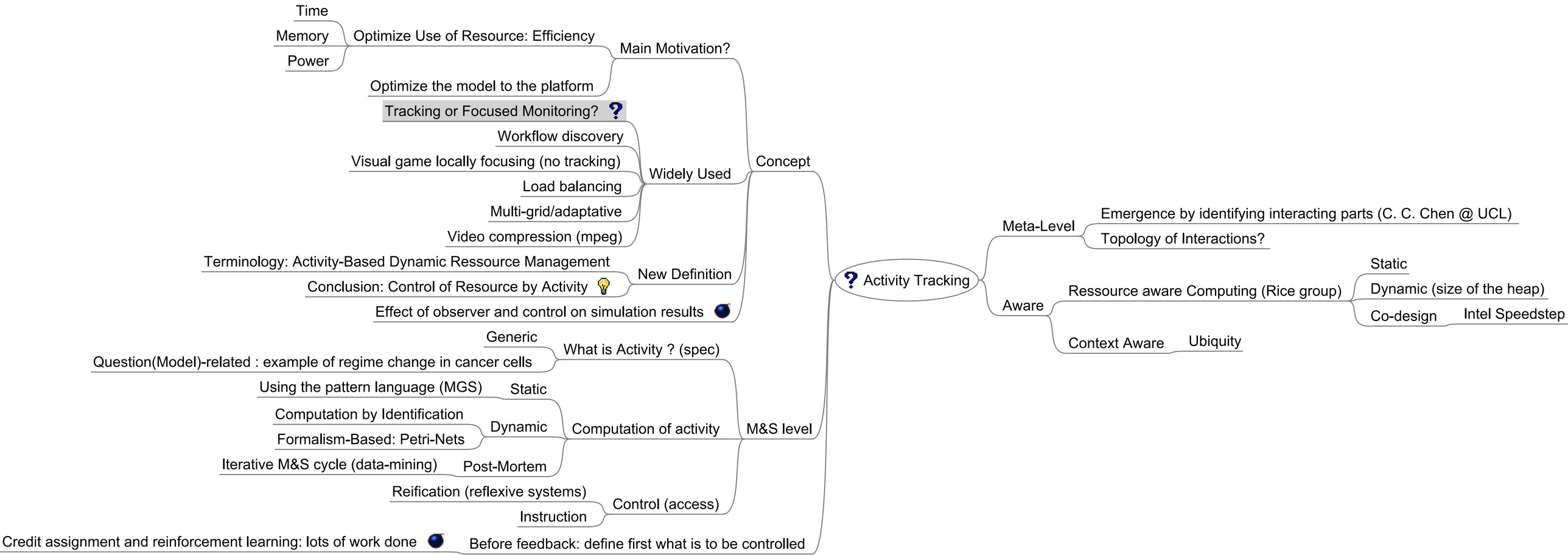
Activity Tracking
Meta-Level
Emergence by identifying interacting parts (C. C. Chen @ UCL)
Topology of Interactions?
Aware
Ressource aware Computing (Rice group)
Static
Dynamic (size of the heap)
Co-design
Intel Speedstep
Context Aware
Ubiquity
Concept
Main Motivation?
Optimize Use of Resource: Efficiency
Time
Memory
Power
Optimize the model to the platform
Tracking or Focused Monitoring?
Widely Used
Workflow discovery
Visual game locally focusing (no tracking)
Load balancing
Multi-grid/adaptative
Video compression (mpeg)
New Definition
Terminology: Activity-Based Dynamic Ressource Management
Conclusion: Control of Resource by Activity
Effect of observer and control on simulation results
M&S level
What is Activity ? (spec)
Generic
Question(Model)-related : example of regime change in cancer cells
Computation of activity
Static
Using the pattern language (MGS)
Dynamic
Computation by Identification
Formalism-Based: Petri-Nets
Post-Mortem
Iterative M&S cycle (data-mining)
Control (access)
Reification (reflexive systems)
Instruction
Before feedback: define first what is to be controlled
Credit assignment and reinforcement learning: lots of work done