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*for tomorrow*

# Access Control: Are we ready for the knowledge worker?

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Professor and HoD: Business Information Systems

Map your path to success

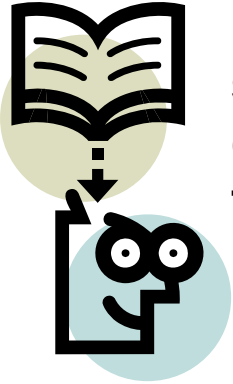
*Your journey begins here*

# Agenda

- **An access control perspective**
- **Movements in business**
  - Towards the knowledge worker?
- **Does the shoe fit?**

# Access Control

## Paradigm



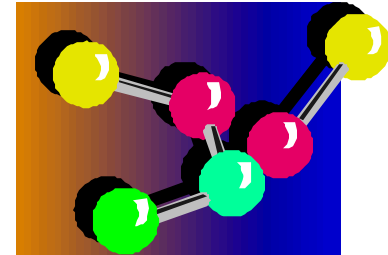
**Paradigm: “a philosophical and theoretical framework of a scientific school or discipline within which theories, laws, and generalizations and the experiments performed in support of them are formulated”**

(Merriam Webster Online Dictionary, 2004)

## Model

**Model: “A schematic description of a system, theory, or phenomenon that accounts for its known or inferred properties and may be used for further study of its characteristics.”**

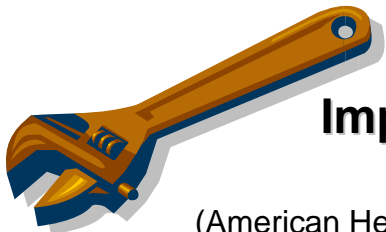
(American Heritage Dictionary of the English Language, 2000)



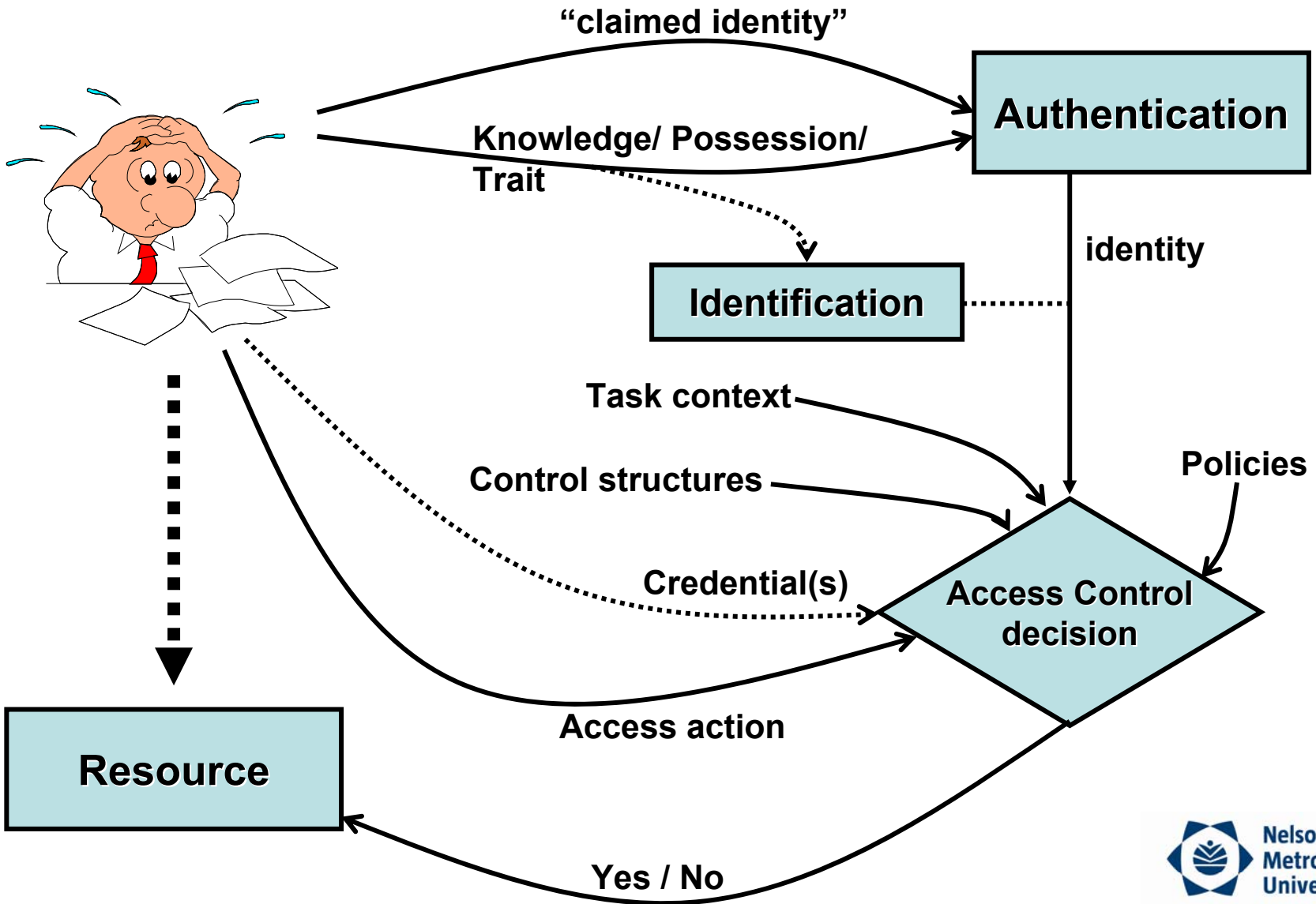
## Implement

**Implement: “To put into practical effect; carry out.”**

(American Heritage Dictionary of the English Language, 2000)



# Access Control Decision in context



# Access Control...

**Conceptually simple:**

**Access allowed =  $\{(s,o,a)\}$**

**where s from the set of subjects (users)  
o from the set of objects (resources)  
a from the set of access rights**

# Access Control paradigms...

**Security labels**

**Ownership**

**Roles (and other contexts)**

**Credentials (as opposed to identity)**

# Access Control Activities

**Design time**

**ADMINISTRATION**

**Run time**

**ENFORCEMENT**

# Movements in business...

## Away from an industrial economy ...

**“The manual worker is yesterday...The basic capital resource, the fundamental investment, but also the cost centre for a developed economy is the knowledge worker who puts to work what he has learned in systematic education, that is, concepts, ideas and theories, rather than the man who puts to work manual skill or muscle.”**

**(Drucker, “Management: Tasks, Responsibilities & Practices”, 1973)**

**“one of the effects of business process reengineering is that several jobs or tasks are combined into one”**

**(Hammer and Champy, Reengineering the Corporation – A Manifesto for Business Revolution, 1993;2003)**

# Information orientation ...

**“More often than not, this technology-centered viewpoint has not encouraged more people-centered management activities aimed at improving behaviors and values for more effective information use”**

**“... getting their people to embrace the right behaviors and values for working with information.”**

**(Marchand, Kettinger and Rollins,  
“Information Orientation: People, Technology and the Bottom Line”,  
Sloan Management Review, 2000, 41(4) , p.69 – 80)**

## Information Technology Practices

## Information Management Practices

## Information Behavior and Values

- “Sharing – is the free exchange of nonsensitive and sensitive information. Sharing occurs between individuals in teams, across functional boundaries and across organizational boundaries (i.e. with customers, suppliers and partners)”

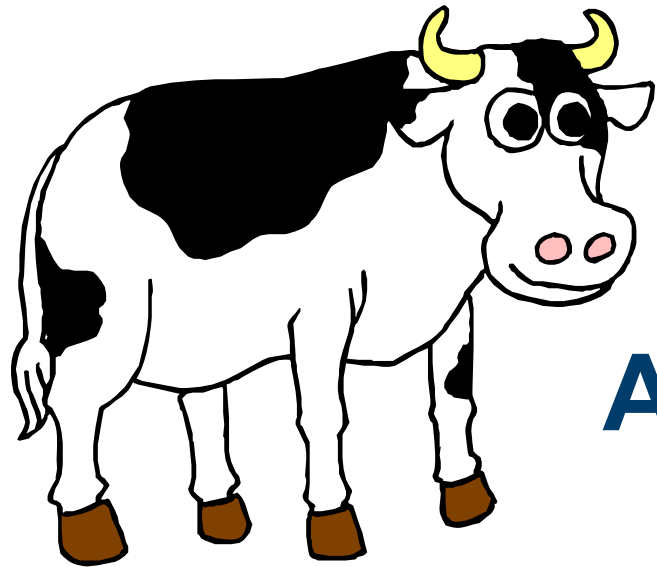
# Case handling ...

## As opposed to workflow ... Why?

- Not all work can be *straight-jacketed into activities*
- Work *distribution and authorization* difficultly aligned
- Control flow results in *context tunneling*
- Routing focuses on what *should* be done, instead of what *can* be done

Van der Aalst, Weske and Grünbauer,  
“Case handling: a new paradigm for business process support”,  
Data & Knowledge Engineering 53(2), 2005, p.129–162

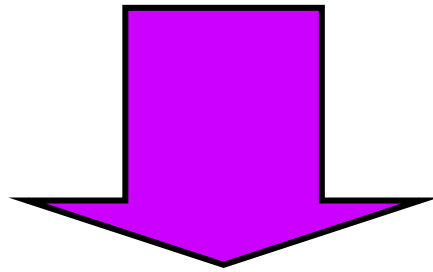
Are we “paving the cow paths”?



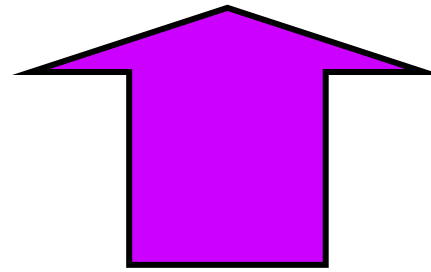
**Are we spending time  
automating and bettering  
“yesterdays procedures”  
??????**

A mind shift...

**“confidentiality”**



**vs**



**“availability”**

# Where are we heading to...

**Automatic  
Provisioning**

**ADMINISTRATION**

**Self  
Service?**

**Run time**

**ENFORCEMENT**

**Auditing  
& “intrusion  
detection”**

# Security an afterthought

# AGAIN?

Thank you

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