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# Small Payment Business in Japan

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Nomura Research Institute, Ltd.  
Consulting Sector  
Financial Business Consulting Department

**Hiromichi Yasuoka (Senior Consultant)**

〒 100-0005  
Marunouchi Kitaguchi Building, 1-6-5 Marunouchi, Chiyoda-ku,  
Tokyo 100-0005, Japan

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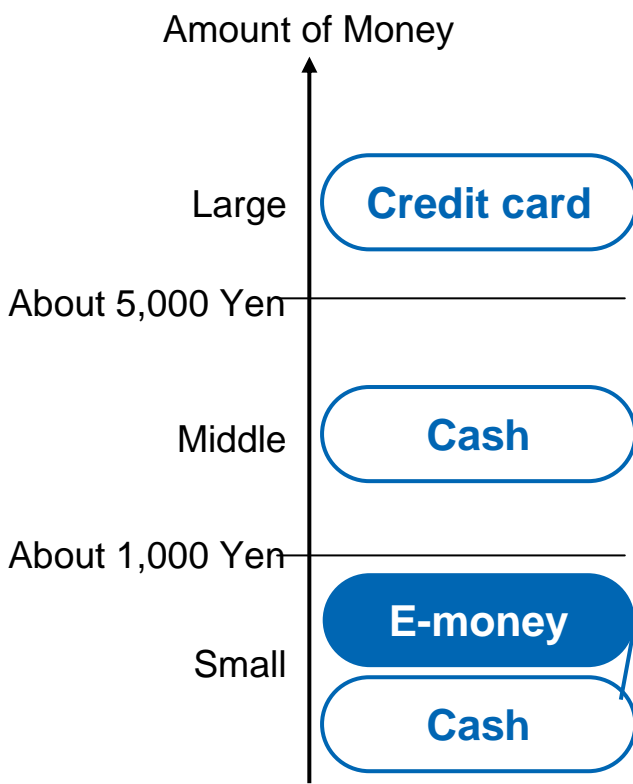
Future potential (globalization, use of OpenID)

Summary

E-money has achieved widespread use in the Japanese small payment market. There are particular merits for enterprises that combine small payment services with their core businesses.

- Credit cards are an instrument of settling large payments, while e-money is used to settle small payments.
- While it is difficult for enterprises to earn profits just from e-money services, enterprises that already have large customer bases may see benefits from combining e-money services with their core businesses.

Primary instruments by payment amount



Difficult for e-money to earn profits on its own

- Average usage value is only about 700 to 750 yen per transaction, requiring extremely large transaction volumes in order to earn profits just on commissions
- Expenditures are large: systems operations, assistance to merchants installing terminals, call center operations etc.

Overview of e-money usage and market (P. 3-6)



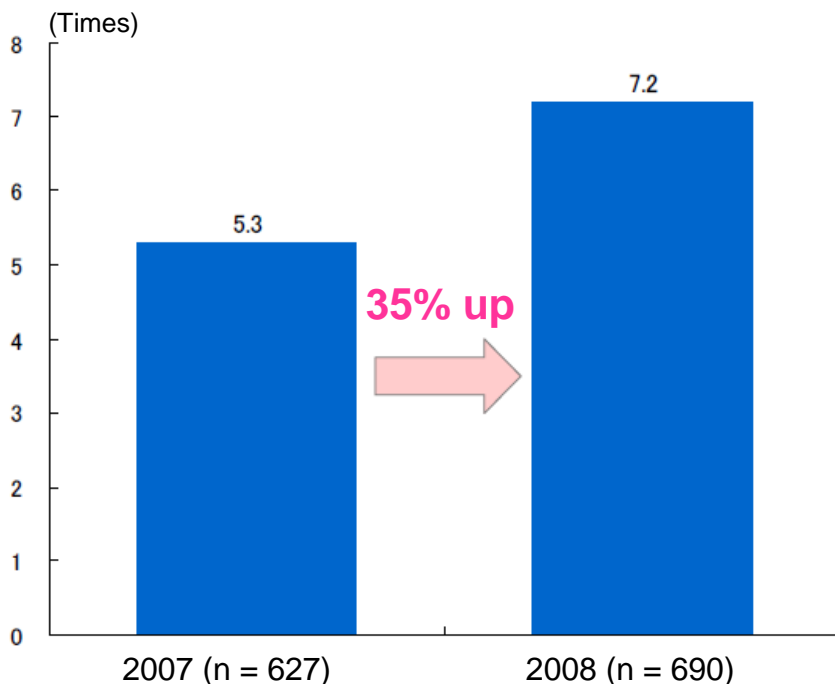
Potential benefits from combination with core business

- Common: Access to detailed customer behavior data
- Railways: Ticket gate maintenance cost savings
- Retail: Shorter checkout times because cash is not used
- Airlines: Embeds brand in day-to-day life

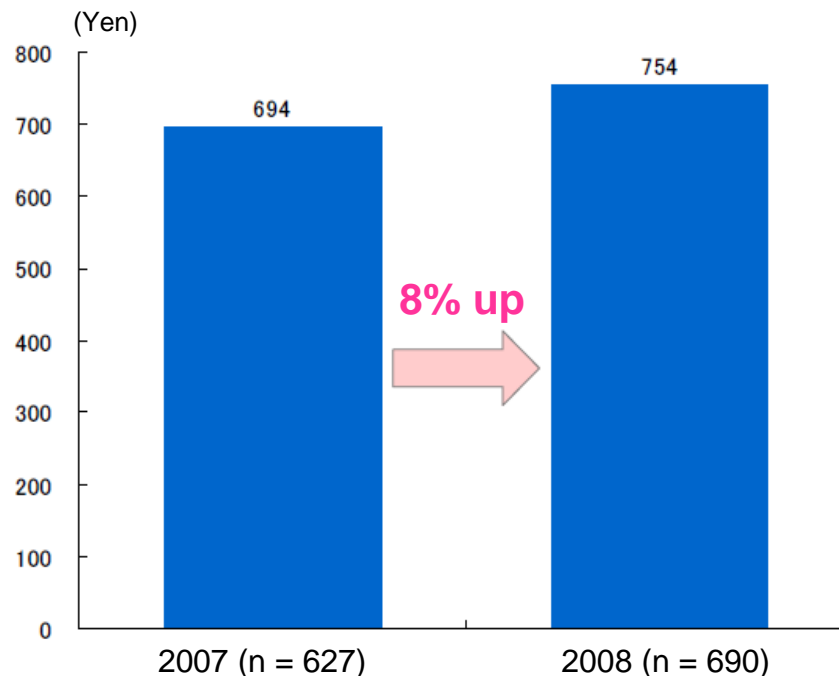
E-money benefits and partnerships (P. 7-9)

Average e-money usage is approximately 7 times/month; average transaction value is approximately 750 yen/transaction and growing. Monthly average usage value (aggregate) has grown to approximately 5,600 yen as instruments have achieved greater penetration.

Average number of transactions (per month) with most commonly used e-money



Average transaction value (per month) with most commonly used e-money



Note 1: Monthly figures were the weighted average of the number of respondents.

Average number of transactions: 31 times and more = 31  
 Average transaction value: 3,000 yen and more = 3,000 yen  
 Average usage value: 30,000 yen and more = 30,000 yen

Note 2: "Monthly usage value," "monthly number of transactions" and "transaction value" were figured based on separate questions, so "monthly usage value" does not equal "monthly number of transactions" x "transaction value."

Source: NRI, "Survey on E-Money," conducted in May 2007 and June 2008 (n = 2,000) [4 major cities: Tokyo, Osaka, Nagoya and Fukuoka]

Overview of the small payment market      E-money operators and issuing volumes  
 In contactless IC payment business, transportation services and retail services are competing on prepaid instruments, while postpaid instruments have been slower to develop.

- Contactless IC payments consist of prepaid and postpaid instruments. In Japan, the FeliCa system is used for both.
- Prepaid instruments are called "e-money."
  - Feasibility tests were conducted for e-money in the 1990s, but ended in failure because they only provided payment and settlement services and had few benefits to consumers.
  - E-money achieved expansion only later as railway operators and retailers moved aggressively into this arena to exploit the benefits from combining e-money with their core businesses.
- Credit card companies have taken the lead in promoting postpaid electronic payments, but have been unable to achieve significant growth in the user base.

### Major e-money instruments (prepaid)

Classification	Operator	Name of service
Railway	East Japan Railway	Suica
	West Japan Railway	ICOCA
	Kanto private railways	PASMO
Retail	7&i	nanaco
	Aeon	WAON
Independent	bitWallet (Tie up with All Nippon Airways etc.)	Edy

**90 million cards**

### Major electronic payment instruments (postpaid)

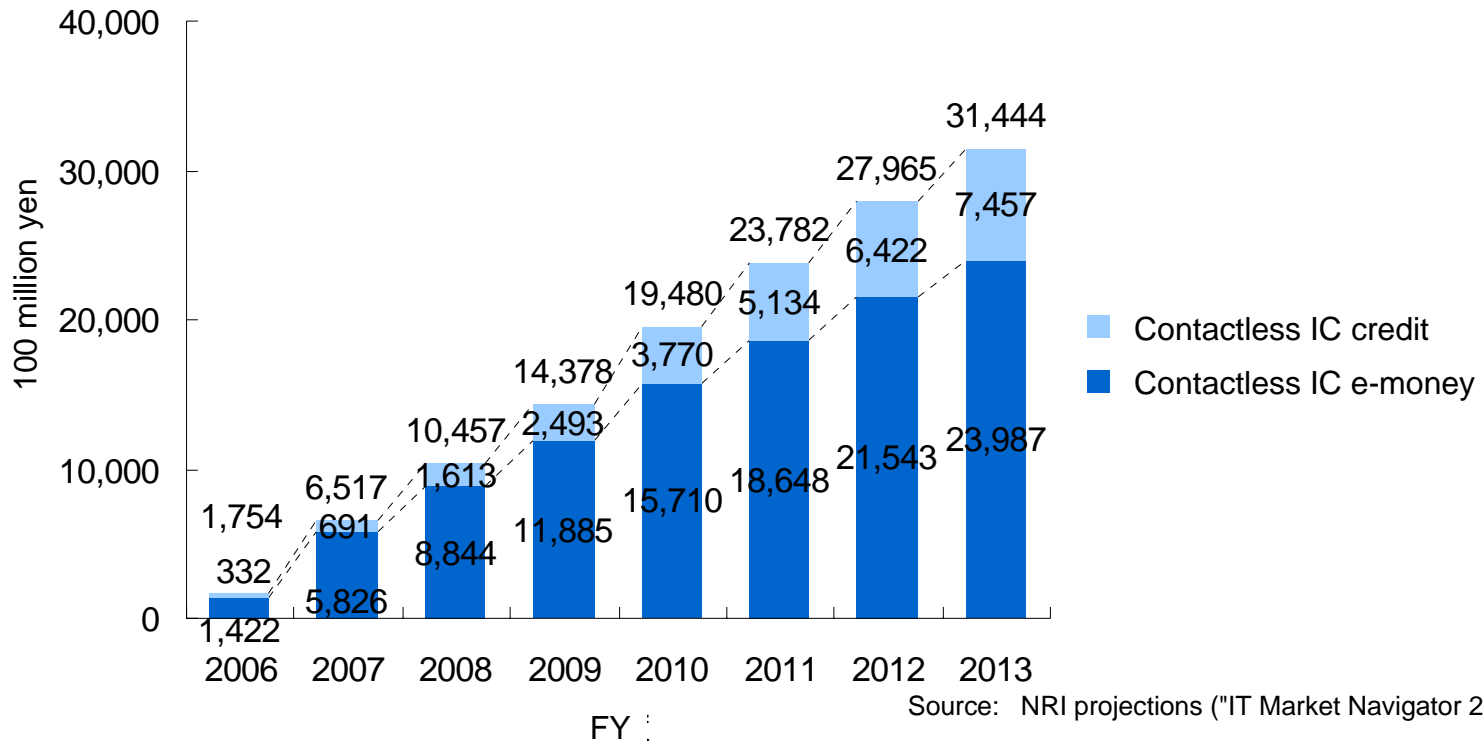
Classification	Operator	Name of service
Credit card	NTT docomo Sumitomo Mitsui Card etc.	iD
	Mitsubishi UFJ Nicos	Visa Touch (Smart Plus)
	JCB	QUICPay
Railway	Kansai private railways	PiTaPa

**15 million cards**

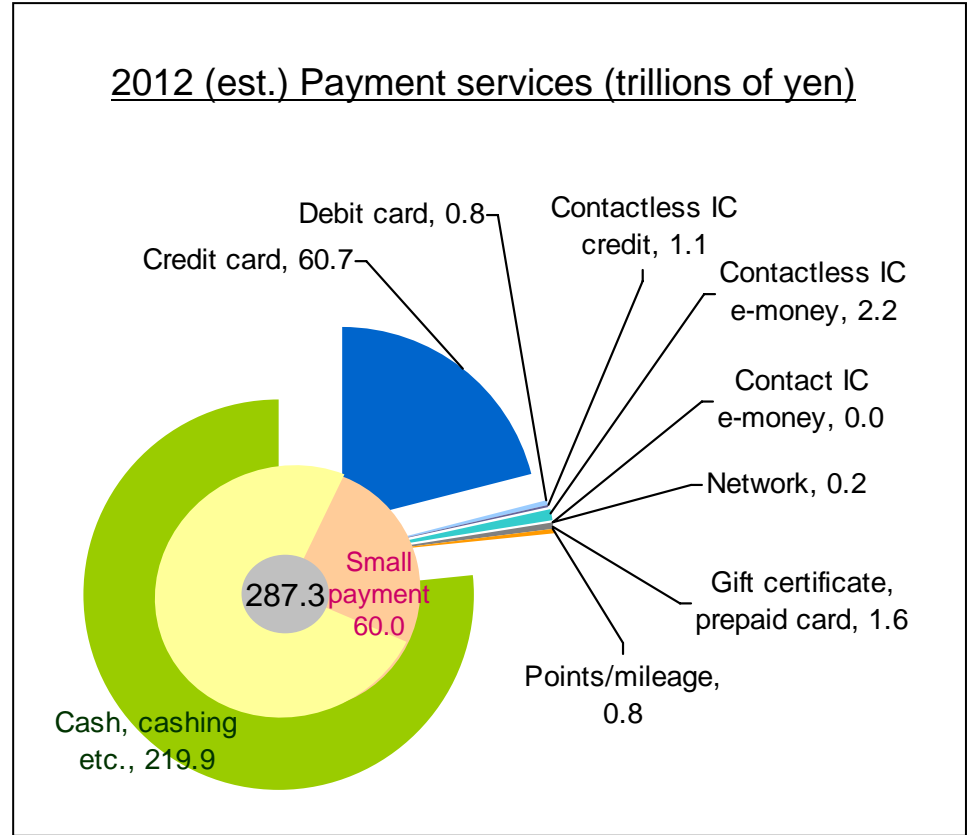
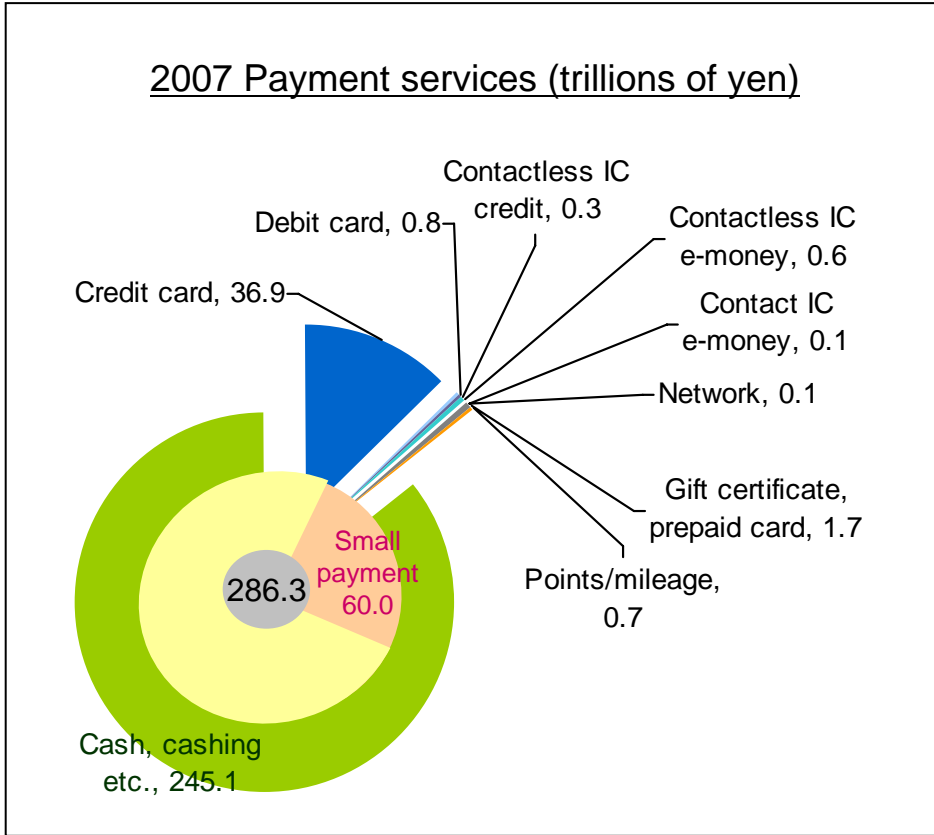


Contactless IC payments grew from 175.4 billion yen in FY 2006 to more than 1 trillion yen this fiscal year and are projected to reach 3,144.4 billion yen in FY 2013.

- The size of the market expanded in FY 2007 with the entry of PASMO, nanaco and WAON.
- There was a temporary slowdown in FY 2008 from the reasons such as points were not awarded when the cards were charged using credit cards and others. On the other hand, there was market expansion such as local railways (West Japan Railway, Hokkaido Railway) have introduced e-money services, and "Pidel" (function included on "taspo" tobacco age verification cards) has begun.
- The number of types of e-money on the market is expected to increase in the future.
  - Local railways (Kyushu Railway, Shikoku Railway, Nagoya Railroad etc.)
  - Local governments



Current growth rates indicate that "credit cards" will experience the sharpest growth of any payment service. While "e-money" will grow, it still lacks presence.

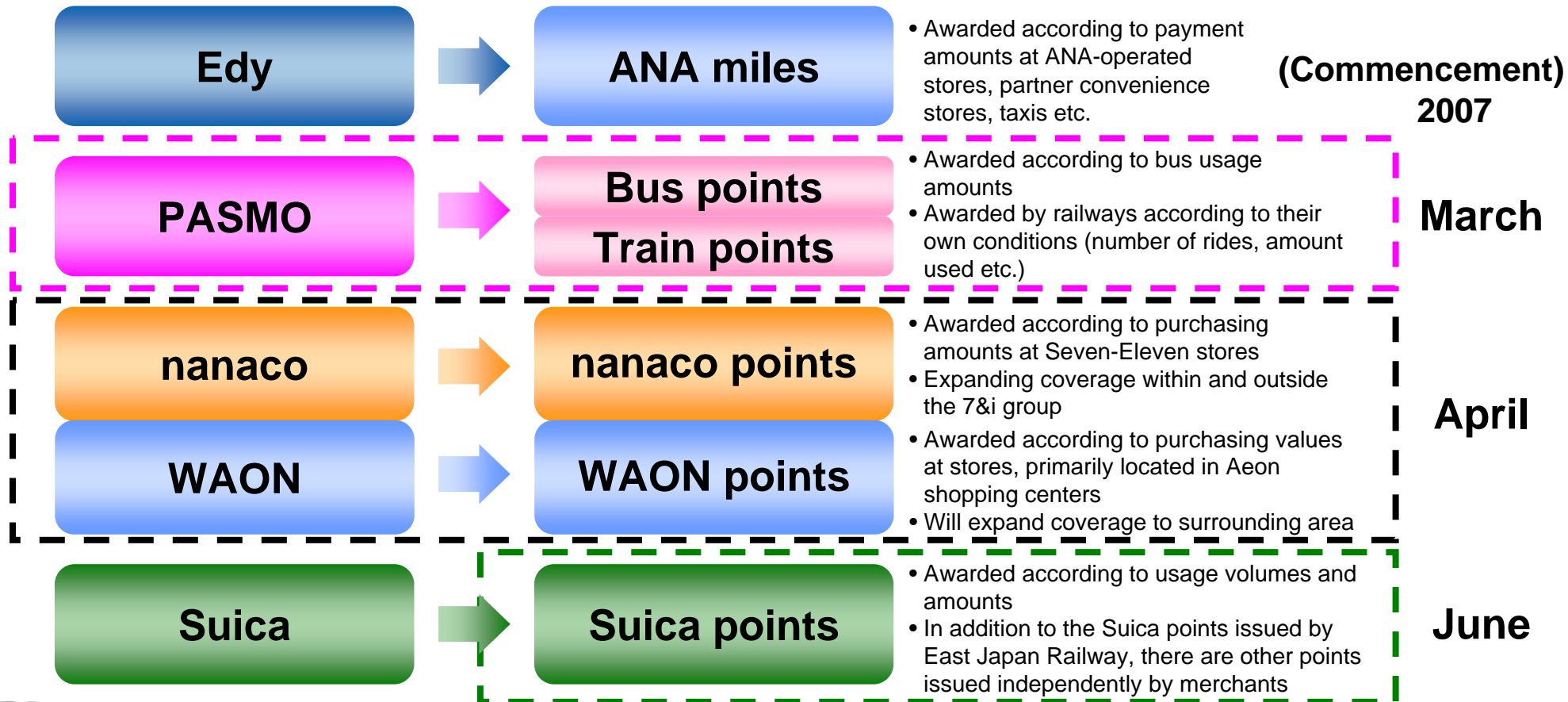


Source:  
 Totals: Ministry of Internal Affairs and Communications, "Private-Sector Final Consumption Expenditures;" debit cards: J-Debit website;  
 Small payments market, contact IC e-money, network, prepaid card, gift certificates: Yano Research Institute, "Prepaid Payment Market 2007;"  
 "Credit card" C.media "Survey of Electronic Payments 2007-2008;"  
 Contactless IC credit, contactless IC e-money points/mileage: Created by NRI from NRI, "IT Market Navigator 2008" and "Enterprise Currency Marketing from a Global Perspective"

Overview of the small payment market      Attractions of e-money  
 Use of e-money earns points and miles.  
 (Synergy between e-money and points)

- Use of major e-money instruments (prepaid) earns points and miles.
  - A single card or Osaifu-keitai completes both "payment and settlement" and "point awards."

Point programs in the Tokyo metropolitan area for major forms of e-money

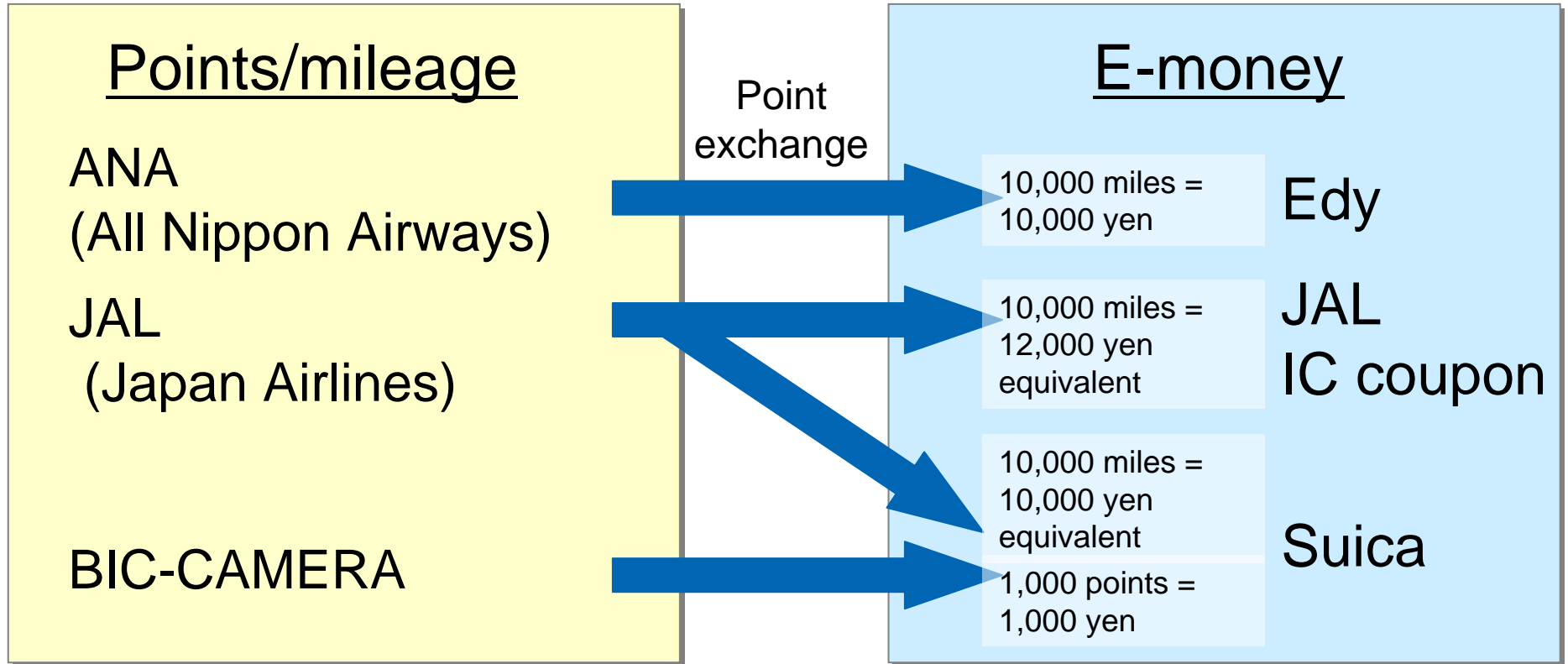




Overview of the small payment market      Attractions of e-money  
Points and miles can be exchanged for e-money.  
(Synergy between e-money and points)

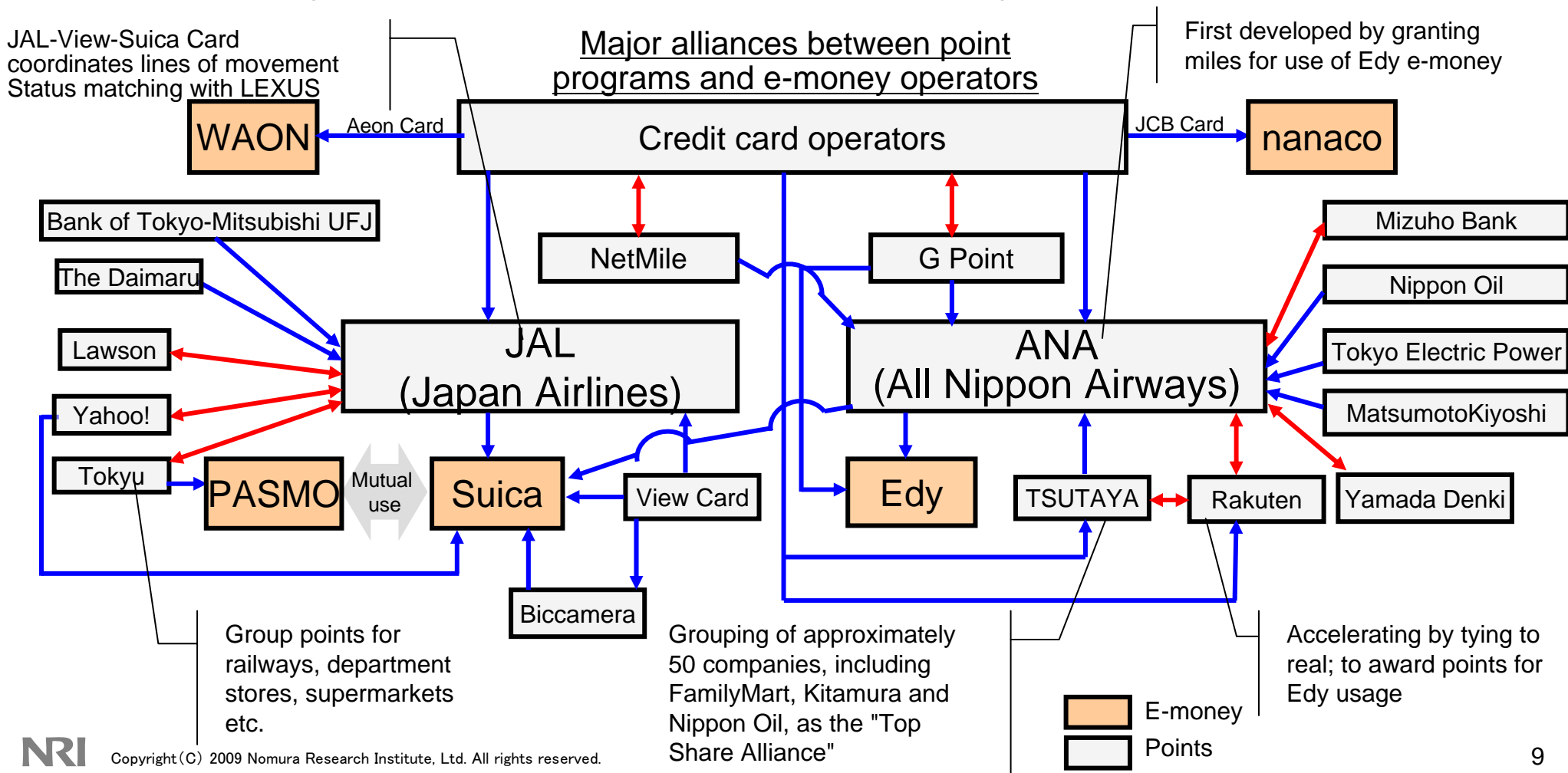
- From the marketing approach, e-money has become one of the exits for points and miles.

Major point programs can be exchanged for e-money




Both e-money and point/mileage programs have transformed into tools for corporate alliances, driven primarily by the airlines.

- Point programs have 4 primary purposes: 1) Retaining customers, 2) Developing valued customers, 3) Attracting new customers and 4) Sharing customers
- The top-ranked sectors for which consumers intentionally collect points are oriented towards day-to-day life (supermarkets, drugstores, consumer electronics stores, cellular phones, gas stations)



There are laws governing enterprise currencies used in small payments (e-money, points), but the treatment is different. The Financial Services Agency (FSA) and Ministry of Economy, Trade and Industry (METI) have very recently provided direction.

Scope of use	Classification	Current treatment	Applicable regulation		
			Consumer protection	Competition policy	Accounting treatment
	<b>E-money</b> (Media type)	Prepaid Card	<ul style="list-style-type: none"> <li>■ Issuer registers with Local Finance Bureau</li> <li>■ Half of outstanding balance deposited (Prepaid Cards Law)</li> <li>■ (Act on the Protection of Personal Information)</li> </ul>	N/A	<ul style="list-style-type: none"> <li>■ Posted as sales at time of issue and cost at time of use</li> <li>Or</li> <li>■ Posted as deposit taking at time of issue and withdrawal at time of use (Accounting Rules)</li> </ul>
	<b>E-money</b> (Server type)	Undefined →As the above	<ul style="list-style-type: none"> <li>■ (Act on the Protection of Personal Information)</li> </ul>		
	<b>Common points</b> (In circulation)	Premium gifts	<ul style="list-style-type: none"> <li>■ (Act on the Protection of Personal Information)</li> </ul>	<ul style="list-style-type: none"> <li>■ Total issuable points and other premiums to be within 20% of the transaction value (Act against Unjustifiable Premiums and Misleading Representations)</li> </ul>	<ul style="list-style-type: none"> <li>■ Notional usage amount reserved at time of issue (Accounting Rules)</li> </ul>
	<b>Own points</b> (Not in circulation)	Discount	<ul style="list-style-type: none"> <li>■ (Act on the Protection of Personal Information)</li> </ul>	<ul style="list-style-type: none"> <li>■ Issuable points to be within the difference between sales price and cost (Anti-Monopoly Law)</li> </ul>	<ul style="list-style-type: none"> <li>■ Notional usage amount reserved at time of issue (Accounting Rules)</li> </ul>

Note: Exceptional cases provided for all  
Source: NRI

Small payment businesses using "Osaifu-keitai"

Osaifu-keitai business

"Osaifu-keitai" = "Cellular phone" + "Contactless IC (including e-money)"

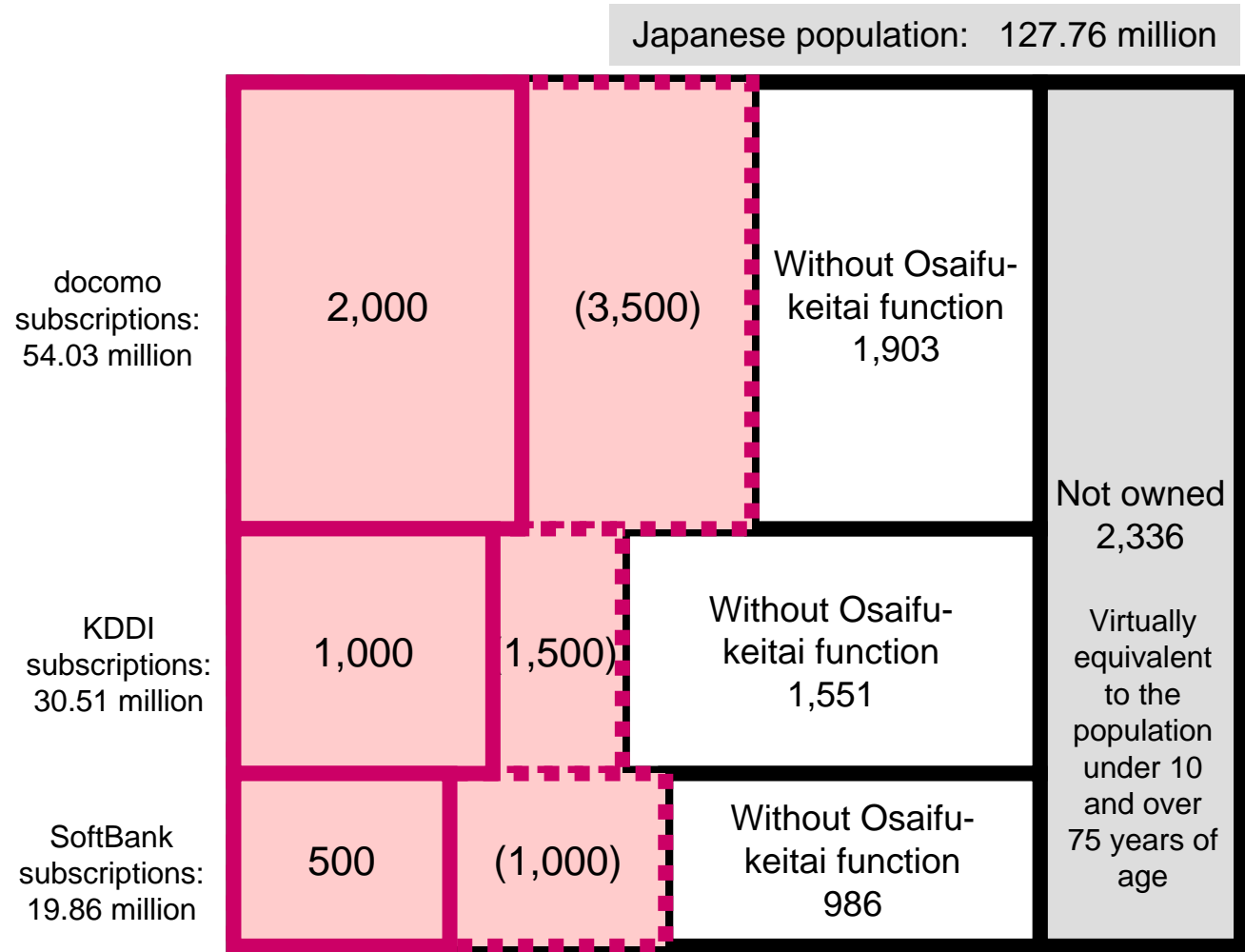
- New value has been created by combining the security and convenience of contactless ICs with the communications functions and usability of cellular phones.



Small payment businesses using "Osaifu-keitai"      Osaifu-keitai handsets  
 More than 100 million cellular phone subscriptions.  
 Of which, more than half are expected to be Osaifu-keitai handsets (users).

■ Size of Osaifu-keitai market

- NTT docomo
  - 20 million subscriptions
  - March 8, 2007
  - ⇒ Currently approximately 35 million subscriptions
- au (KDDI)
  - 10 million subscriptions
  - November 25, 2007
  - ⇒ Currently approximately 15 million subscriptions
- SoftBank
  - 5 million subscriptions
  - September 25, 2007
  - ⇒ Currently approximately 10 million subscriptions



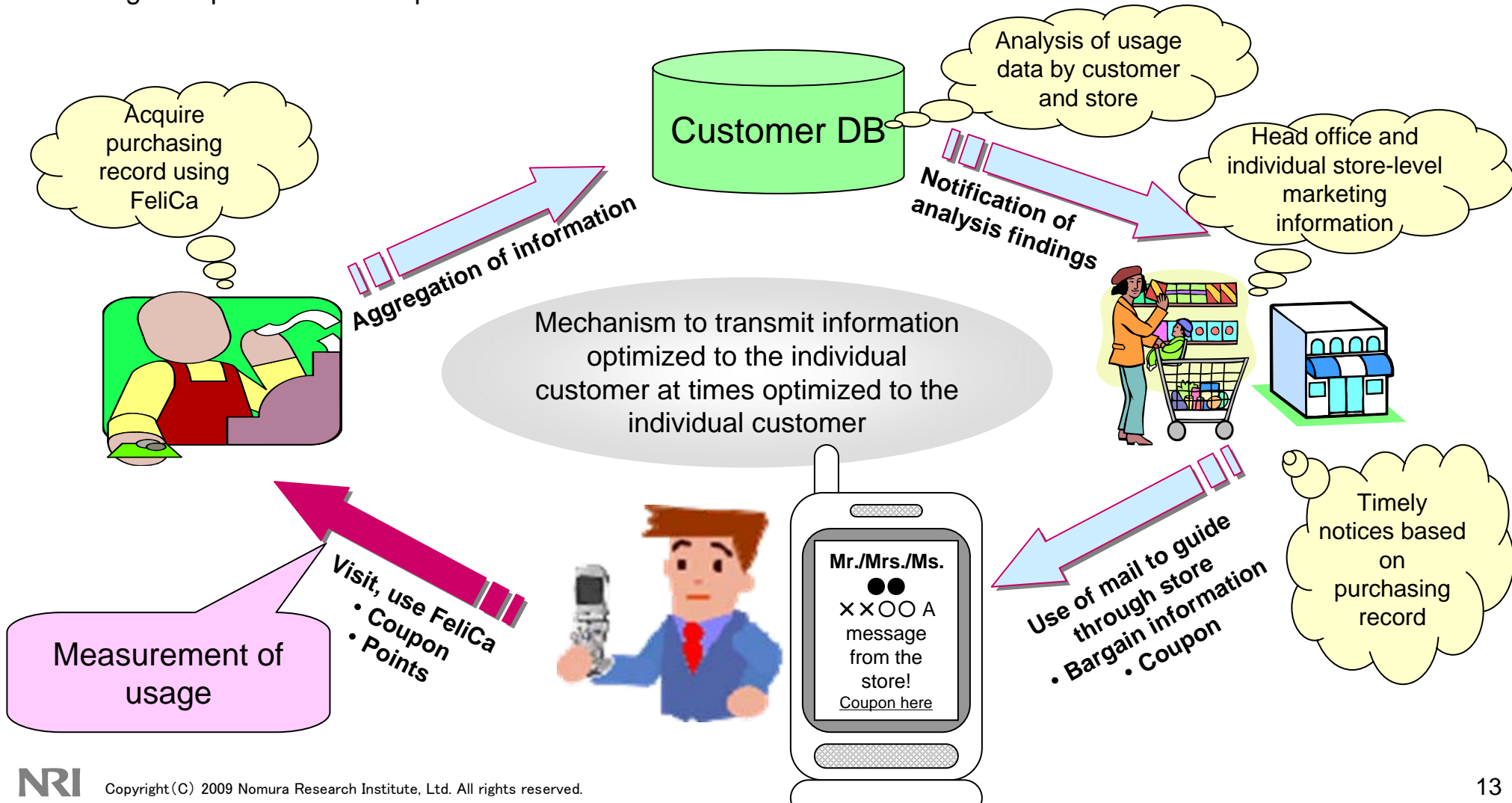
Cellular phone subscriptions: 105.42 million (the end of November 2008)

# Small payment businesses using "Osaifu-keitai"

# Osaifu-keitai services

## Use of Osaifu-keitai transformed the CRM workflow into "something valuable."

- Osaifu-keitai can be used as a CRM (Customer Relationship Management) tool to guide individual customers through the premises in an optimal manner.



Future potential (globalization) Spread of electronic payment

Transportation segment IC cards are the only instruments to have spread overseas. Credit card companies are expected to begin full-fledged promotion in the future. International alliances may prove interesting.

- Many cities have already implemented contactless IC transportation tickets.
- VISA's payWave and MasterCard's PayPass are expected to spread.

### Major e-money instruments (prepaid)

Classification	Location	Name of service
Railway	UK, London	Oyster
	China, Shanghai	Shanghai Public Transportation Card
	China, Beijing	Beijing Public Transportation Card
	China, Shenzhen	Shenzhen Transcard
	China, Hong Kong	Octopas
	Korea	T-Money
	Taiwan, Taipei	Easy Card
	Taiwan, Kaohsiung	I Pass
	Malaysia	Touch'n Go
	Singapore	EZ-Link
	Thailand, Bangkok	Bangkok Metro Smart Card
Retail etc.	Taiwan, Seven-Eleven	ICash
	Singapore, NETs	Cash Card (contact IC)
	Thailand, TSCC	Smart Purse
Public Card	Malaysia	MyKad/MEPS Cash

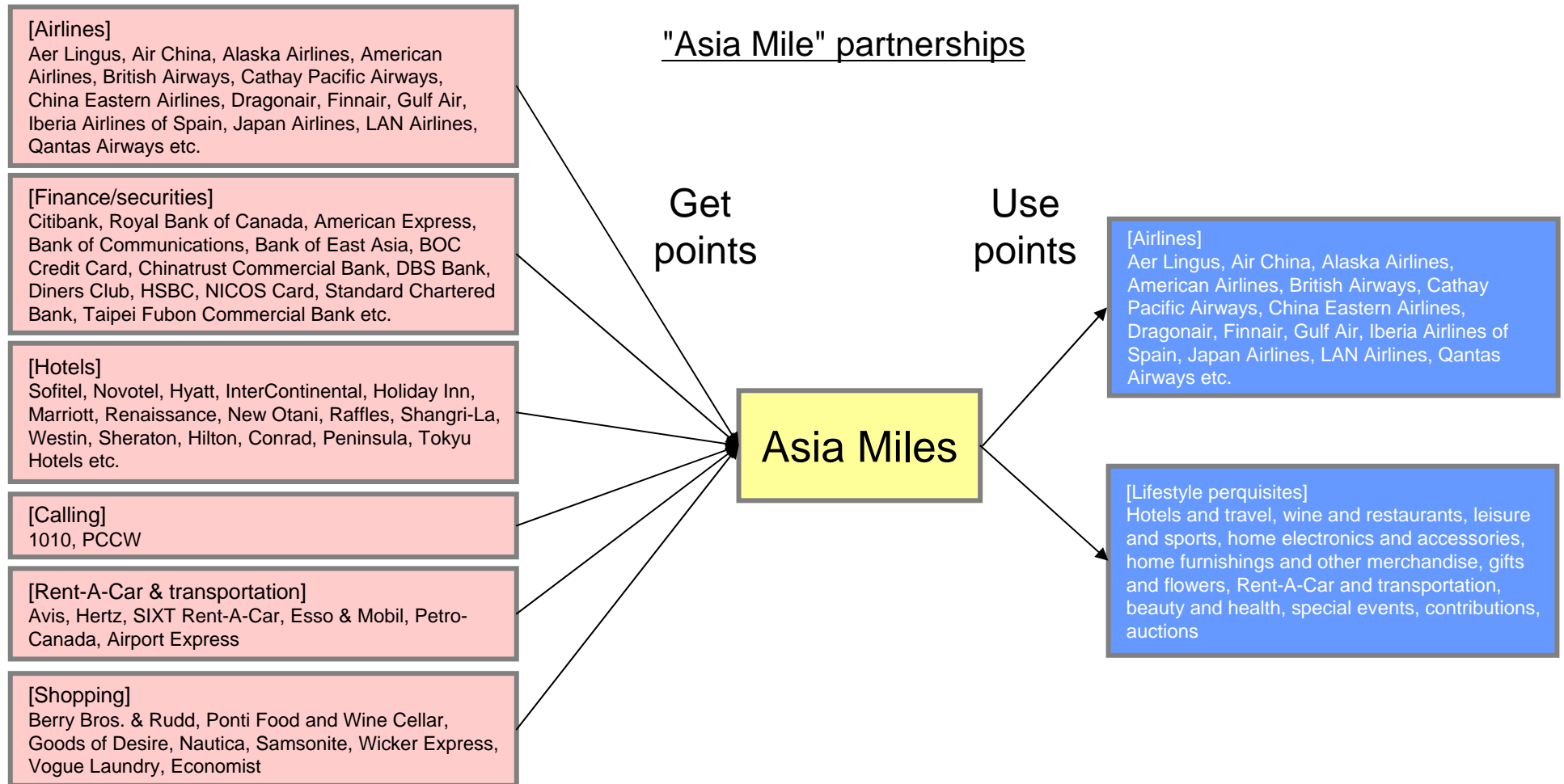
### Major electronic payment instruments (postpaid)

Classification	Operator	Name of service
Credit Card	VISA	payWave VISA Contactless Visa wave
	MasterCard	PayPass
	JCB	J/Speedy
	AmericanExpress	ExpressPay
	Railway	MasterCard

※ Common handsets already developed.

Future potential (globalization) Using points to develop global alliances  
 Not just "small payments," but "marketing" → Potential to develop into tools for alliances among companies, industries and markets.

- Pan-Asian points are already offered, but potential in Japan for alliances on e-money in addition to points?



Source: Created from Asia Miles documents



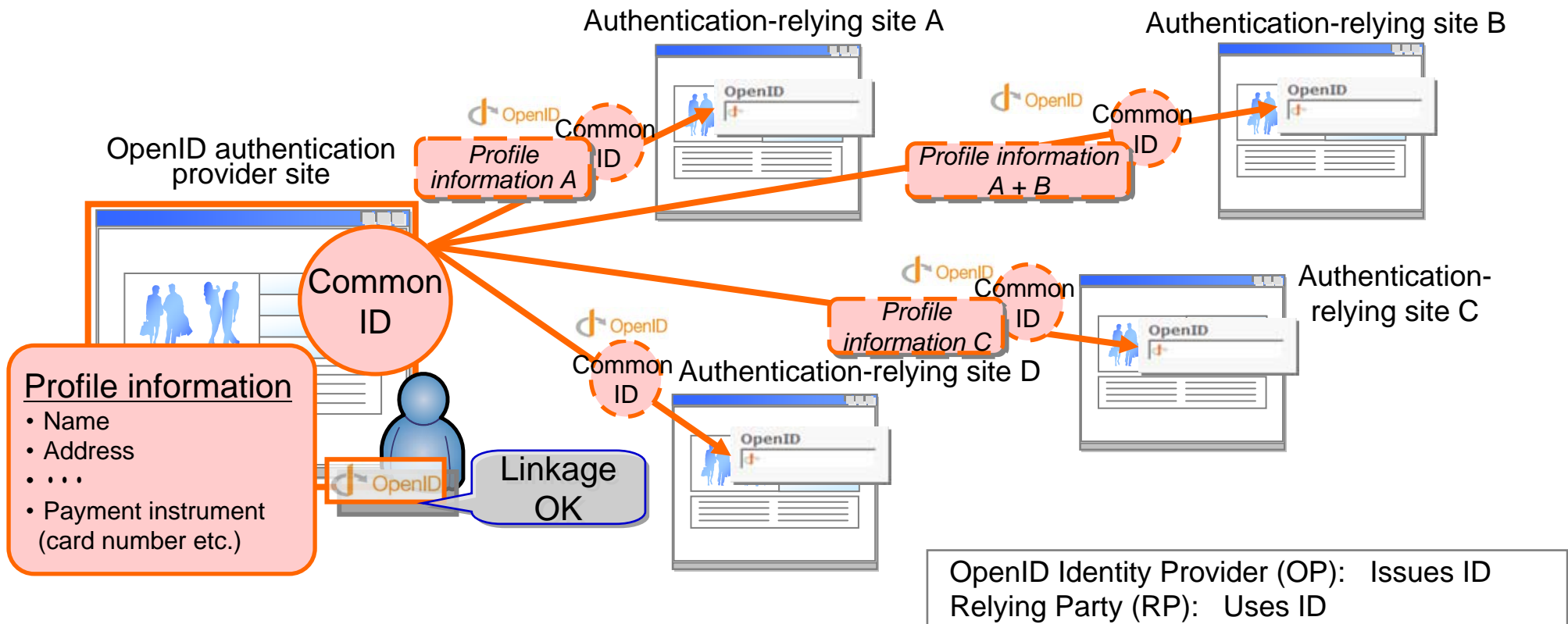
Future potential (OpenID)

Payment information partnership

OpenID is a standard that allows a common user profile to be used by multiple net services. It is possible to tie payment information to the ID, creating potential for future spread.

- By registering an ID with an OpenID site just once, it is possible to use the same ID to login to other sites without the need for further registrations, and registered profile information (name, address...card number) can be linked as determined by the user (subject to approval).

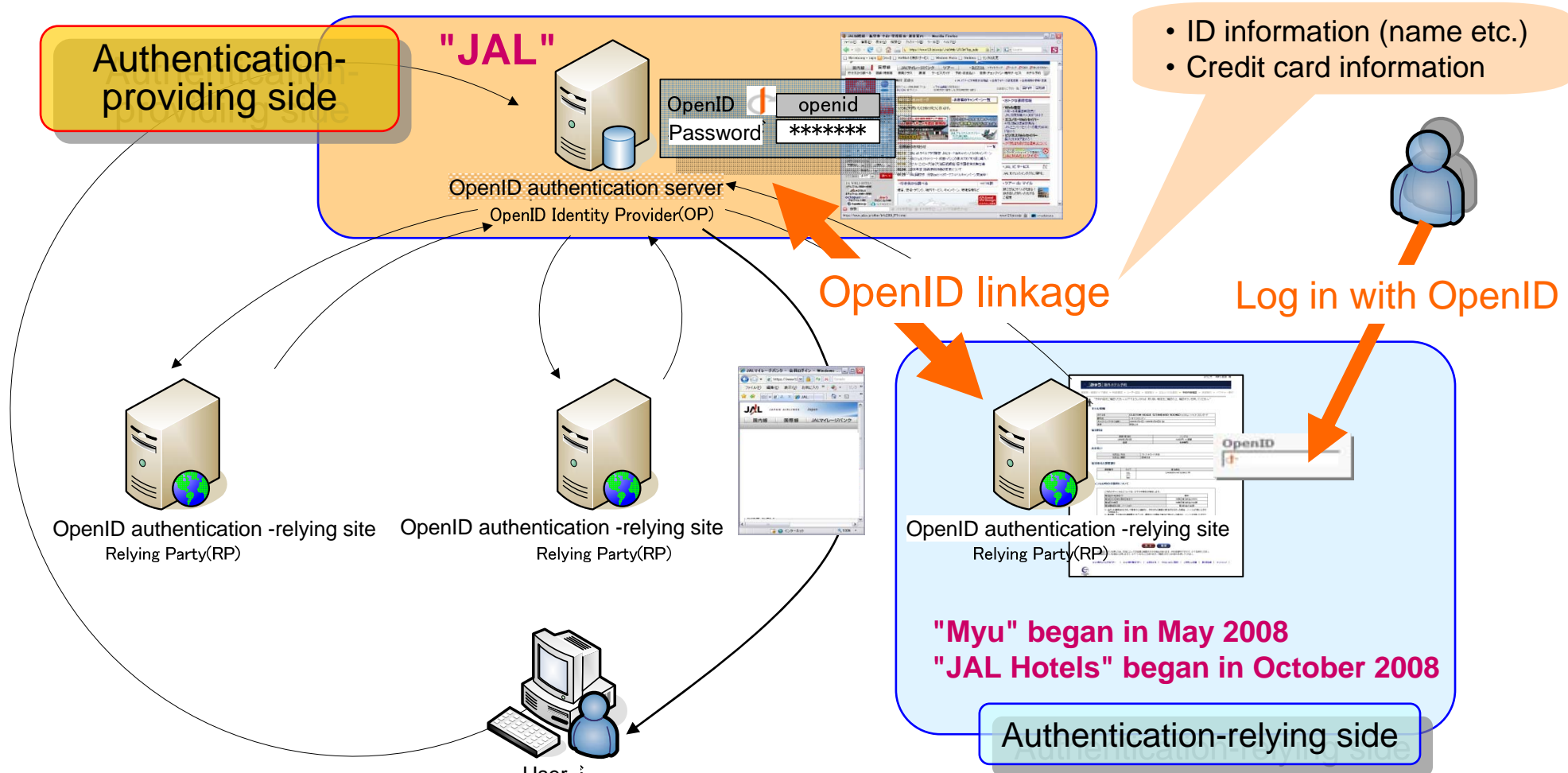
### OpenID Image



There are already "Hotel site-linked services" that bring together the profile linkage and payment linkage of the OpenID system.

(Linkage between JAL and international hotel reservation sites)

### Using OpenID for a hotel site-linked service



## Summary

Tools for small payments (e-money, etc.) have achieved widespread use in Japan. International alliances are among its strongest future potentials.

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### ■ Small payment market

- Between 2007 and 2008, the average number of e-money transactions per month grew from 5 to 7 and the average transaction value from 700 to 750 yen. The monthly average usage value (total) grew from approximately 4,500 yen to approximately 5,600 yen.
- In contactless IC payment (e-money, postpaid electronic payment), transportation-related and retail-related prepaid services are in competition.
- The contactless IC payment market will exceed 1 trillion yen usage value this year and the number of cards in the market will be close to 100 million.
- One of the major factors in the spread of e-money has been the synergy with point programs. Corporate alliances have also been a work.

### ■ Small payments: Legal system, issues to be addressed

- There are legal frameworks for enterprise currencies (e-money, points), but their treatment differs.
- The Financial Services Agency (FSA) and Ministry of Economy, Trade and Industry (METI) have very recently provided direction.

### ■ Small payment business using "Osaifu-keitai" (= "Cellular phone" + "Contactless IC")

- Osaifu-keitai is already standard equipment in the handsets sold by Japanese carriers (docomo, KDDI, SoftBank)
- Osaifu-keitai has achieved broad penetration; there are more than 50 million handsets in use.
- Use of Osaifu-keitai transformed the CRM workflow into "something valuable."

### ■ Future potential

- Potential for international e-money alliances, including transportation-related IC cards and credit cards
- Uniform technical standards like OpenID may provide new uses and encourage international alliances

## Company profile and initiatives on "Enterprise Currencies"

- Name : Nomura Research Institute, Ltd.
- Head office : Marunouchi Kitaguchi Building, 1-6-5  
Marunouchi, Chiyoda-ku, Tokyo
- Established : April 1, 1965
- Capital : 18.6 billion yen
- Representative : Akihisa Fujinuma, Chairman and president
- Employee : 4,714 (NRI Group total: 5,711) as at March 2008
- Sales : 342.2 billion yen (consolidated, FYE March 2008)
- Business : Consulting and IT solutions services
- URL : <http://www.nri.co.jp/>
- Consulting services (outline)
  - ① Management (management strategy, management diagnostics/rebuilding, operational reform, human resources and organizations, information systems, introduction and improvement of enterprise currencies etc.)
  - ② Industry (technology development strategy, alliance strategy, DB marketing, financial services strategy, and marketing strategy of telecommunications services etc.)
  - ③ Society (new national land-use and regional concepts, urban and regional planning, informatization of administration, disaster information systems etc.)
  - ④ Economy (economic analysis and forecasting of Japan and other countries, electronic transactions in securities markets, risk analysis etc.)

- Publications related to Enterprise currencies (e-money, points)
  - Enterprise Currency Marketing from a Global Perspective  
<http://www.nri.co.jp/english/opinion/papers/2008/pdf/np2008133.pdf>
  - Secondary Currencies: "Mileage Points"  
- What can Japan learn from the US business currency alliances? –  
<http://www.nri.co.jp/english/opinion/papers/2006/pdf/np2006107.pdf>
  - "Enterprise Currency Marketing," Toyo Keizai, March 2008.
  - "Enterprise Currencies in 2010," Toyo Keizai, September 2006.

