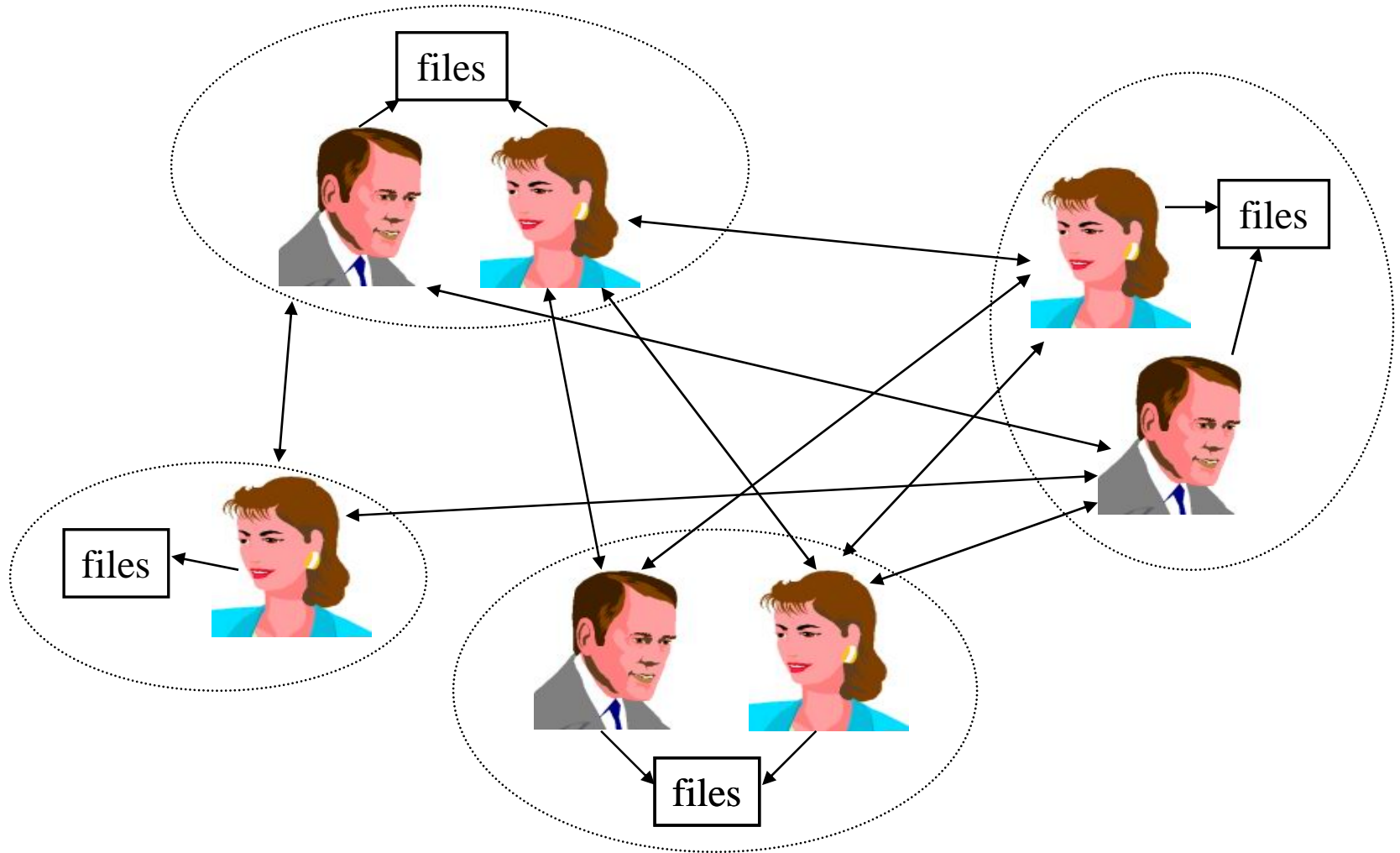


# Project Management

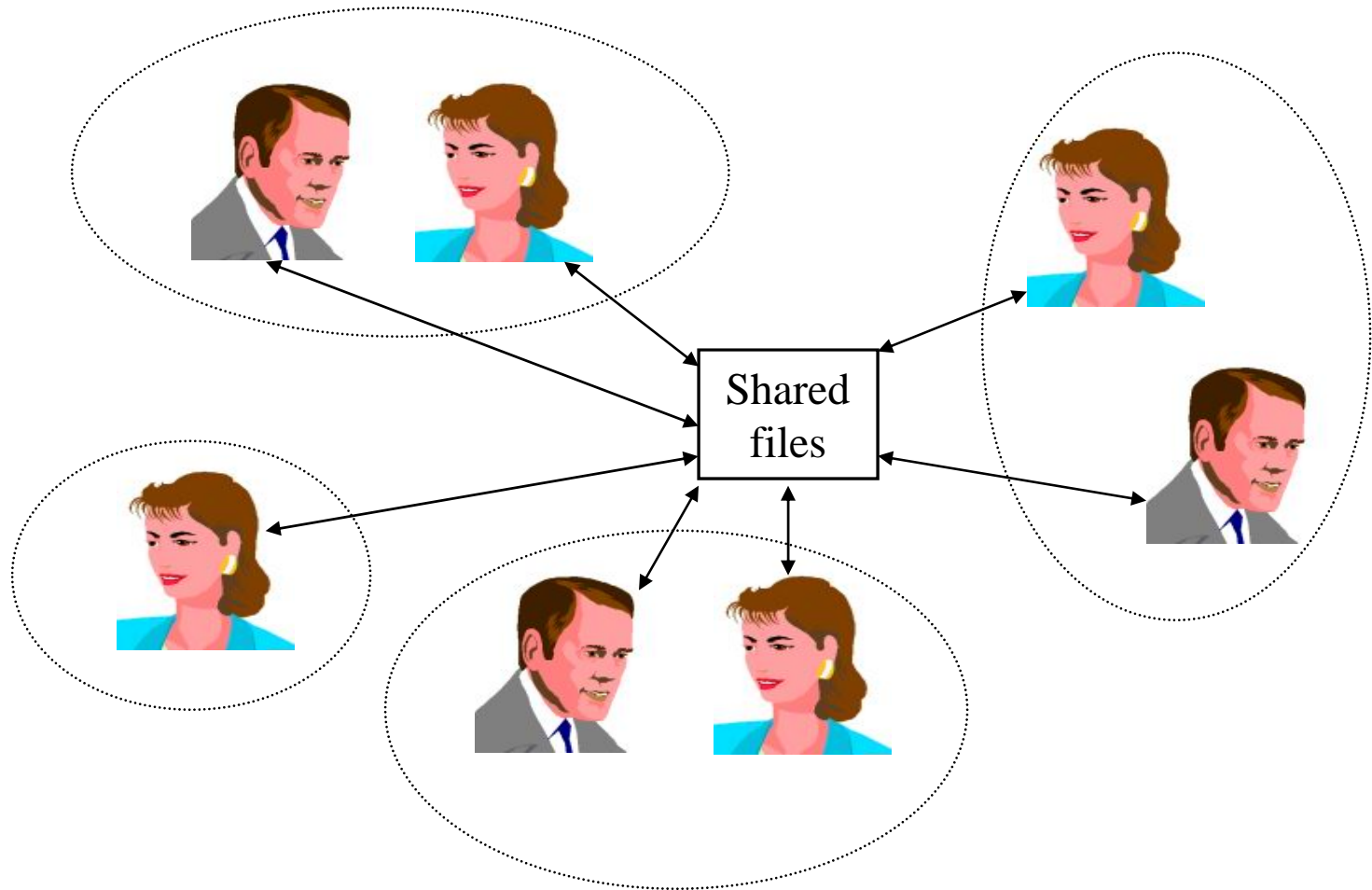


- Projects involve a team of people - the design team.
- The purpose of a project is to facilitate the construction of a building: not to produce drawings, attend meetings or create a paper trail.
  - When issuing drawings the task at hand is not completed when the drawings leave your office, not when they arrive at the recipient's office, but when they are actually looked at by who ever needs to look at them.
- A project management system should do more than make the tracking of transmittals or correspondence more efficient, it needs to make the availability of information more efficient.

# Traditional Project



# Shared Project

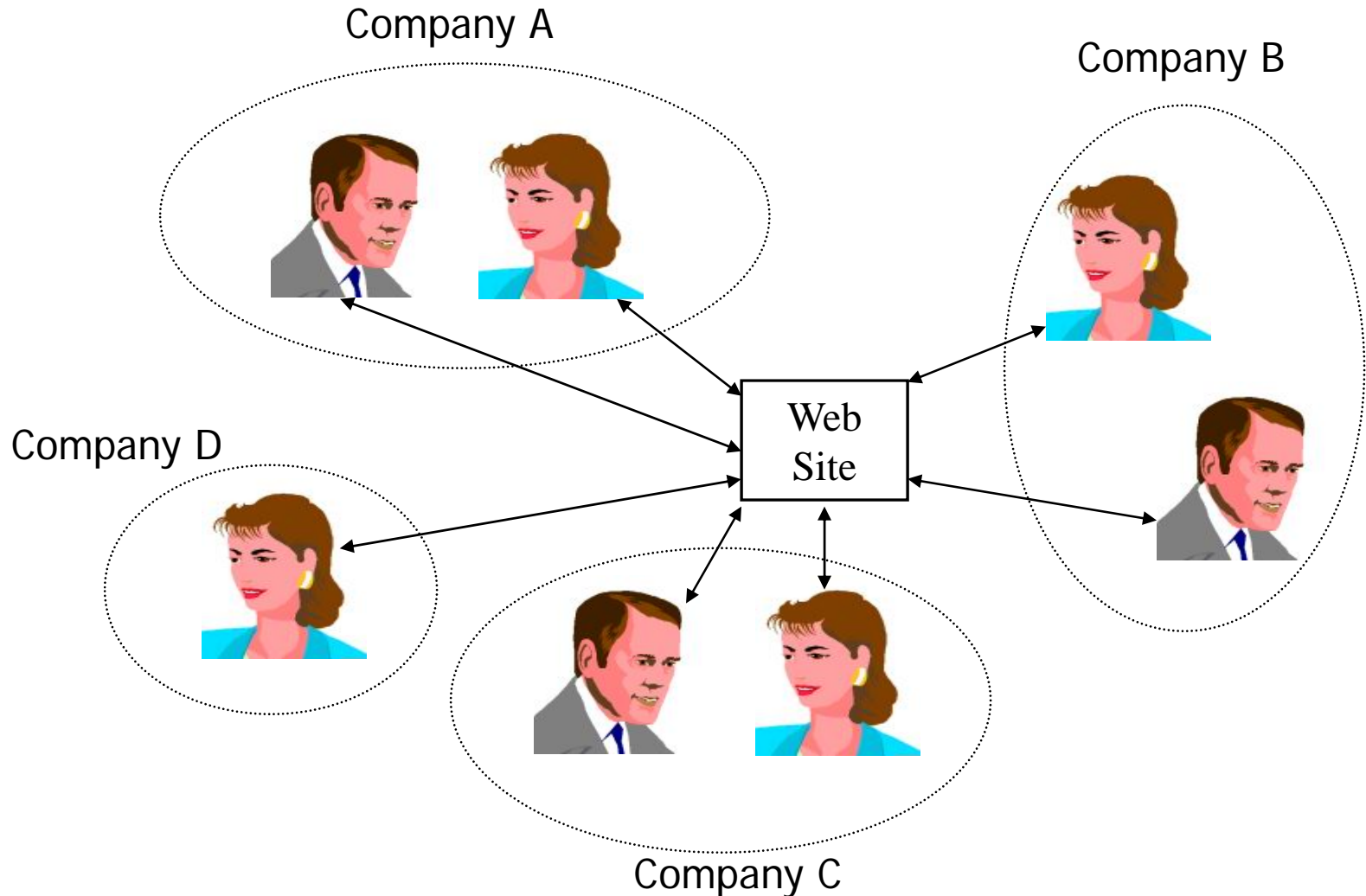


# Efficiency



- Make projects more efficient by reducing time spent on non-core (non-creative) tasks.
- Reduce time to:
  - communicate
    - a message
    - response to a message
  - make information available
    - like drawings, meeting minutes, briefs etc.
  - record actions
    - transmittals, drawing register, correspondence filing
  - manage
    - by gaining overview of issues
    - progress

# Web Based Project Management



# Providing WBPM



Web Based Project Management could be provided by:

- another member of the design team:
  - owner / developer
  - project manager
  - builder / construction manager
- the head consultant:
  - architect
  - engineer
- a commercial provider:
  - pay per project
  - pay per user

# Ownership



The owner has control over:

- who can access the system.
- who accesses what.
- controls workflow, including:
  - document types & approval controls.
  - status types & status approval.
- back-ups & archiving - including who receives copies.
- how the interface works:
  - e.g. how drawings are uploaded.
  - what software is required.

Remember: Whoever owns the system can view **ALL** the data on the system.

# In-house vs. Commercial



- Competing commercial systems can be assessed & most appropriate chosen.
- The most appropriate design team member can be chosen to be administrator (i.e. head consultant).
- Equivalent rights to access information can be agreed, and is policed by a disinterested 3rd party -the provider.
- Work flow can be agreed (and subsequently modified) between team members.
- Commercial WBPM providers are often amenable to making changes to improve their system.

# Selecting the Administrator



- Appoint a 'Managing Administrator' who:
  - will be regularly using the system or has experience with the system.
  - Has the authority to impel others to use it, and use it correctly - including consultants.
  - Can manage the setting up process - establishing protocols, document numbering, document types, status types etc.
- Appoint an Administrator who could:
  - be the Managing Administrator, or;
  - assist the Managing Administrator:
    - a computer literate architect or draftsman
    - support staff that types in information under direction (e.g. adding new users)

# Users



Most systems facilitate communication between users - not companies.

Be economical with the number of users. Don't add:

- people you know won't use the system (e.g. directors)
  - if they are required to be on the system assign some-one else to log-in as them and deal with their correspondence.
- people who aren't directly involved in the project but provide support to people who are (e.g. uploading drawings)
  - get them to log-in as some-one on the project team, or create a generic user (e.g. Document Issuer)

# Security



- Don't over do security:
  - avoid preventing people being able to do their work.
  - it is better everyone is kept informed.
  - remember that people are still responsible (communicating digitally doesn't instantly make them act irresponsibly).
  - everything done on the system is tracked anyway.
- ensure status workflow is clear & set up correctly:
  - e.g. sub-consultants may issue drawings as AFC, but they are not actually AFC until checked by the head consultant.
- Don't allow security for other purposes influence the design team:
  - greater security is required for tenders & sub-contractors.

# Setting up the System



Document types, Status types, Filing codes

- Minimize number of types & be super specific.
- Don't duplicate:
  - **FAX vs MEMO, DRAFT vs PRELIM, CLOSED vs COMPLETED**
- Avoid un-specific categories like **GENERAL** or **MISCELLANEOUS**.
- Ignore pseudo paper filing systems:
  - they'll never be used properly by *everyone* using the system.
- Minimize number of fields that are used:
  - most people will use the default value anyway.

# Workflow



- Workflow dictates who has control over a document e.g. RFI
  - is sent to one person only (but can be CC'd to many).
  - recipient can either forward to one other person or reply.
  - only originator can close off.
- Don't overdo document controls, it can get annoying.
- Avoid systems that mimic email:
  - there should only be one document showing all communications, not a number showing partial communications.
- Avoid enforced automatic notifications:
  - too much information degrades response time.
  - Those that it is intended for may not notice it's arrival.

# Document Control 1



- Controlled Documents include:
  - Drawings.
  - Specifications (specification sections).
  - Schedules.
  
- Institute a Document number system that:
  - can be used by all design team members.
  - covers all possibilities (it is difficult to re-number once started).
  - can be used to group documents.
  - avoids duplicating information inherent in the system; e.g. status, discipline.

# Document Control 2



- Institute a File naming system that identifies the file's contents:
  - no-one cares about your in-house job number.
  - Remember you have 255 characters available.
  - can be used when uploading drawings to avoid errors.
  - DocNo[rev]-papersize~title e.g. *GA-A1000[F]-B1~Site Plan.pdf*
- Decide on file format everyone will use:
  - use PDFs (*Adobe Page Description Format*); large but common.
  - or DWF (*AutoDesk Drawing Web Format*); small but less common with non-CAD users.
  - never issue CAD files (DWG, DRG) as drawings. (email direct to sub-consultants for use as backgrounds)

# Document Control 3



- Files issued may be available to more people than you would like. Editable CAD files are a particular danger.
- Avoid systems that allow uploading of only one drawing at a time.
- Look for methods to automatically populate the system's drawing register (e.g. via a spreadsheet).
- Uploading & downloading may seem to take a long time, but compare it to physically delivering them.
- Make use of print bureaus:
  - if they are a user on the system you can issue them a print request, & they will deliver them.

# Filing 1



In theory you shouldn't need to file, however the data is at a remote location you have limited control over.

- To access the data you need all the following working:
  - your computer
  - your internet connection
  - the internet
  - the web site internet connection
  - the web site computer(s)
  - the web site software

# Filing 2



- You could lose access to data because:
  - the provider loses all of it (or loses the previous days worth).
  - the provider goes off-line for a lengthy period.
  - the provider goes bankrupt.
  - the client or builder controlled site denies access due to a dispute (which could happen after the project is finished).
  - you are never provided with an archive set at the completion of the project, or the archive is so difficult to use it is useless.
- Keep a copy of everything concerning your involvement
  - could be electronic; PDF or DWF files, save web pages as MHT files or print to PDF.
  - Printed hard copy; keep drawings as A3 reductions.

# Conclusion



- Get it early in the process while everyone has time to experiment, and there is time to make modifications.
- Insist the lead consultant be Administrator.
- Spend the time at the start of the project setting it up properly. Create **written** agreed protocols.
- Badger all users (particularly sub-consultants) to use it exclusively and properly.
- Badger the WBPM provider if things don't work properly or optimally.
- Keep your own records, and ensure everyone in your office does the same.