Sizing E-Commerce

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For

ACOSM 2000

Edited and presented by Charles Symons, SMS, with permission

Introduction

- The purpose of this session is to discuss the problems associated with sizing web based applications

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  - Operates as an associate of Software Measurement Services (SMS)

Topics of Discussion

- What problems triggered this investigation?
- Some sizing examples
- What problems were encountered
- Conclusions & further work

Current Practice

- At the moment there is no agreed mapping of web-based applications to
  - IFPUG
  - MkII
  - COSMIC
- So practice is different
- and ideas spread slowly

What motivated this study

Current practice is unsatisfactory

- there is an increase in the number of web based applications
- there are only a few ‘experienced’ counters
- cannot be sure of standard of count

Sizing Examples 1

- Basic web site
- Minimal interactivity
- Provides information only

Software Measurement Services - Microsoft Internet Explorer

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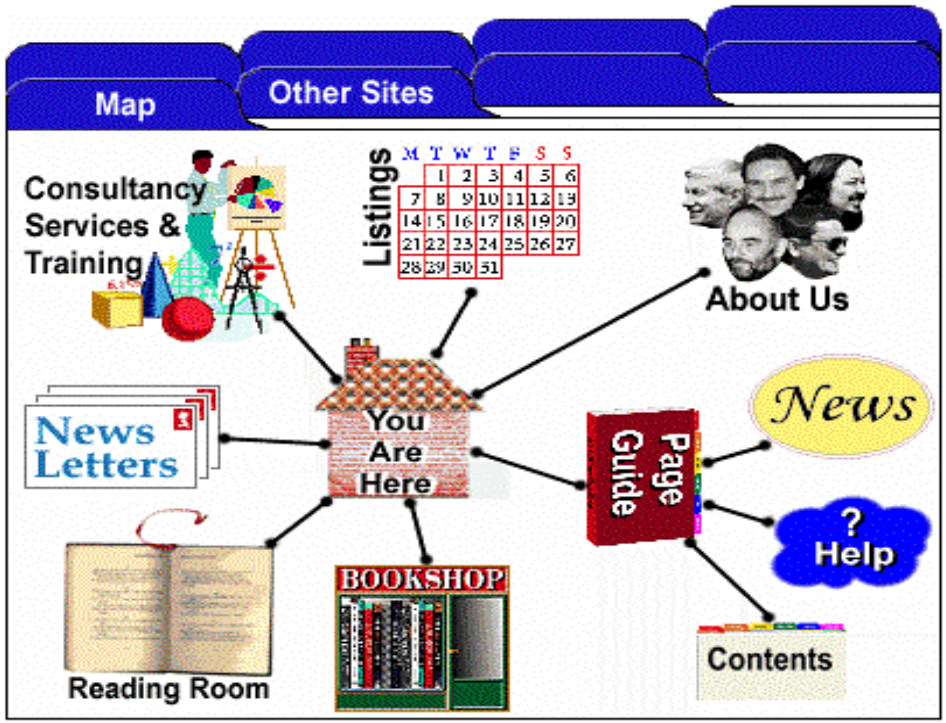

This page was updated on Wednesday, 27 September 2000

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Software Metrics

Mathsemantics: Making Numbers Talk Sense
Edward MacNeal

Price: *out of print*
Format: Softback

The Goal/Question/Metric Method ***New !***
Rini van Solingen & Egon Berghout

Price: £33.50 (UK)
Format: Hardback

Internet

Web Site ILF's

- The first thing is what are the internal logical files?
- IFPUG 4.1 requires an ILF to be
  - A group of data that is logically related and user recognisable
  - Maintained by an elementary process of the application
- We have data that meets the first of these rules
- But not the second

Web Site EIFs

- If the files are not ILF's, are they EIFs?
- IFPUG 4.1 requires an EIF to be:
  - A group of data that is logically related and user recognisable
  - The group of data is external to and referenced by the application
  - The group of data is NOT maintained by the application
  - The group of data is maintained in another application as an ILF

IFPUG White Paper

- IFPUG publish White papers
  - Web Sites
  - Client Server
- Intended as guidance
- NOT approved by CPC

White Paper on Web Sites

Discusses Files as:-

- the logical group of data is either an ILF or an EIF
- depending on how and where the data contained on the Web Site is maintained
- and provided that the data is maintained by a User using available tools.

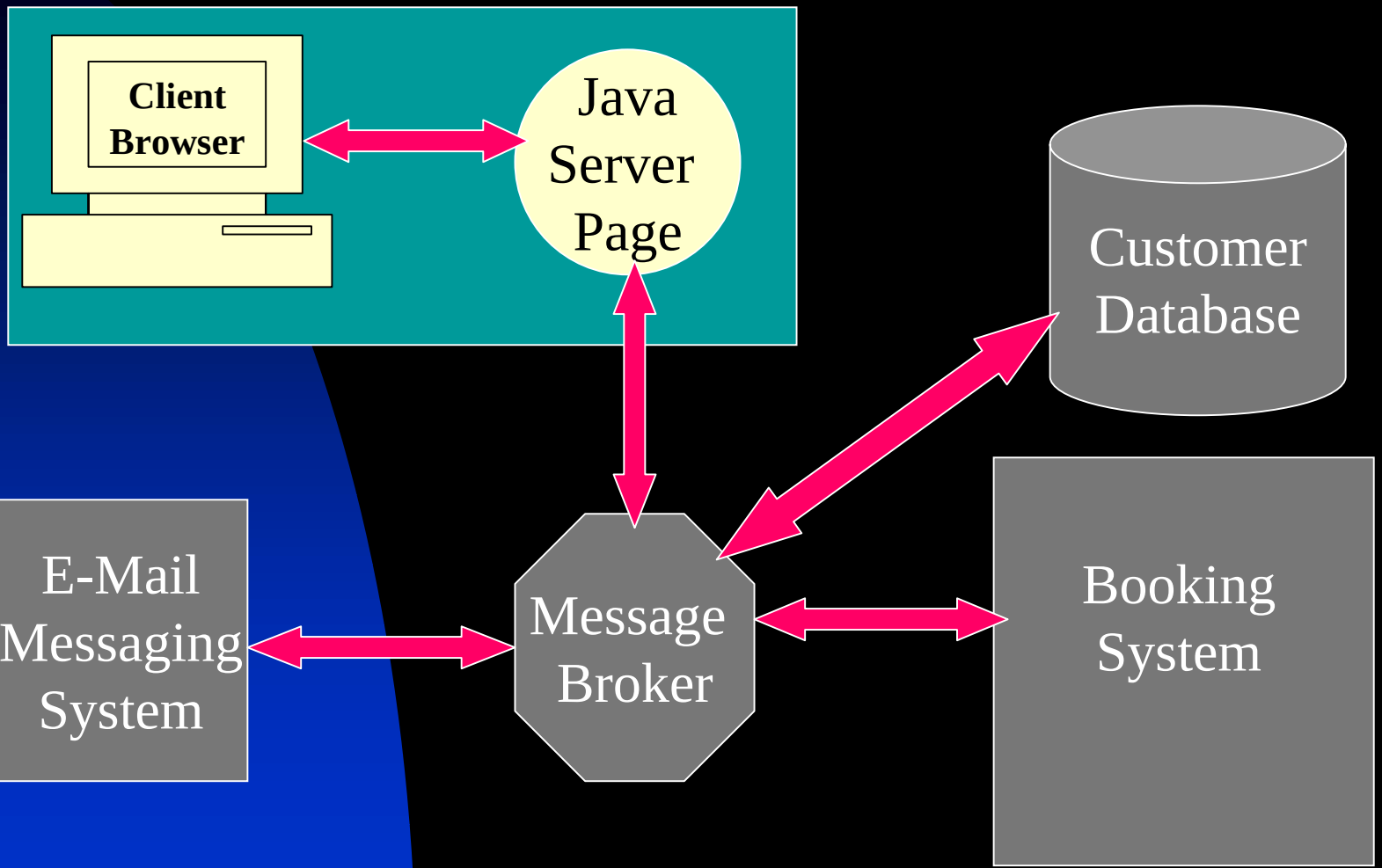
SMS Web Site

- Has data stored in Files
- This data is updated by the developer
- So whichever description you care to use
  - There are no Files
- We can argue that the data is maintained at the User's request so
  - We can treat them as EIFs
  - But it's a fudge

Sizing the SMS Site – the Fudge method

- OK, so if we call them EIFs then there are 11 EIFs. All simple
- The Transactional Function types consist of 27 Queries again all simple
- Size = 11*5 + 27 *3 = 136
- Effort was approx 840 hrs +-25%
- Time to deliver was 6.18 hrs/UFP limits 4.6 – 7.7

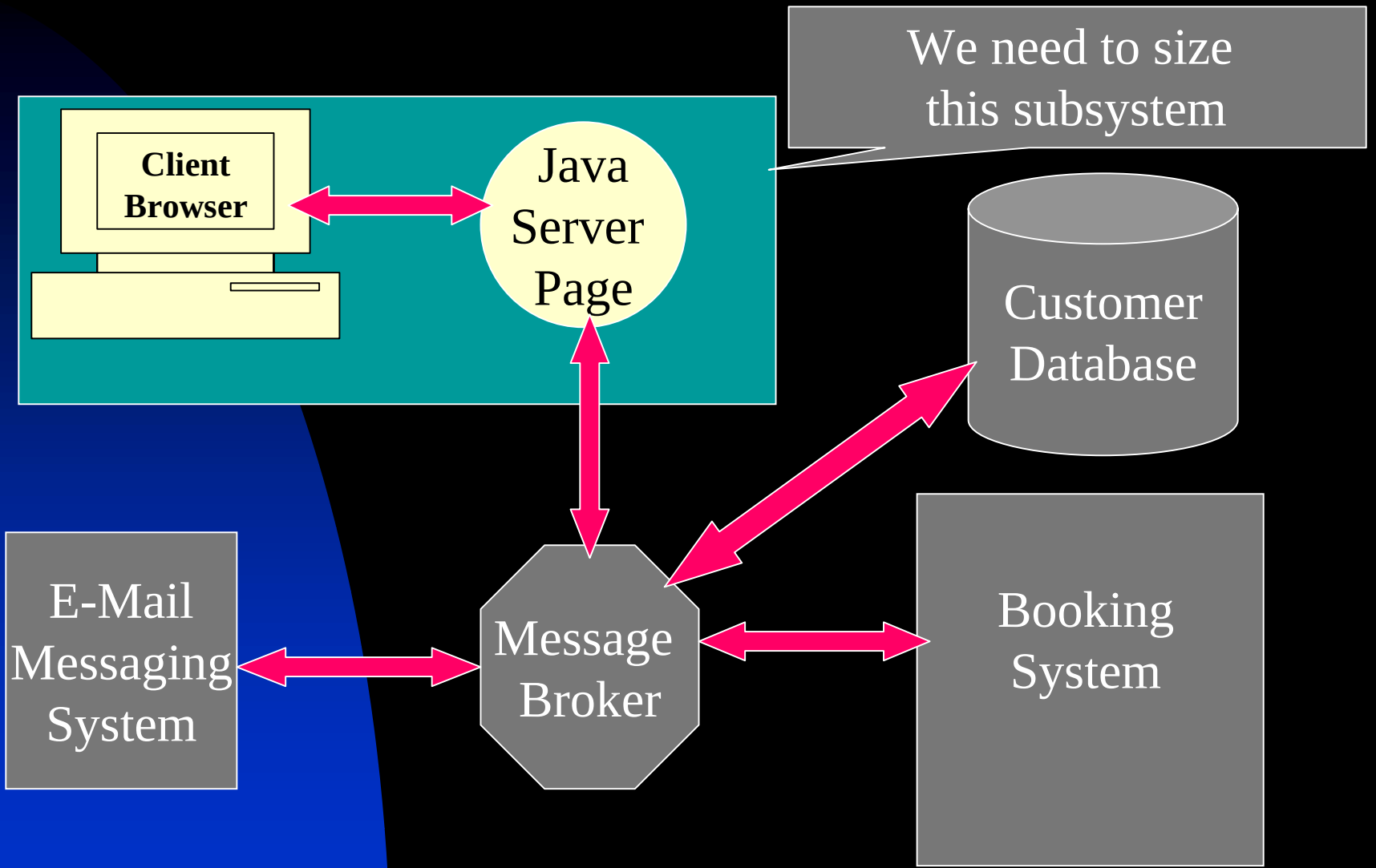
Sizing Example 2 – Shipping bookings



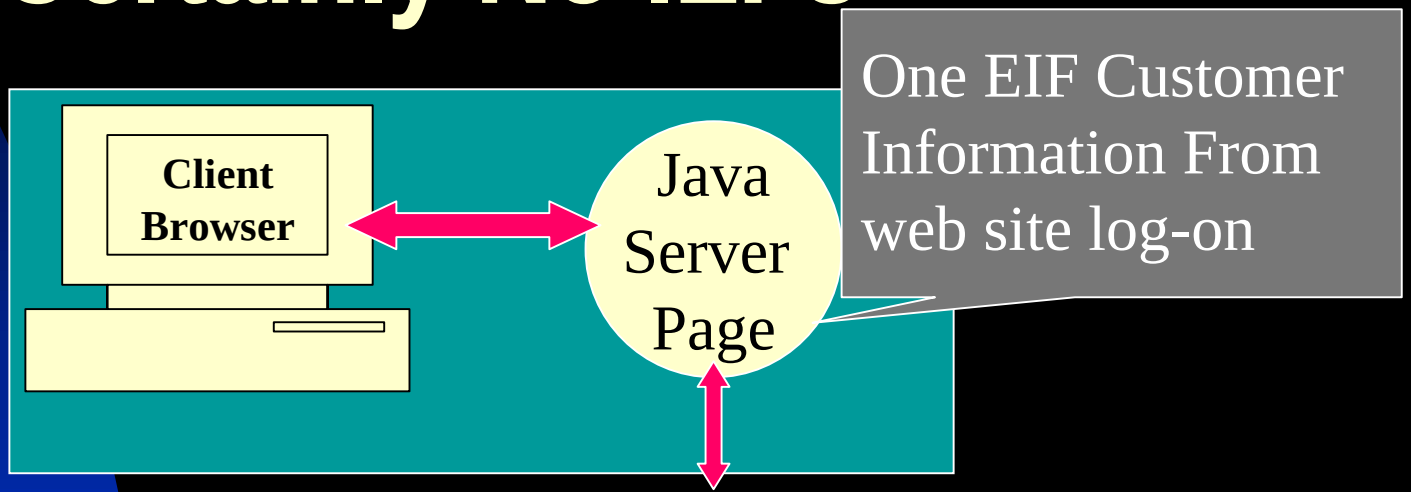
What's the Problem?

- A system to allow shippers to book space for containers on a ship
- Straight forward extension of the current booking system
- BUT we are only sizing the web subsystem

Sizing Example 2 – Shipping bookings

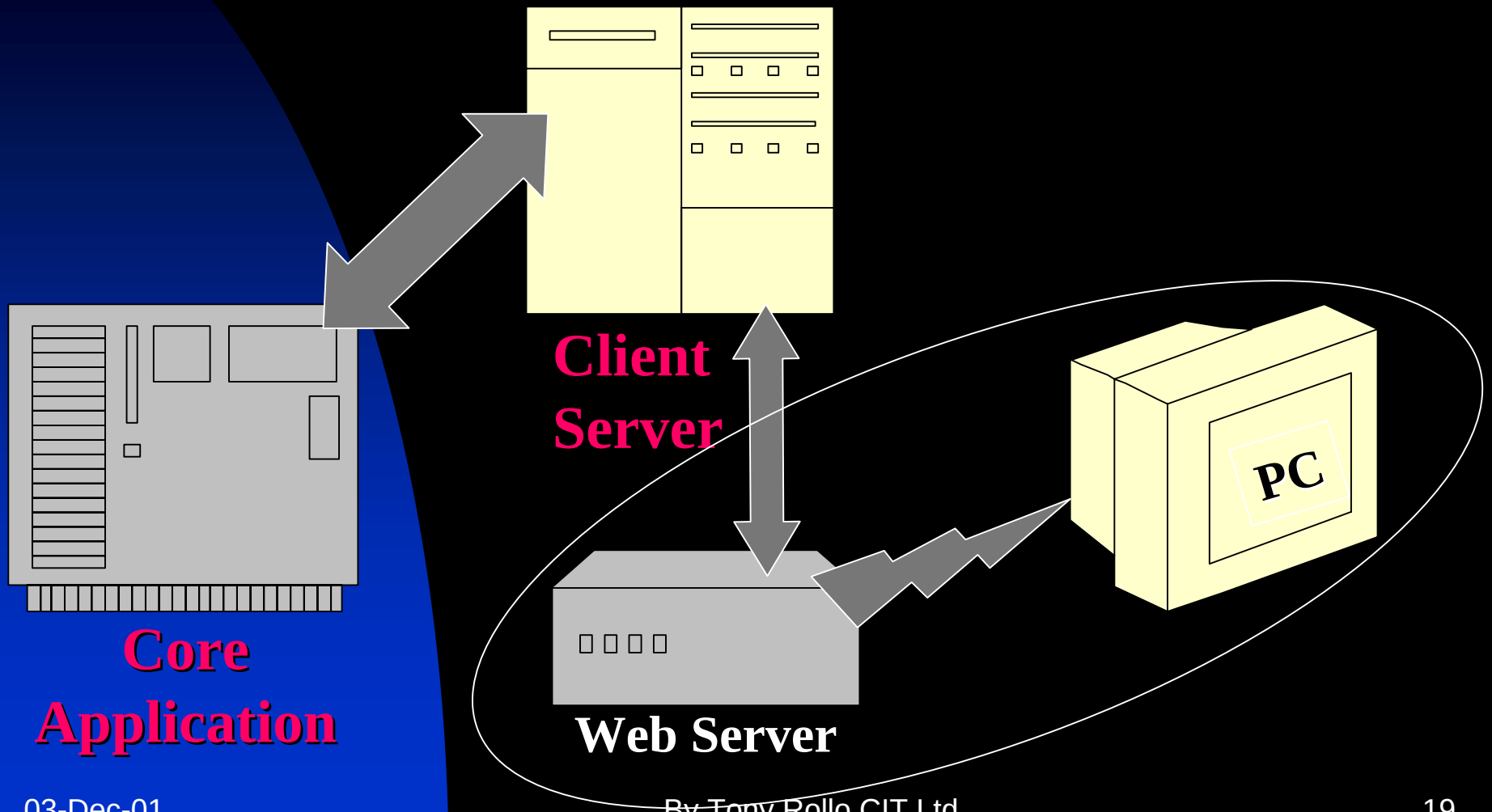


There are No Files Certainly No ILFs

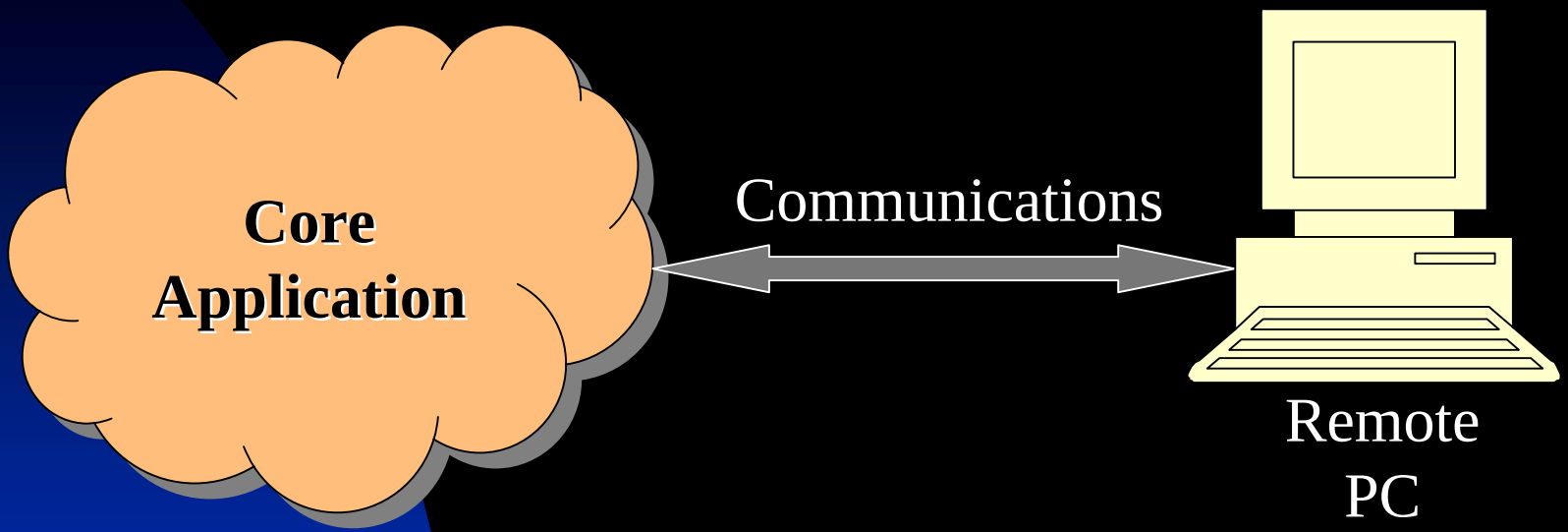


A User is any person that specifies Functional User Requirements and/or any person **or thing** that communicates or interacts with the software at any time

What's going on?



The Logical View



So what we have is the same as a remote terminal

We should size this as an enhancement to the core application

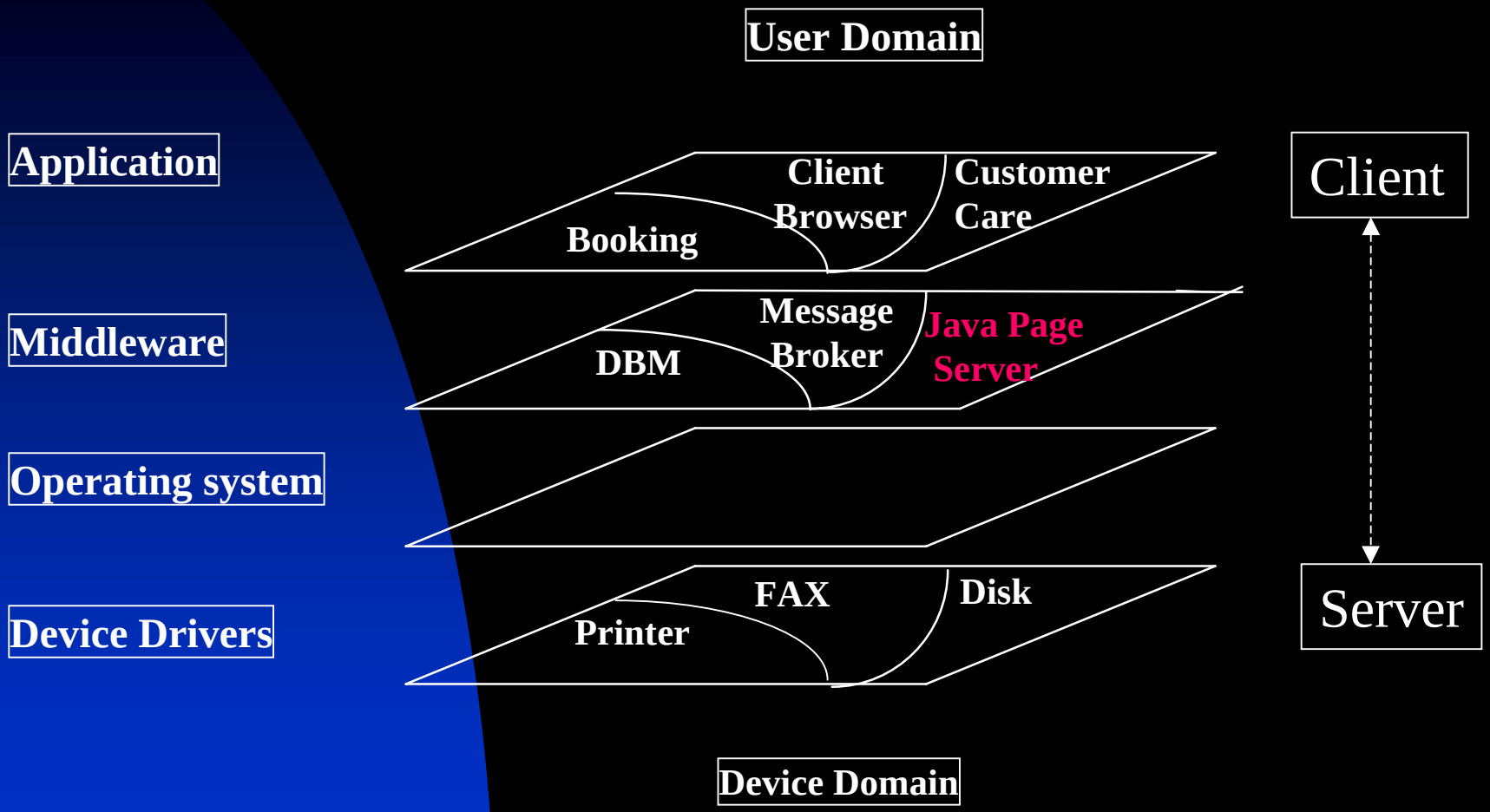
What will that mean?

- IT Management needs to size the web site
- Productivity will look low with 1 EIF
- We could use the fudge approach
- We need a method that allows us to size the web site

So let's try COSMIC-FFP

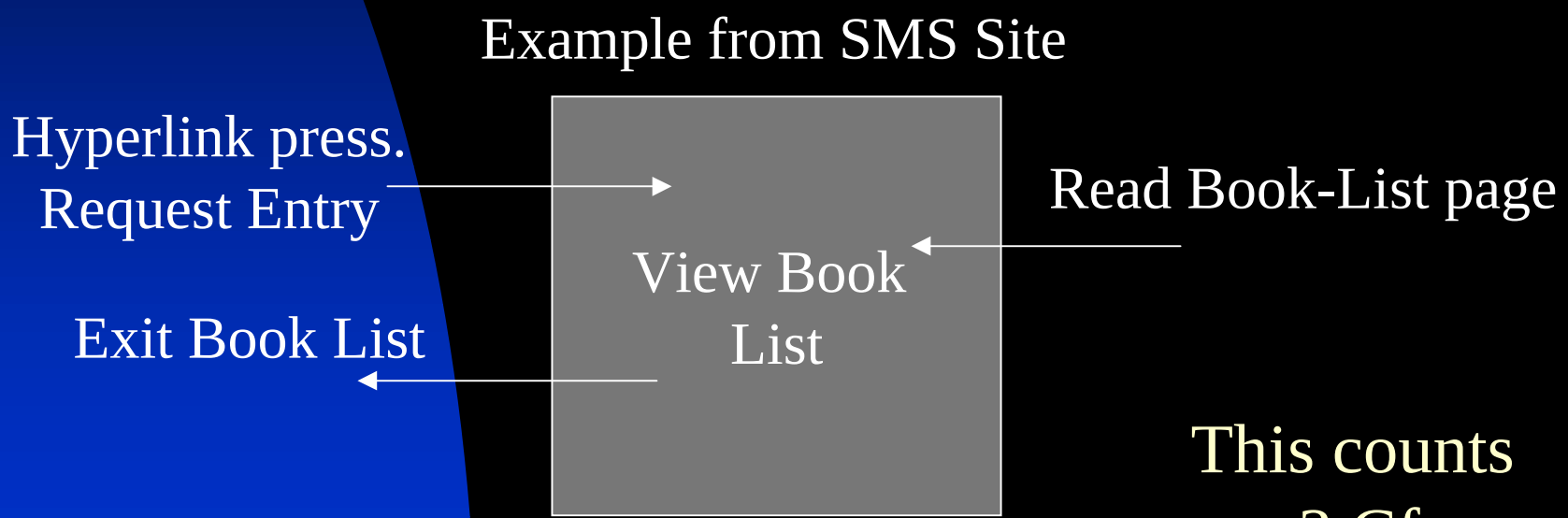
- Functional sizing measure
- Across wide range of domains
- World wide usage
- Compatible with ISO 14143-1
- Best principles of current methods

Allocation of Requirements



What This Means

- We can now size our Web Sites
- Because we can always identify the Data Movements



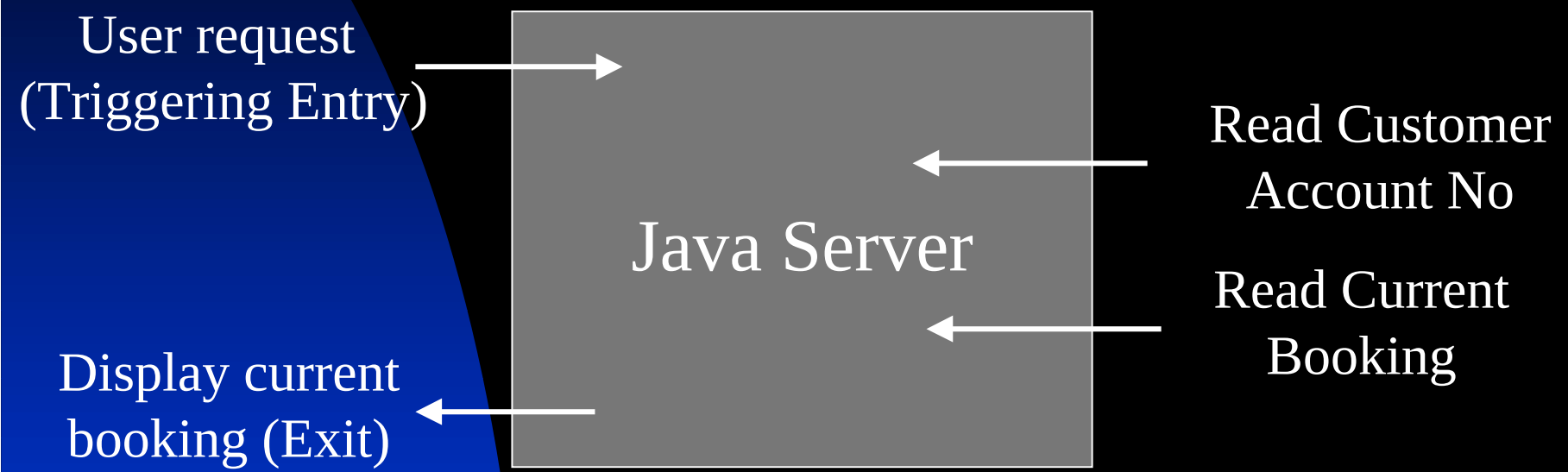
SMS Web Site

- Consists of 28 Processes
- These contribute 3 Cfsu’s each
- Hence the functionality available to the User on the SMS Web Site is 84 Cfsu

Booking System – Some Functions

- View bookings list
- View existing booking
- Get Customer Details
- Edit existing booking
- View trading partner list
- View current trading partner
- Enter partners to booking
- Enter transport chain details
- Enter cargo container details
- View terms of transport

View Booking List: The PC as the User of the Java Server requests to retrieve a current booking



Functional Process size = 4 Cfsu

(Aside: how does the Message Broker handle the request to retrieve a current booking?)

Assumed answer = two Functional Processes, each 2 Cfsu

Conclusion

- Current IFPUG method rules need amending to work properly for sizing Web Site front-ends to existing systems
- The COSMIC FFP method appears to work
- We now need COSMIC based data for estimation, benchmarking etc.