The integration of Computing and Routine Work
Les Gasser, 1986

- How computing fits in work
- How computer use changes
- A micro-level study and analysis of computers in organizations
  - Individuals
  - Groups
- Sociotechnical

- Assumptions
  - Organization have limited resources
  - Actors have bounded rationality
  - Knowledge is unevenly distributed
  - Meaning is created in the interactions among people and groups

Concepts of work

- Work task
  - Agenda (objective)
  - Resources
    - Time, information, budget, skilled staff, computing
  - Carried out by person or group
  - Part of the division of labour
- Task chain
  - Sequence of work tasks
- Production lattice
  - Structure of intersecting task chains
- Primary work
  - Carrying out the tasks
- Articulation work
  - Establish, maintain or break the production lattices
- Computing work
  - Activities being parts of the primary or articulation work
- Work situation
  - The task and its context
Fit between work and computing

- **Misfits**
  - Slack
  - Too much resources
  - Slip
  - Undersupply of resources
    - Data does not match the needs
- **Fits**
  - Computing is considered acceptable
- **Misfits happen anywhere and anytime**
  - Inaccurate data
  - Late reports
  - Technical inadequacies
  - Inadequate computing resources...

Adaptations for overcoming misfits

- **Fitting**
  - Changing computing arrangements
  - Adjusting work schedules and commitments
- **Augmenting work (adding work)**
  - Verifying and revising data
  - Assessing causes and effects of anomalies or misfits
  - Consolidating data sources
  - Training
  - Archiving data or programs
- **Working around (intentionally using the computer system in ways for which it was not designed)**
  - Data adjustment
  - Procedural adjustment
  - Backup systems
Adaptations

• Ad hoc when only one task is involved
  – People adapt when they consider it necessary
• Organized when task chains are involved
  – Fitting often requires computing personnel
  – Augmenting requires the involvement of colleagues
  – Working around requires that all involved understand how they "fool the system"
• Methods for information systems development
  – Technological approach
  – Only addresses fitting as the solution to the integration of computing in work
    • Use case, sequence diagram