
An expert
Not an expert
Can you spot the difference ?
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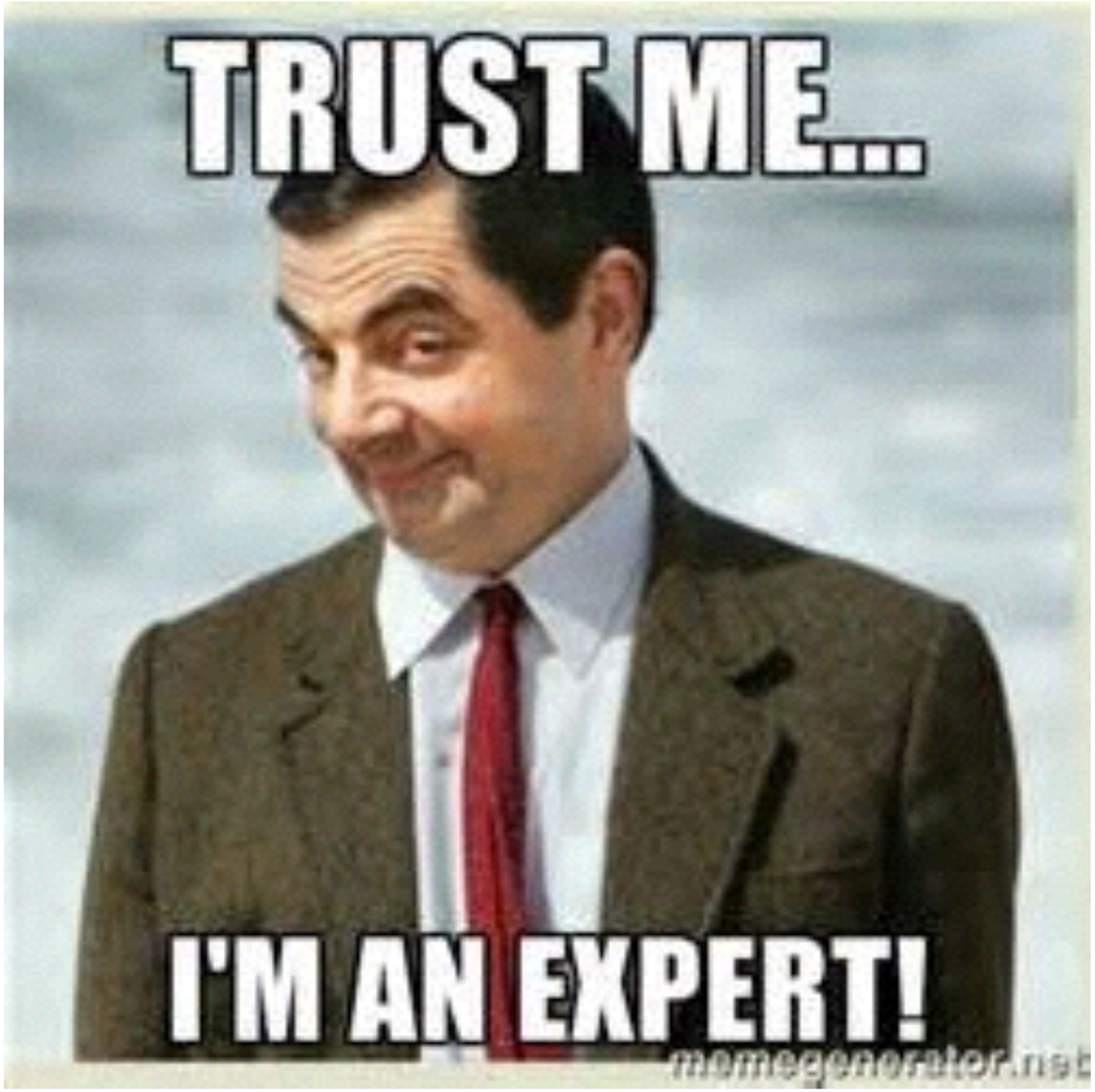
"I know nothing about the subject,
but I'm happy to give you my expert opinion."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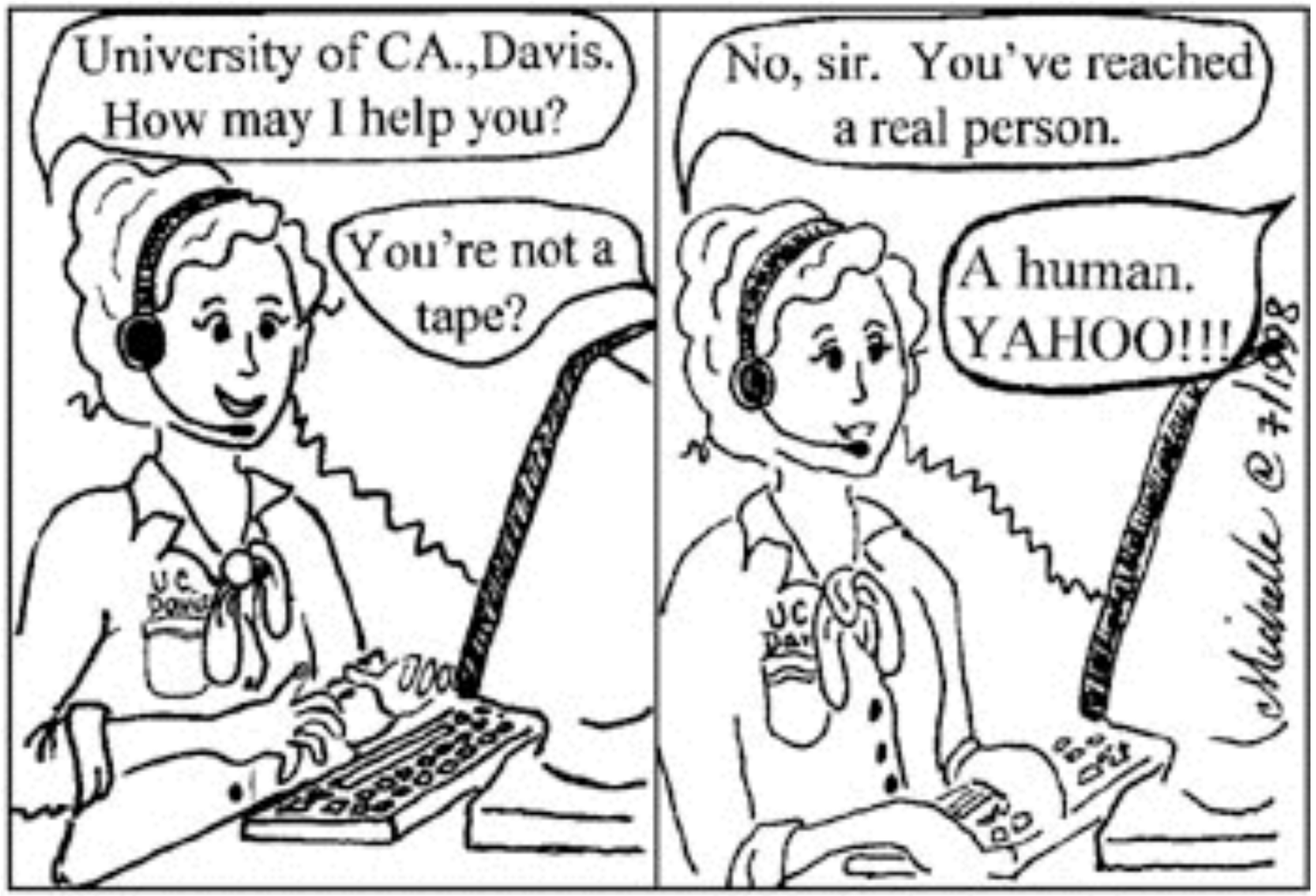

Cartoon by Michelle Hoglund, one of the artists on the campus operator team.

GEODELTA

Technical and Organizational Aspects to Quality Control of Geodata

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Subjects

- Geodelta's playing field
- Technical aspects of quality control of Geodata
- Core data and enhanced data
- Organizational aspects of quality control of Geodata
- Concluding remarks

Geodelta

- Active in the geo-world since 1984
- Always focused on quality control
- All software always home made
- Operating mainly for public institutions
- Licensing of software through sister company Delft Vision

Geodelta's playing field

- Creating tendering documents and technical specifications
- Conducting tendering procedures
- Advice on the choice of contractor
- Project management
- Quality control
- Advice on acceptance or rejection

Some highlights

- Development of a highly automated process to check the quality of aerial images, aerial triangulations, adjustments and ortho imagery (from 2005)
- Establishing the Dutch AHN2 specifications for a nationwide LIDAR height model together with ITC-Enschede (2007)
- Development of a highly automated process to check the quality of supplied LIDAR-data (from 2007)
- Establishing the specifications of the yearly nationwide high resolution and low resolution nationwide aerial photo flight (2011)
- Development of a map quality analysis tool (2013)

Technical aspects of quality control

- Past
  - Relatively simple: One workflow for one product
- Present
  - Becoming increasingly more complex due to more demanding specifications, “smart” hardware, complex mathematical models, advanced computations
- Future
  - Fusion of data from different sources into e.g. nationwide datasets

Core data and enhanced data

Core data

- Data which can serve as a skeleton for GIS applications
  - Core data must have a guaranteed quality
  - Core data must be up-to-date
  - Core data must be acquired regularly
  - The accessibility of core data must be easy at no or low cost

Examples of core data

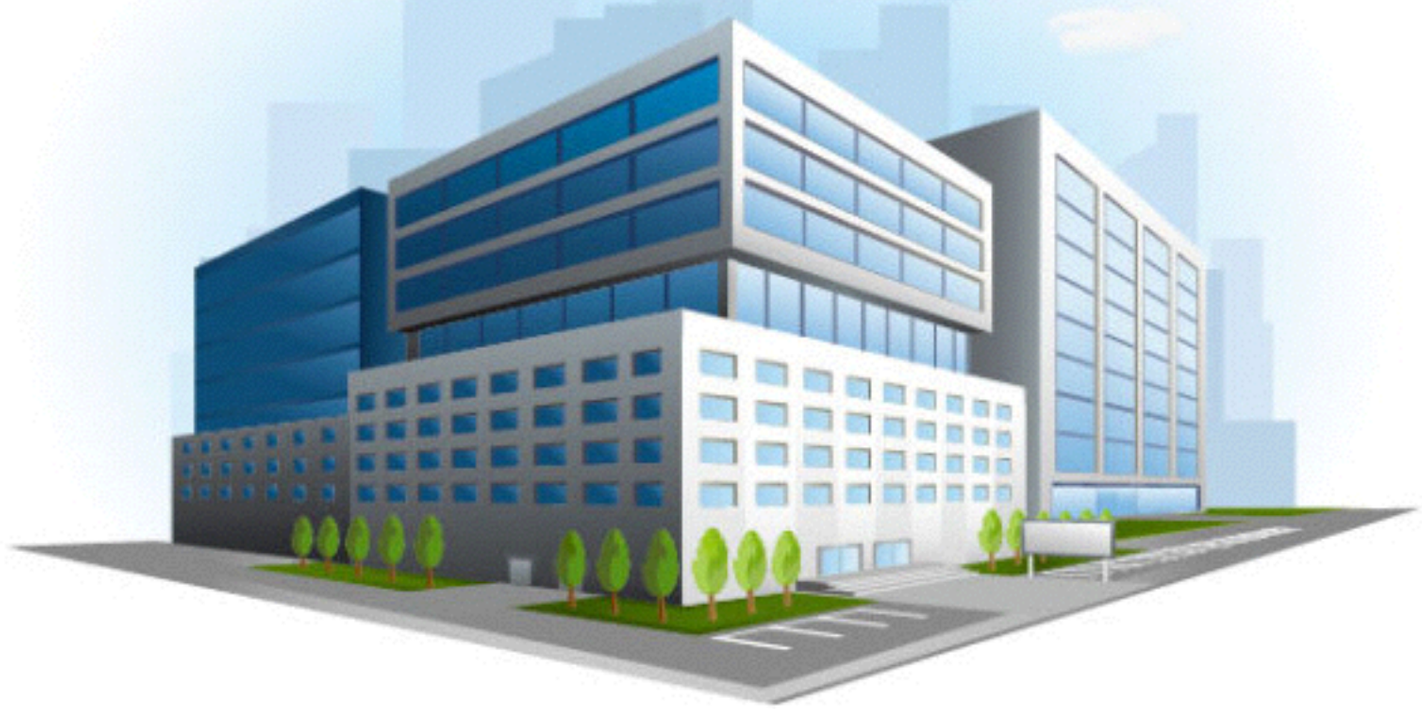
- A nationwide geodetic reference system
- A nationwide set of high resolution aerial images
- A nationwide set of high density high quality lidar-data

Core data is only core data if

- The quality of the data is known
- The acquisition of the data is periodic at regular intervals

Organizational aspects of quality control

Past



Organizational aspects of quality control

Past

Organizational aspects of quality control

Starting in the 90's

Privatization

- “Why should we make products ourselves if the market can do it cheaper?”
- “We can reduce cost by tendering all work”
- “We can reduce cost by not investing in specific knowledge”

Organizational aspects of quality control

Present

Result of this policy (1)

- Correct juridical procedures seem to be more important than a good product
- Complex European tendering procedures where the role of the technical expert seems to be underestimated and the role of the juridical expert seems to be overestimated
- Low price is often prioritized ->
  contractors must compete on price, not on quality
- Evaluation of submitted tenders is often an evaluation how good the contractor has written his tender, not how competent he is to deliver the required product
- Too many deliverables do not fulfill the required specifications

Result of this policy (2)

- Low prices for the private sector means low profit (if any) ->
  less innovation, less attractive discipline
- Too much privatization means a weak public sector -> not enough technical experts, no clear vision by policy makers on what is possible or what's needed

Organizational aspects of quality control

Future/wishes

Organizational aspects

- Establishing “fit to purpose” tendering documents means a perfect co-operation of various disciplines involved. Technical experts should play a more prominent role here
- Quality Control is important so that guarantees can be provided that core data indeed has the said quality. The users of the core data must be ensured that this is the case
- Quality Control work will become more complex due to e.g. the fusion of data sources

Concluding remarks

- Technical requirements should better fit the present technology
- Technical requirements should be very well written without any possibility of misinterpretation
- Quality Control work should be performed by the public sector

Clarification

How to select a good expert?

Clarification

"I know nothing about the subject,
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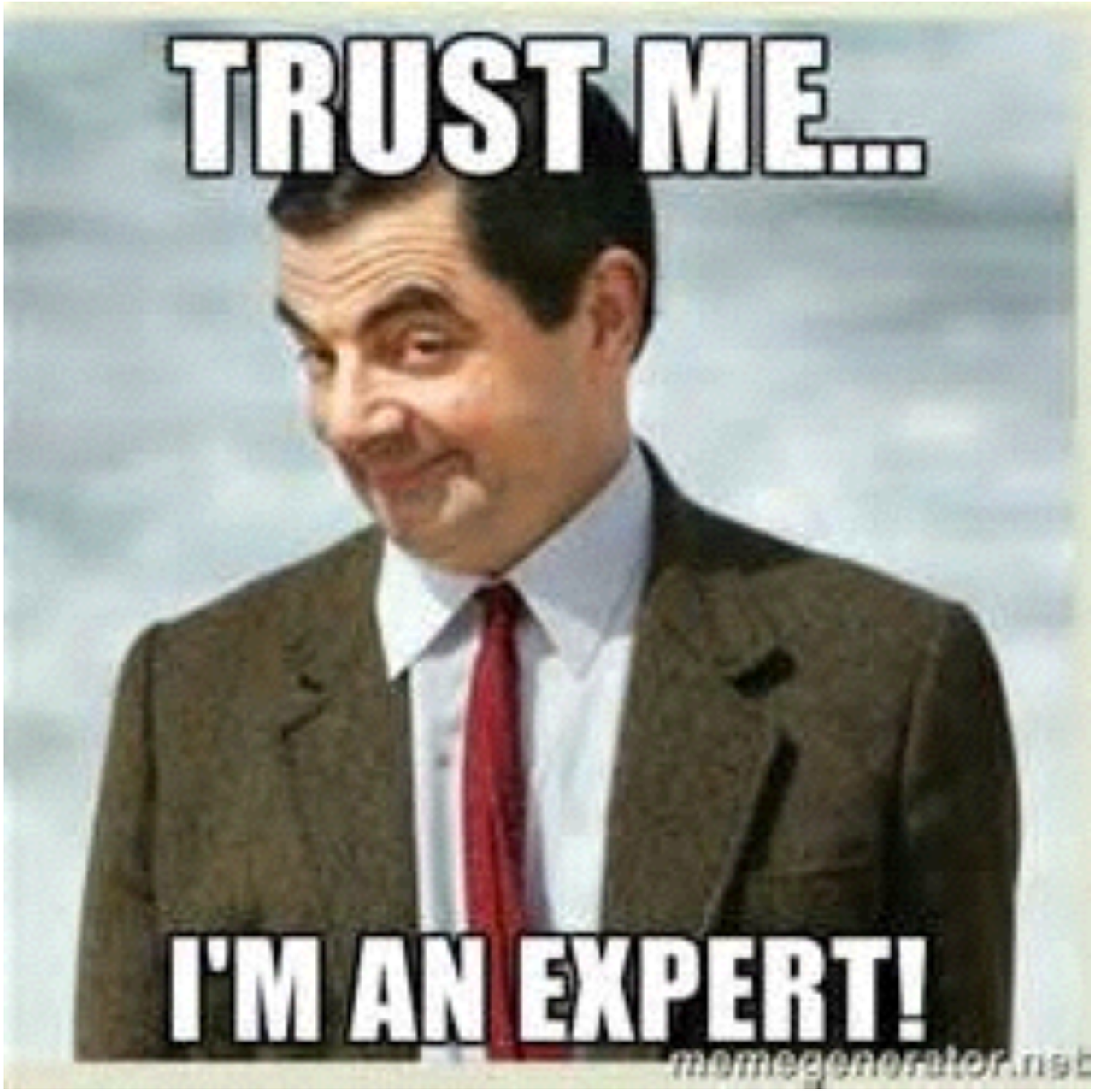
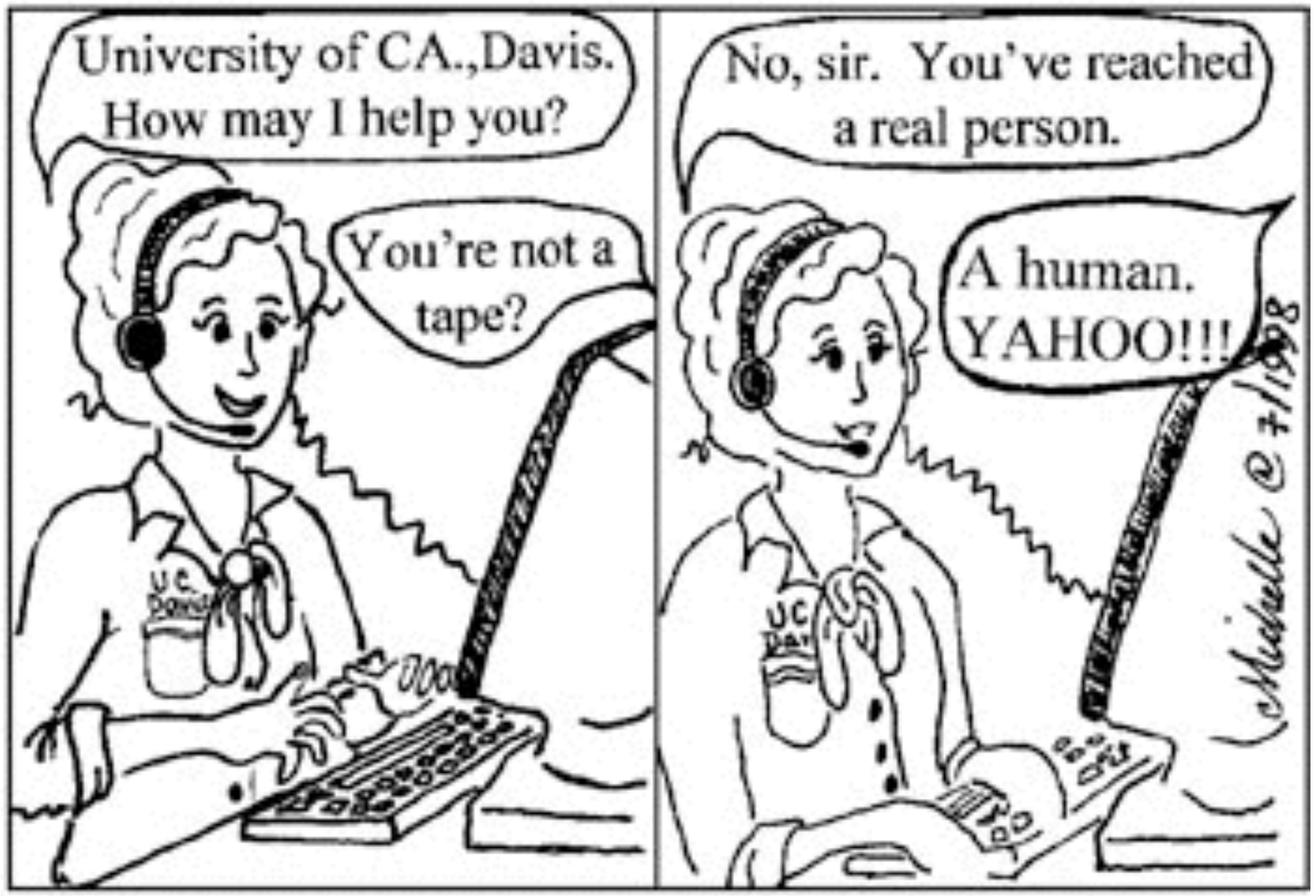
Clarification



Technical experts are a must

Juridical experts may be helpful

Clarification



Cartoon by Michelle Hoglund, one of the artists on the campus operator team.

The human factor makes the difference

Clarification

The public sector always has budget problems