ACCESS Position Paper

W3C Ubiquitous Web Workshop

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Outline

- Background

- Challenges

- Three Domains

- Use Cases

- Thoughts on Standardization

- Conclusion

Background

- A Technology Provider: ACCESS(since 1984)
- Japan: 70 million mobile users (2005/E)
- 214 million licenses in 721 products(Sep 2005)
- Embedded(Non-PC) network software

We learned …

Software Engineering
in Restricted Env.

Industrial Consortia
(Easy Internet,
WAP Forum, …)

Real-World Challenges

Solid Ubiq-web	Soft-Interaction Ubiq-web	Full-Interaction Ubiq-web
Machine-to-Machine Communications	Human Interactions with restrictions	Human Interaction without restrictions

Practical Issues

Technical Issues	Non-Technical Issues	Operation/ Configu-ration
Protocol, Data Units	Size, Numbers, et al	Border Solutions

Use Case 1: Setup

- *Densha* wants to use Internet connection from his brand new digital TV.
  - *Densha* is a nickname of a hero in a Japanese million-seller novel
- He wants easy setup without disturbing experience
- He wants a choice for consumers
  - He wants easy setup for his favorite ISP
  - He wants easy setup to change his ISP
  - He wants healthy competition for digital-TV special price package
- He wants a secure setup
 - He wants secure(no steal!) setup procedure without exposing his private data

Use Case 2: Size in IOP

- A handset vendor *SquarePhone* wants a competitive price with reasonable memory

- A carrier *EarthMobile* wants every vendor to guarantee length of URL, cache size, . . .

- An e-commerce company *NanoTV* wants seamless e-commerce with their existing commerce server

  - They need 30 cookies, 5 Kbytes

  - They want their SSL certificate matches any ubiquitous device, so that each device has sufficient number of SSL certificates, like 50

  - They wants each device supports sufficient length of URL, so that their name-value pairs in GET HTTP request is successfully transferred, name-value pairs(50)

Use Case 3: Browser in devices

- *Hermes* has a new fancy handset with a full browser

- She wants to get mobile-specific web pages when there are suitable mobile contents are available because the screen size is small

- She wants to get the full browser-oriented pages some time to search details of restaurants
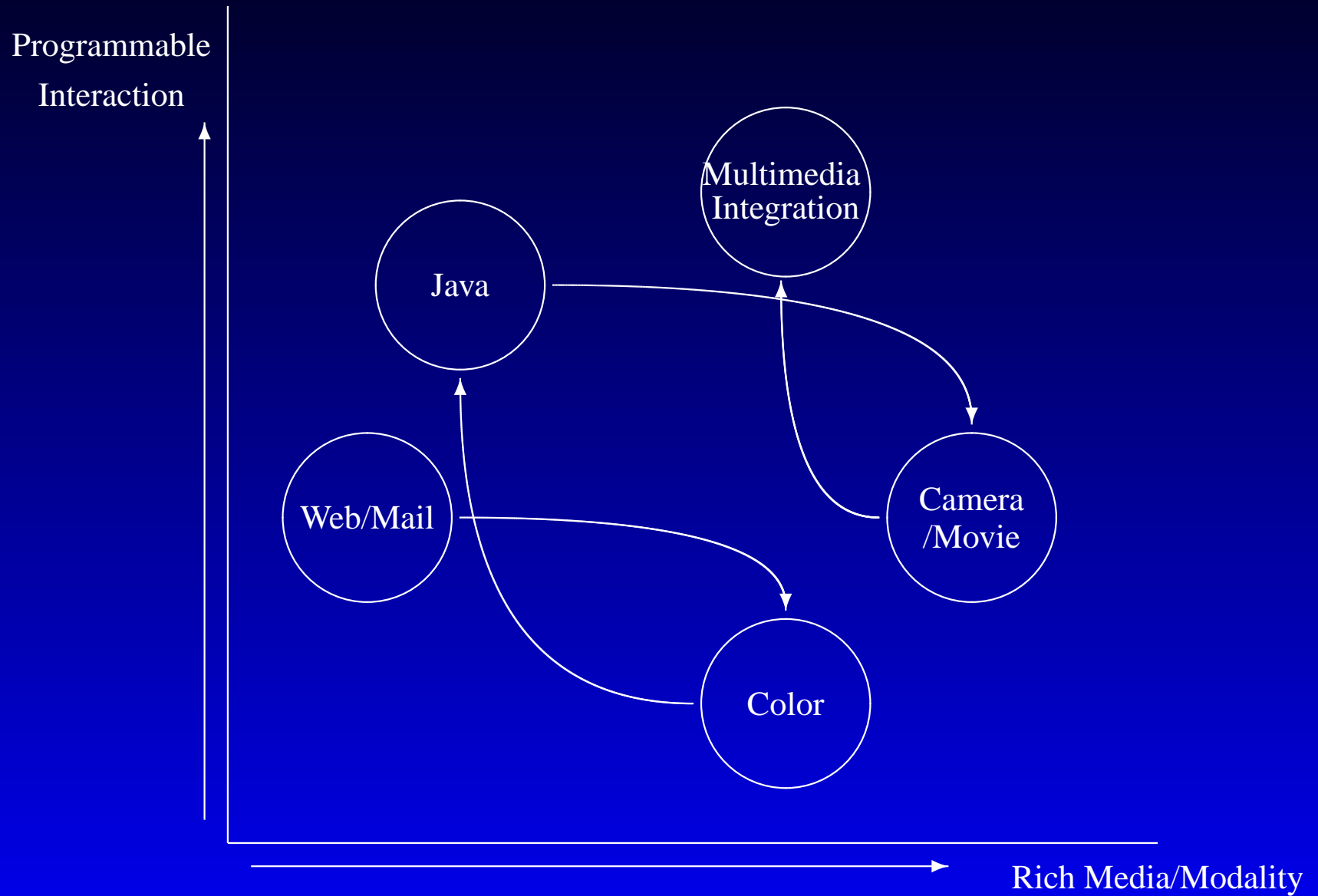
Std. Stages
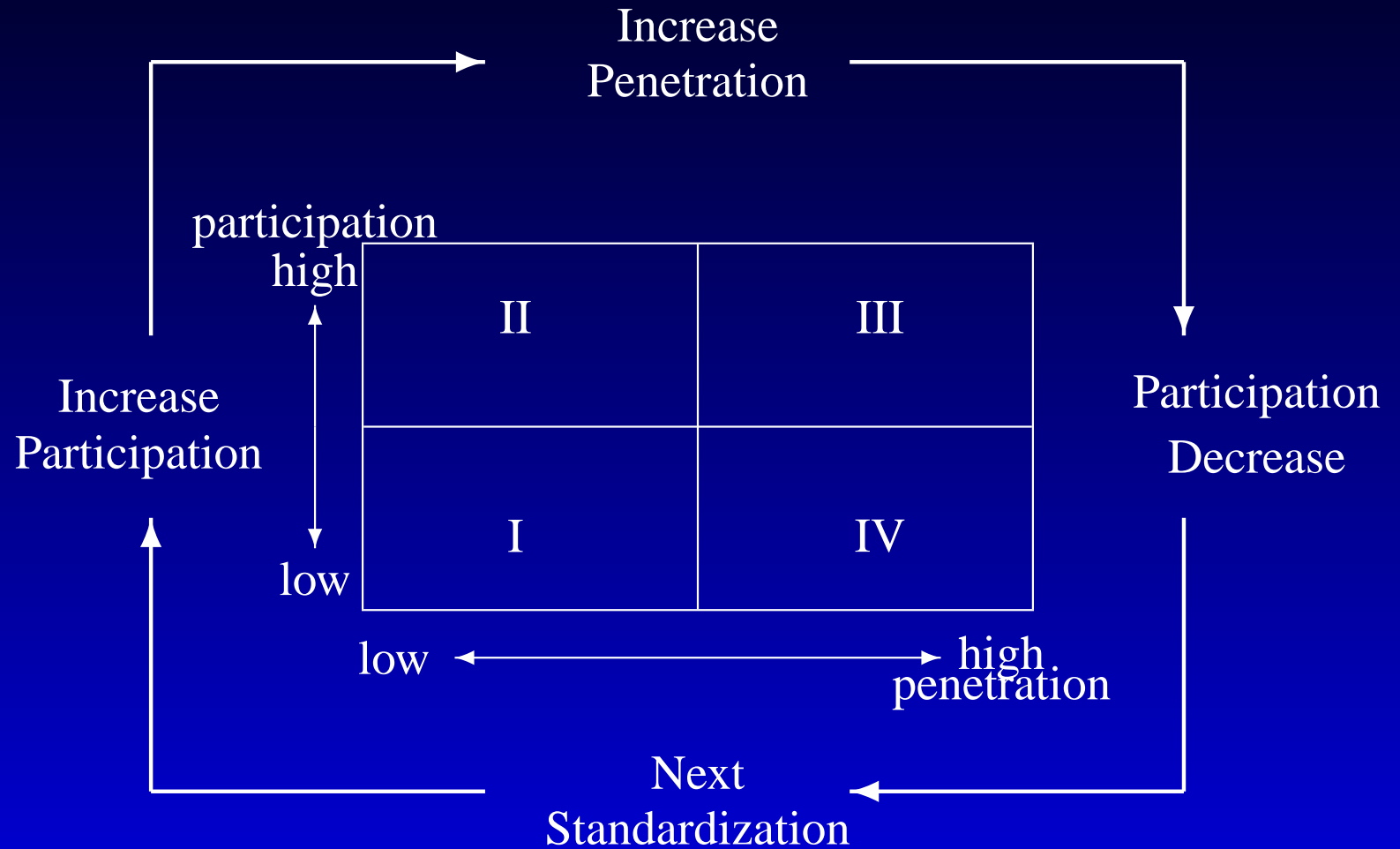
Conflicting Challenges

Consistency	Autonomous Service Evolution
Diversity of Platforms, Capabilities	Interoperability

Time Consuming Spiral

Programmable
Interaction

Multimedia
Integration

Java

Web/Mail

Camera
/Movie

Color

Rich Media/Modality

Framework req

	Neutral Std Body	Industrial Consortia
Framework	General	Focused
Features	Core	Synchronized
		Stage-setting
Interoperability	Materials	Conformance Schemes

- Boundary Definition needed:
    - Platform Synchronization Aspects
    - Configuration, Management Aspects

Conclusion

- 3 Different Ubiq Web Domains

- Easy Setup vs Visibility/Controllability for Users

- Diversity vs Interoperability

- Who will take a lead, and what is a good feedback loop for markets
  - To deal with different business models in consumer electronics

- Standardization Frameworks