Defining Software Product Markets
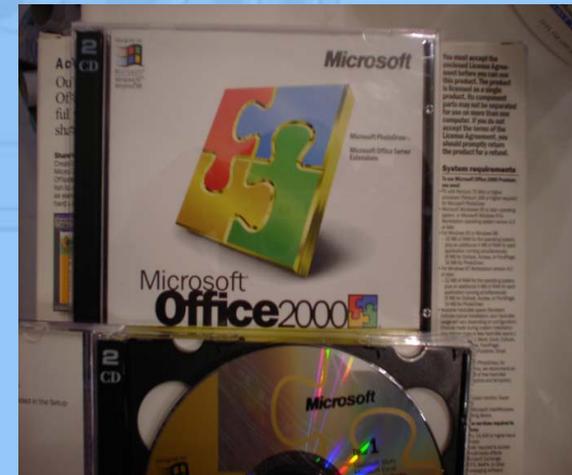

Sketch by Art Lien / CNBC

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Main Point

- **Relevant software product markets can be correctly delineated using existing techniques**
  - **The key is describing software products at the right level of abstraction for the analysis**

Confusion in *Microsoft*

- **COL: Market for "platform-level browsing software for Windows" (pp. 39-46)**
  - **D.C. Cir.: "Varying and imprecise"**
    - **Attempted monopolization: Reversed**
    - **Tying: Remanded for rule of reason analysis; plaintiffs barred from "careful" market definition**

Explicit Definition

Microsoft: A software product consists of "code and nothing else."

Would Microsoft have taken the same litigation position in a copyright infringement suit?

The D.C. Circuit's tying analysis relies on this fallacy.

For more, see 39 WAKE FOREST L. REV. 1

Confusion in *Microsoft*

- **FOF: "Market for Web browsing functionality" (¶ 201)**
  - **COL: Not cited**
  - **D.C. Cir.: Not cited, but district court failed to enter "detailed findings defining what a browser is or what products might constitute substitutes"**

Confusion in *Microsoft*

- **FOF: "Market for Web browsing functionality" (¶ 201)**
  - *COL: Not cited*
  - *D.C. Cir.: Not cited, but district court failed to enter "detailed findings defining what a browser is or what products might constitute substitutes"*
    - Antitrust analysis requires description in detailed and explicit terms

The Web Browser Product in Windows 98

Legal rights + technological capabilities

necessary to use the accompanying software code, according to the accompanying documentation,

for the user purpose of selecting, retrieving and perceiving Web resources
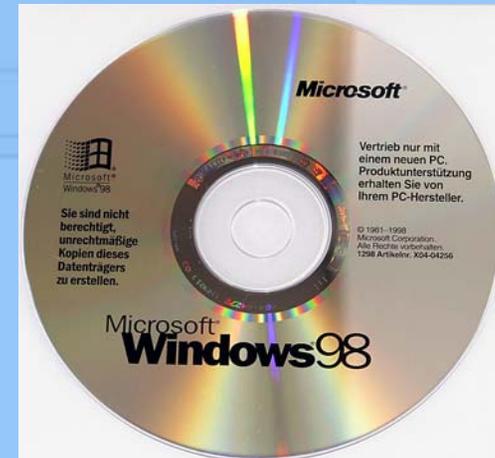
More Detail is Available, But Unnecessary

- **Legal rights**
  - Copyright law supports licensing of software use for distinct user purposes
  - If consumer is "owner of a copy," § 117 adaptation privilege
  - Otherwise, refer to license and documentation
- **Technological capabilities**
  - DRM supports enabling of software use for distinct user purposes
  - Installation is only one aspect of software use
    - Linking, loading and execution
- **For more, see 18 HARV. J. L. & TECH. 1**

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Same User Purpose

- "[C]ommodities reasonably interchangeable by consumers for the same purposes make up that 'part of the trade or commerce,' monopolization of which may be illegal."

Supporting a User Purpose

/* Converting binary to BCD */

C:> bin2bcd

Enter binary: _

Supporting a User Purpose

/* Converting binary to BCD */

C:> bin2bcd

Enter binary: 11001100_

Supporting a User Purpose

/* Converting binary to BCD */
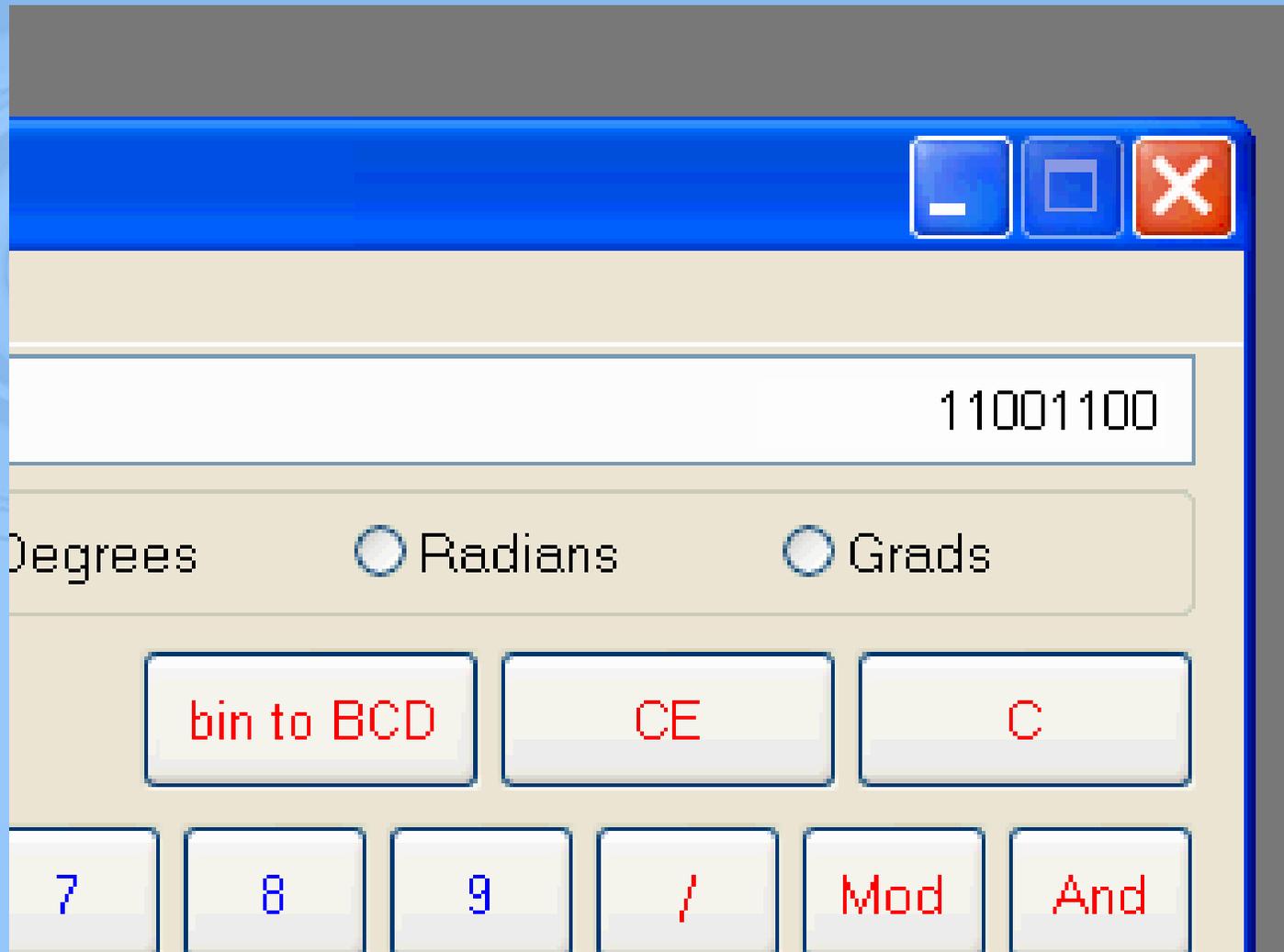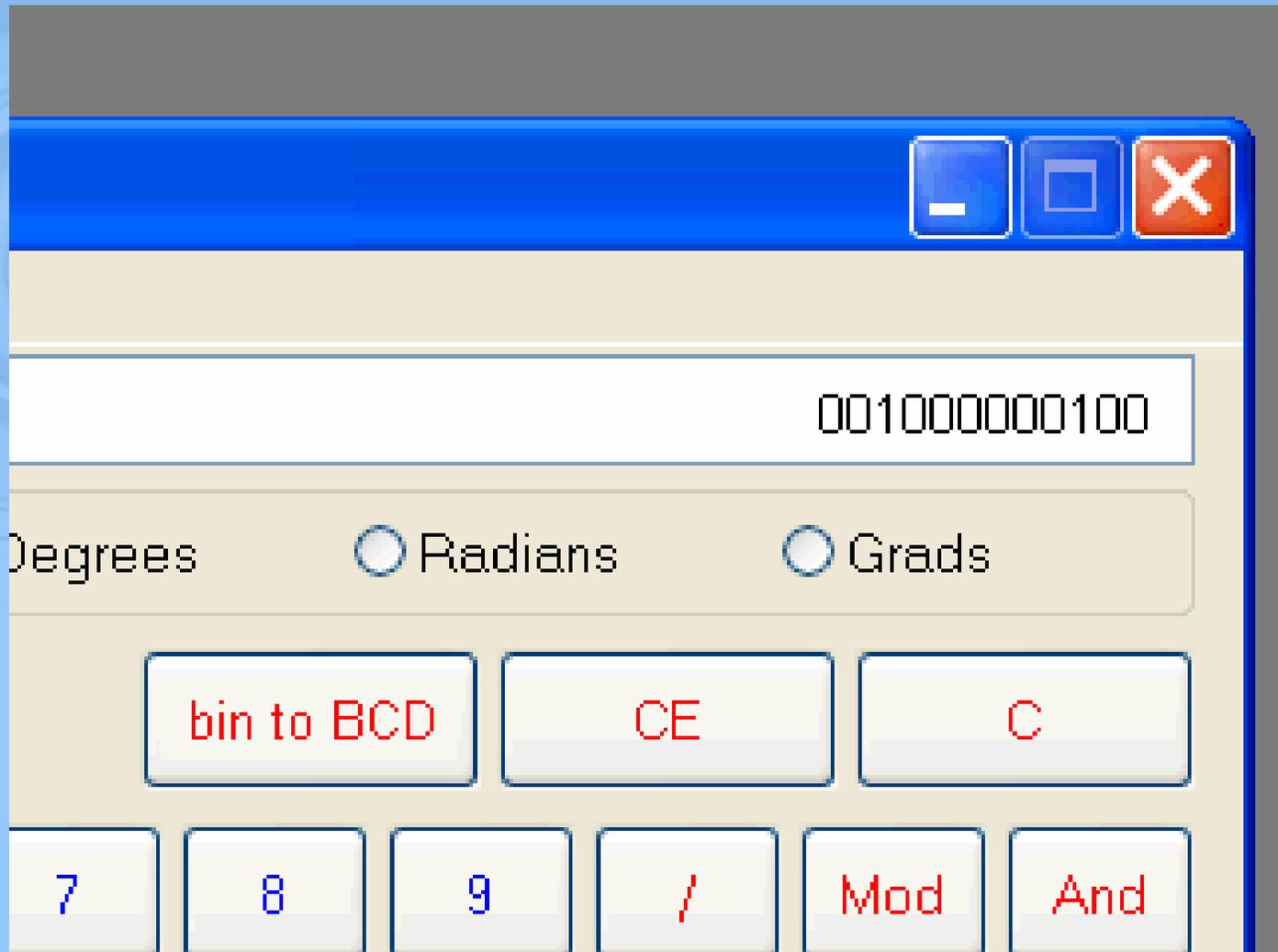
C:> bin2bcd

Enter binary: 11001100

  BCD = 0010 0000 0100

Another Way

Another Way

Identifying Substitutes

- **Demand substitution?**
  - **Same user purpose**
  - **Different code**
  - **Different user interface**
- **Role of platform software?**
  - **Different operating system, but high overlap**
- **Supply substitution?**
  - **Structural barriers to entry?**

- **Appropriate level of abstraction?**

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An Essential Use Case

Precondition: x86 PC, Win32

User Purpose: Perform a Web transaction

| User Intention	System Responsibility
	offer choice of Web resources
select Web resource	
retrieve Web resource	
	request Web resource from Web server
	receive Web resource from Web server
	present Web resource
perceive Web resource	

Windows 98 Competes in Two Relevant Product Markets

End use segments:

- **Platform software for Windows 98 applications**

- **Legal and technological support for performing Web transactions**

Two services provided through one facility

- **cf. Jefferson Parish**
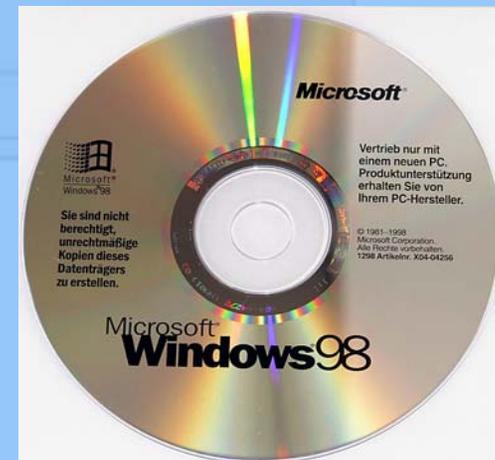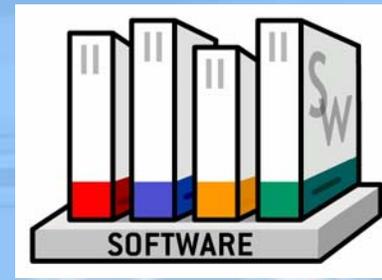
Price Discrimination Markets

A relevant product market can be defined around a captive end use segment

- Cellophane? Probably not. Arbitrage defeats price discrimination

- Software? Possibly. DRM can prevent arbitrage

Quality-Adjusted Price Discrimination Markets

An end use segment is captive if a hypothetical monopolist could profitably discriminate against it by reducing quality with respect to that end use alone.

Antitrust Policy Benefits

- **§ 2 protects competition to design the product that best supports each software functionality for which a market exists.**
  - Promotes human-centric, usable software
  - Prohibits foreshortening of competitive windows already limited by network effects
- **Every software developer is free to choose the code that is to be executed when a user chooses its software product for a particular purpose.**
  - Freedom to innovate!
- **Design choices are made by the software developer, not by courts or monopolists.**

Further Reading

- **A. Chin, *Antitrust Analysis in Software Product Markets*, 18 HARV. J.L. & TECH. 1 (2004)**
- **A. Chin, *Decoding* Microsoft, 39 WAKE FOREST L. REV. 1 (2005)**
  - **Available at:**
    - **Hearings Web site**
    - **AndrewChin.com**
- **A. Chin, *Analyzing Mergers in Innovation Markets*, 38 JURIMETRICS 119 (1998)**