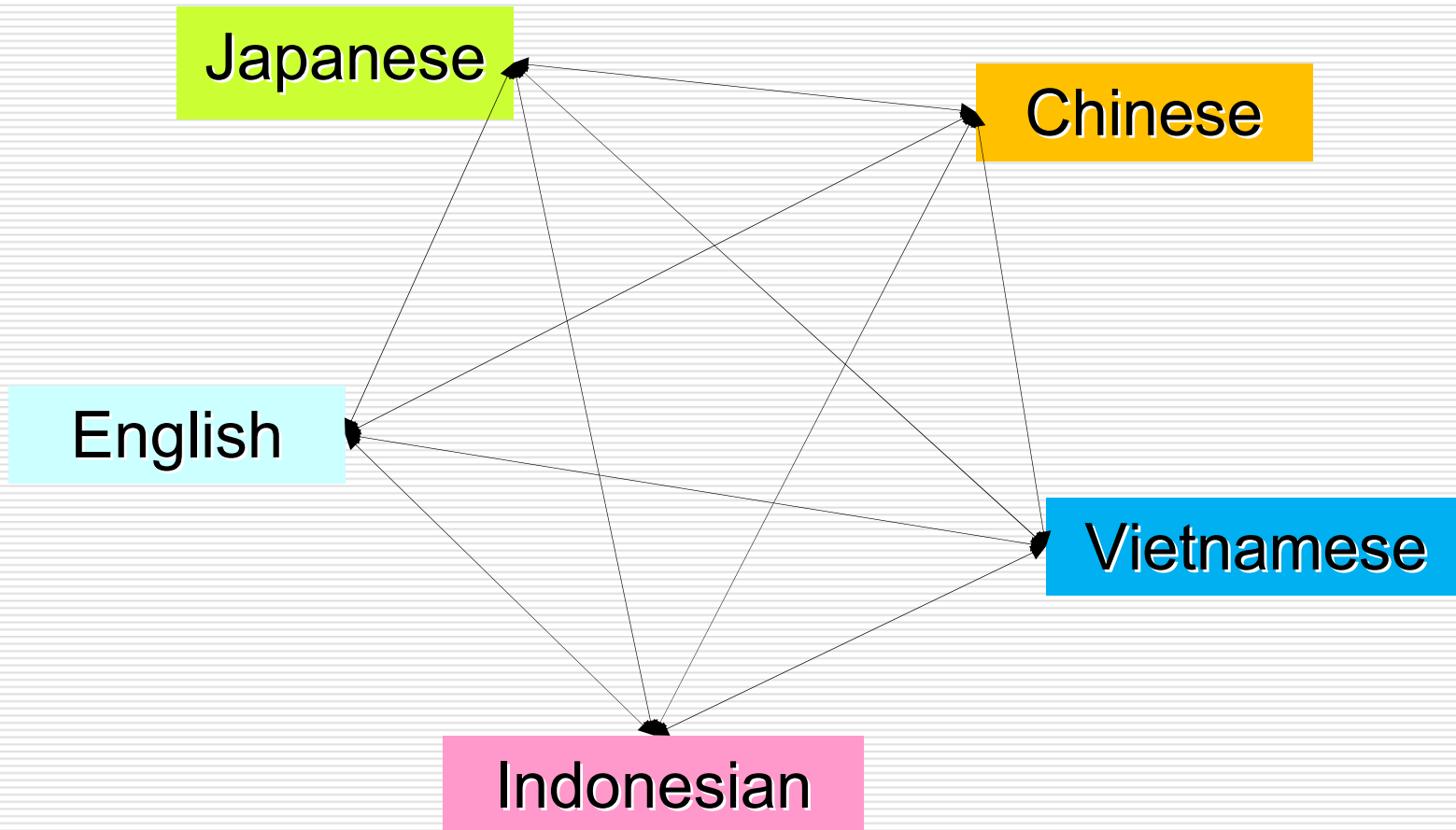
⁸Institute for Infocomm Research (I2R), Singapore

Server Location for Network-based S2ST

Asian Speech Translation Advanced Research (A-STAR) Consortium



NICT Network-based S2ST system



Network-based S2ST Systems

