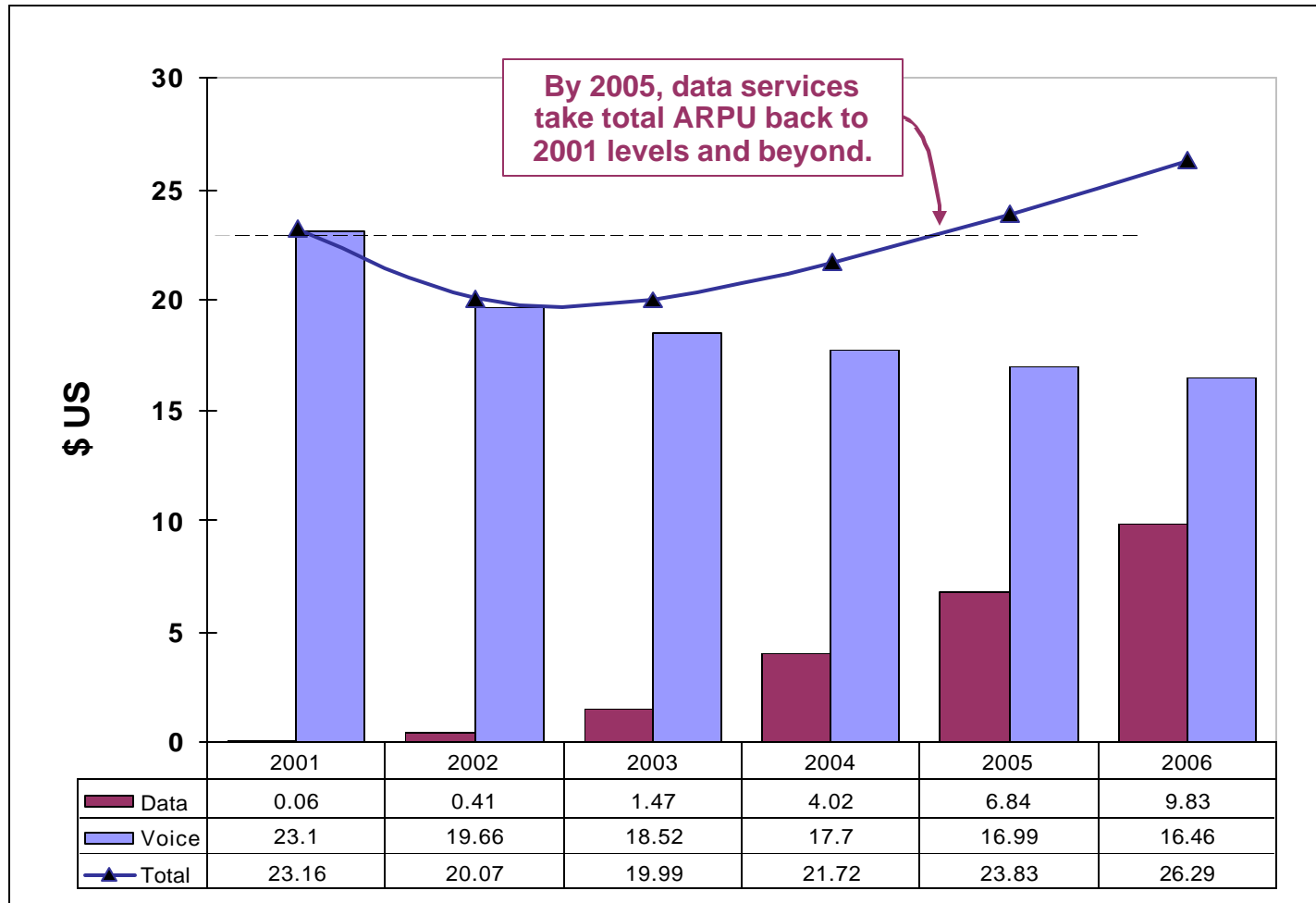


2004 CDMA Latin America Regional Conference:
Enabling IP Data Services



- > Celine Bak, VP Products
- > May 27, 2004

Wireless data services are poised to drive ARPU back to 2001 levels.



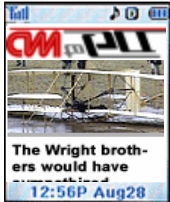
CAGR 2001-2006

Data Services: 177.3%
Voice Services: -6.6%

Source: Yankee Group 2002, Bridgewater Systems



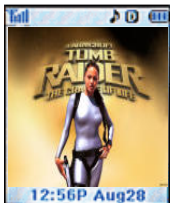
CDMA service providers offer a broad range of advanced services today.



News



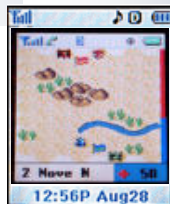
Ring Tones



Movies



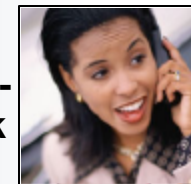
Sports



Multi-player Games



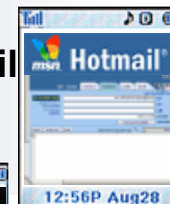
Location Positioning



Push-to-Talk



MMS

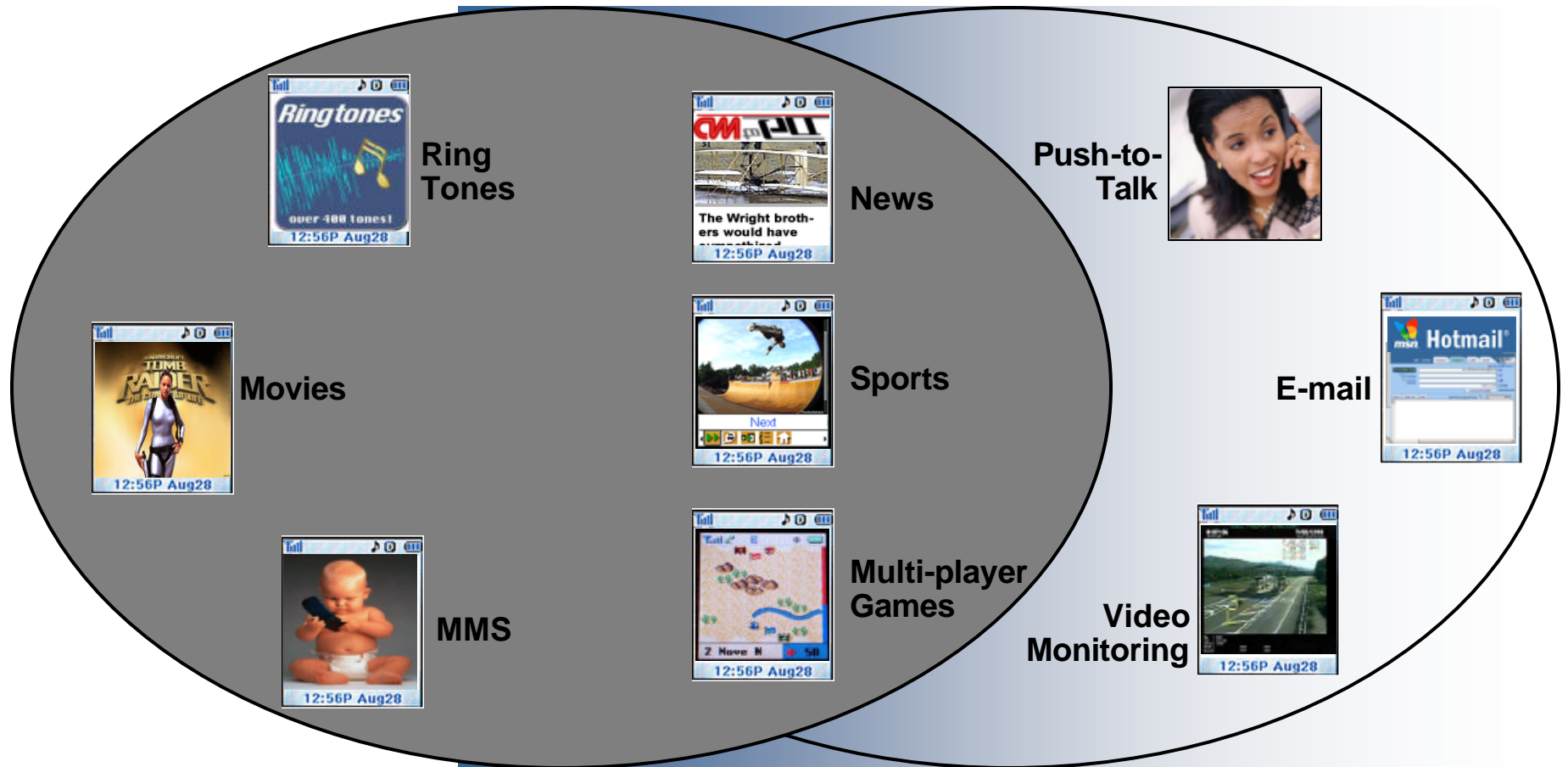


E-mail



Video Monitoring

Prepaid data services can be offered through business models to suit each market.



Pay-per-Use

Subscription

Content Control enables carriers to offer premium content while remaining in control – without costly integration.

→ Content Control is the ability to redirect the user's access to content due to:

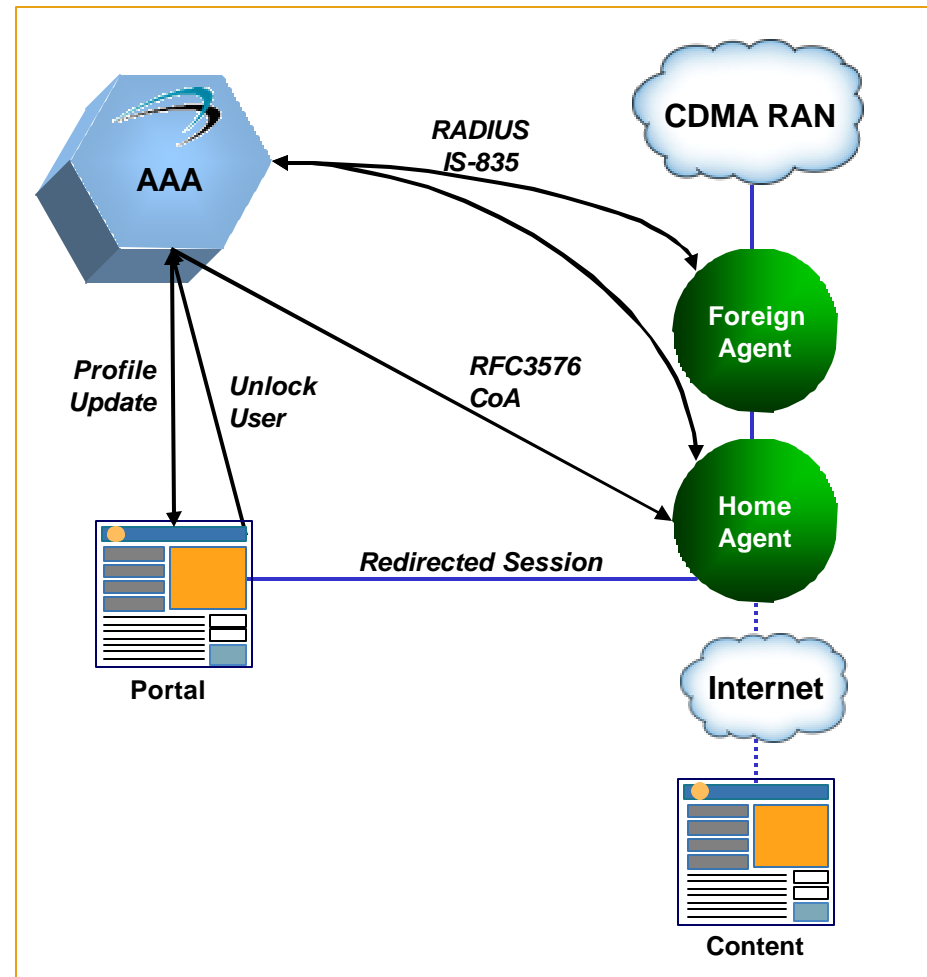
- Appropriateness of content
- Content payment requirements

→ Uses existing systems

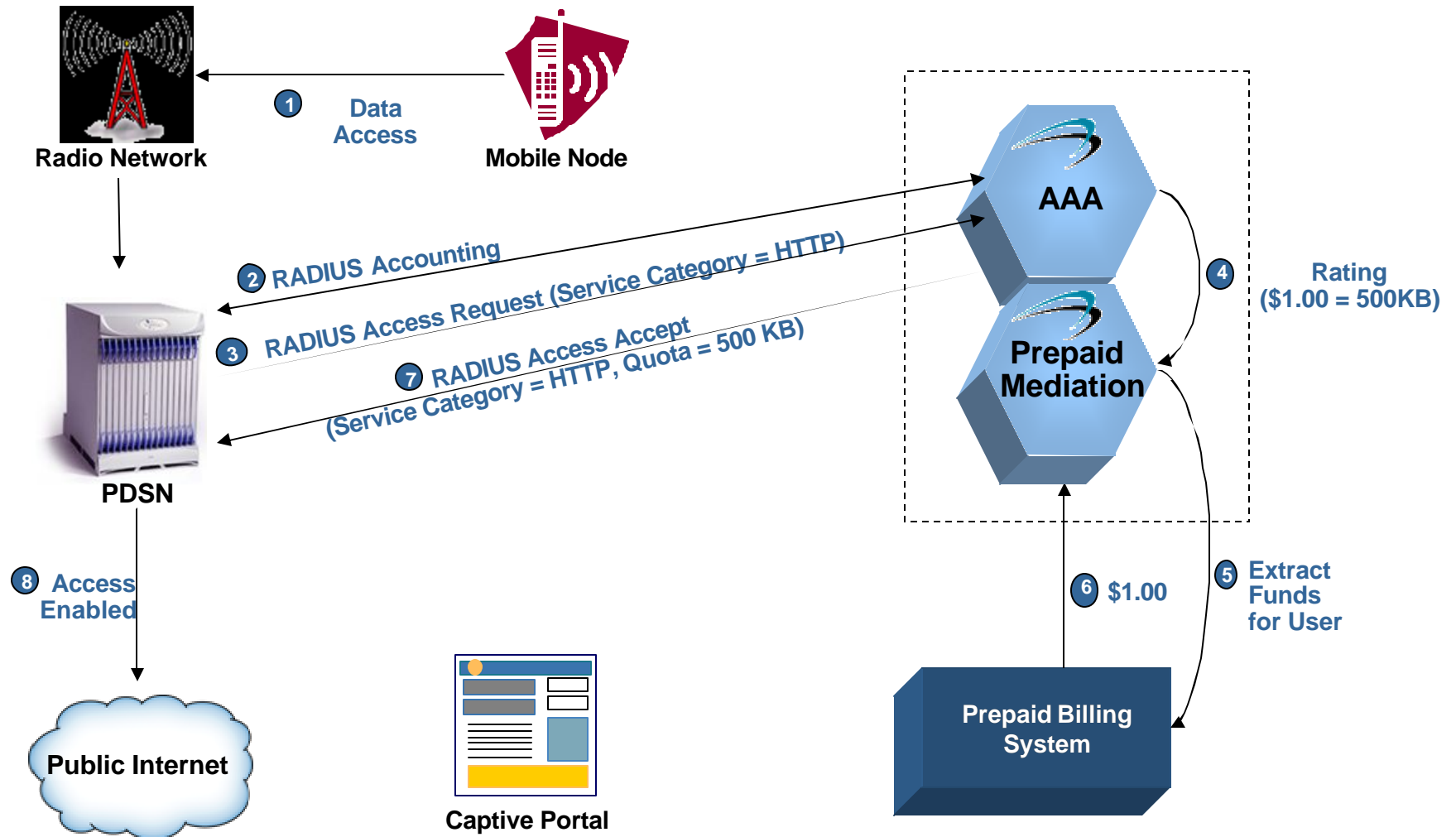
- Home Agent
- Rating Engine

→ Keeps control with the Service Provider

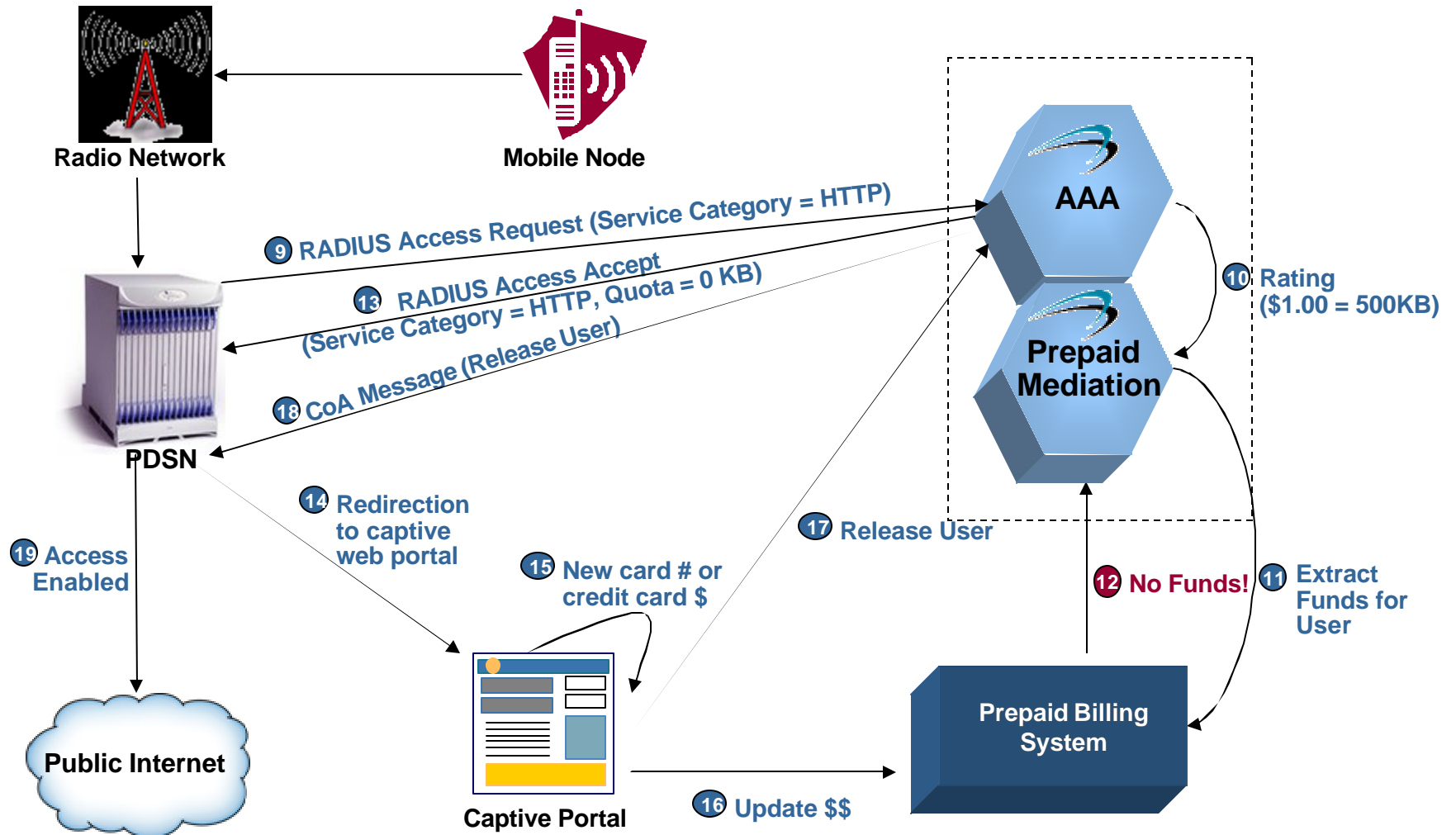
- Do not have to integrate with content providers
- Broader range of controls than available in the billing / rating system
- Prevents traffic traversing the Internet



Carriers can leverage current infrastructure to deliver prepaid data services.



Carriers can leverage current infrastructure to deliver prepaid data services.



Some applications require direct integration.

→ Not all content can be controlled by network elements

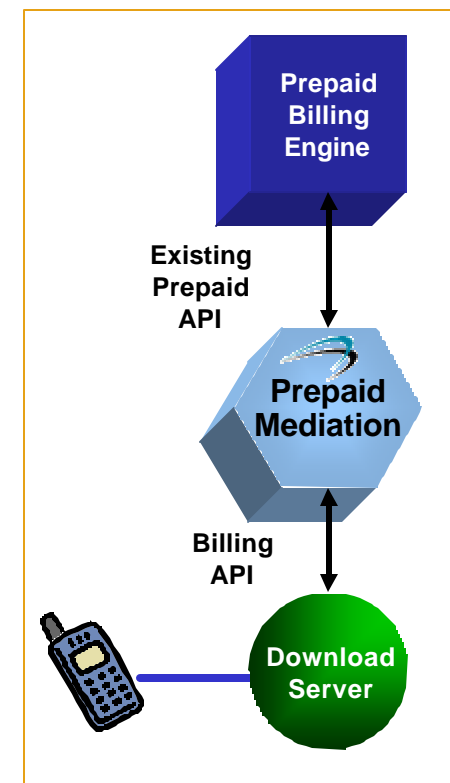
- Lack of visibility into content
- Downloadable content particularly hard to spot
 - Download start
 - Download end

→ Integration with some applications must be performed

- Limited changes to the application keeps expense low for prepaid users

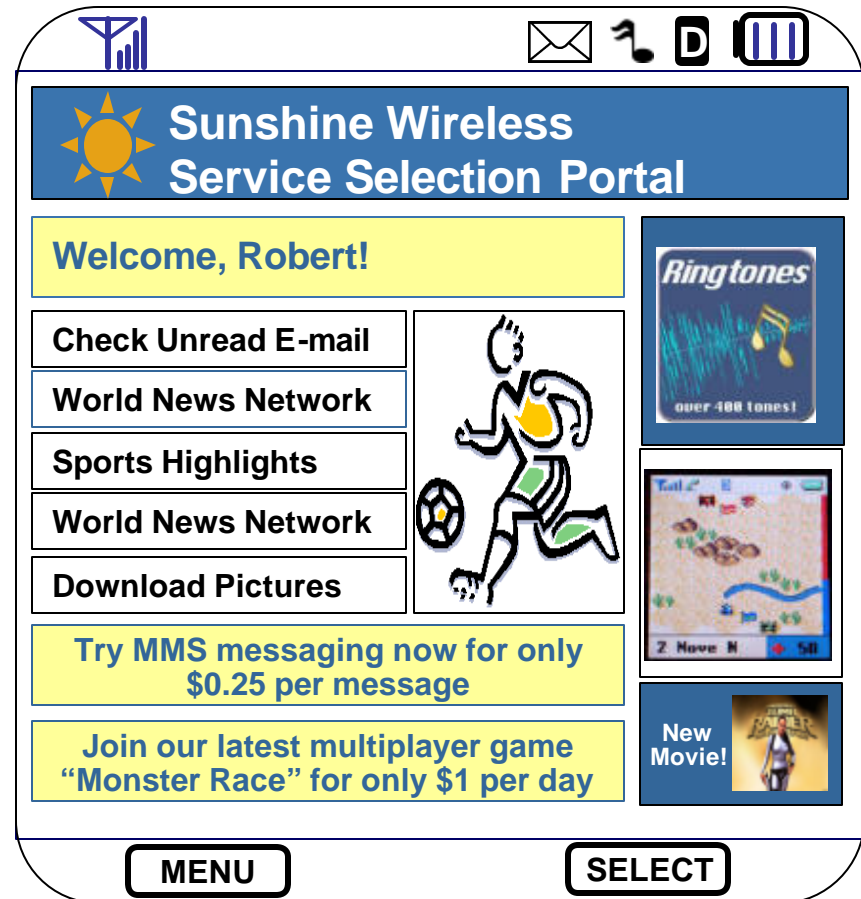
→ Common interface to existing billing system

- Makes balance management easy for the user
- Efficient reuse of existing prepaid billing system



“Metering” by type of data traffic can provide carriers with immediate feedback on both prepaid and postpaid usage patterns.

- **Spot top selling content**
 - Promote to other users
 - Obtain more like it
- **Spot poorly selling content**
 - Remove offering
 - Reduce cost of management
- **Guide content choices, segmentation and marketing**



Summary

- **Network controlled data services enable carriers to:**
 - Leverage existing infrastructure (HA, AAA, Billing systems)
 - Enable dynamic offerings, self selection, service provisioning
 - In prepaid - single balance for both voice and data
 - Track take up of offerings in real time

- **Centralized application control enables service providers to leverage centralized view of session state and subscriber profile**

Thank you!



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