What an Information System is, and why it is important to know this

Ray J Paul

Emeritus/Visiting Prof Brunel

Visiting Prof LSE

EJIS co-editor

Discombobulator

(dancer)

Content

- Defn's of an Information System (IS)
- Need for common understanding of an IS
  - Even if called something else
- What an I.S. is
- An I.S. as a model
- Some art and an analogy
- A simple definition of an IS
- Implications and conclusions

Definitions of an (IS)

- Information Technology (I.T.) is for me:
  - = Hardware + software
- IT contains IS
- IS contains IT
- IS is academic study of IT

Need for common understanding of an IS
Even if called something else

- So what is an IS professional?
- Why would anyone ask us?
- What use of my talk today?

- To get down to a basic common understanding

What an I.S. is in practice

- It contains some delivery mechanism that stores, allows manipulation of, and retrieves data and/or information
- Yes, yes I know it could be a pencil and paper, but let's get real about it, it's some hardware and some software, i.e. some Information Technology (I.T.)
- (We can leave dinosaur IT for others)
- Assume w/o loss of generality, business systems

And people

- Most systems have users/customers etc
- Something/somebody has to move the system on
- Typically there are users of the system in the organization who, using the I.T. interact with the outside world and come to some business resolution

An I.S. then:

- At any point in time, the combination of the I.T., the users and the outside world constitutes the I.S. 'at-that-point-in-time'
- An I.S. is not a static system, it is what it becomes with the passage of time - it is dynamic.
- Evidence? Consider an I.S. as a model of the organisation.

An I.S. as a model

- Organisation change ==> model change otherwise history

- **You can't 'build' an I.S.**
- **No projects as we know them, no build a system, it's not static, it needs growing**

So, if an I.S. is dynamic: ...

- And I.T. versus people?

- Both
  - a blending of
    - speed/accuracy benefits of I.T. +
    - adaptability/ flexibility of humans.

- What goes to IT and what to users?

- But I am rushing ahead

Why can't we do it all with I.T.?

- Some people think you can
- All you need is requirements
- Requirements engineering, apart from being an oxymoron, suggests that if you follow some carefully considered processes and procedures you will be able to determine system requirements.

- NONSENSE.

Some Art: The Raft of the Medusa

- Gericault, 1819, Louvre

- Julian Barnes
- A history of the world in 10½ chapters

- Chapter 5

Barnes 's discussion

- What was not painted
- Politics (user participation??)
- Hope versus despair
- The artist's personal input

- Users cannot know what they want

An analogy: gardening

- Basic structure, unchanging short-term

- Never finished

- Never the same twice

Implications

- I.T. and human division of contribution
- I.T. must be adaptable, whilst still functioning
  - Cut the lawn - basic maintenance
  - Get rid of pests - debug
  - Change bed to veg - new or changed product
  - Remove excessive growth - get rid of superfluous parts of system

Human contribution

- At the end of the day, people make systems work.
- New situations - people are adaptive, flexible, problem solvers
- But, management control?
- People need to be given responsibility and be trusted
- Anathema to 'quality' (lack of) industry

Academic Information Systems

- Teach and research real systems
- I.T. needs C.S. and S.E. expertise
- 'People' part needs HCI, psychology etc
- The I.S. as a dynamic model needs 'I.S.' expertise, an appreciation of other disciplines
- Introducing or changing an I.S. needs all expertise(s) and intelligent thinking

Conclusions

- Isn't this a bit much Ray?
  – Maybe, but an I.S. is how I have described it
  – I.S. is not I.T.
  – I.S. is not just people

  – "I.S. is I.T. in Use"

  – We can continue to ignore this. We can continue with our current success and impact