The US-Aus F.T.A. I.P. Provisions
KEY ASPECTS: INNOVATION, OPEN SOURCE, OPEN CONTENT

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FREE FOR EDUCATION

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The Justification for I.P. Monopoly Powers

- **Not Morality**
  'They deserve it'
- **Not Micro-economics**
  'It's good for individual / corporate revenue / competitive advantage'
- **Not National Strategy**
  'It's good for national competitive advantage'
- **The Sole Grounds Are Macroeconomic**
  'The economy as a whole will work better (because there will be more innovation)'

Lack of an Economic Case

- Anti-Competitive Measures require strong justification, and the onus of proof falls on the beneficiaries of the Monopoly
- The Music, Multi-media and Software industries have put forward statistical arguments that have been found seriously wanting
- There's plenty of life within existing Copyright laws (e.g. history of VCRs; iTunes and follower initiatives, burgeoning Open Source industries)

Invention

The conception of a new idea
Expression of a new idea in an apparatus or method

Innovation

The application of knowledge
to manufacture and deploy a new kind of artefact

The articulation of an invention

The adoption of a new product or process

Big-Bang Innovation cf. Cumulative Innovation

- Genuine 'breakthroughs' do occur
- But most Innovation is progressive:
  - Process Innovation is often needed, in order to support Product Innovation
  - Step-wise Refinement results in Incremental Emergence or Conversion
  - Dependent on Interaction with others, and often on Contributions of others, incl.:
    - Users
    - Suppliers
    - Competitors

Codified Knowledge

expressed and recorded, in a more or less formal language
(text, formulae, blueprints, procedure descriptions)
disembodied from individuals
communicable information

Tacit Knowledge

informal and intangible
exists only in the mind of a particular person
'knowing that' cf. 'knowing how to'
not readily communicated to others

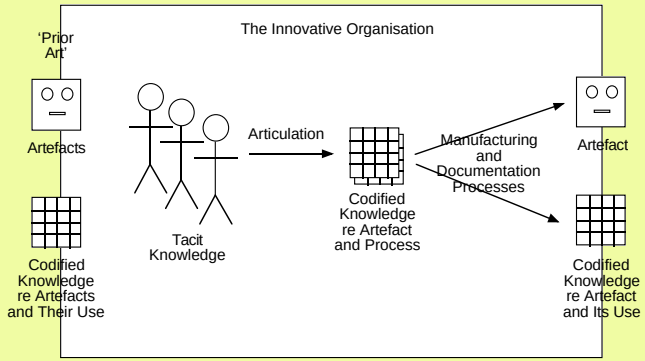
Codified Knowledge

An omelette recipe
A combination of structured and unstructured text

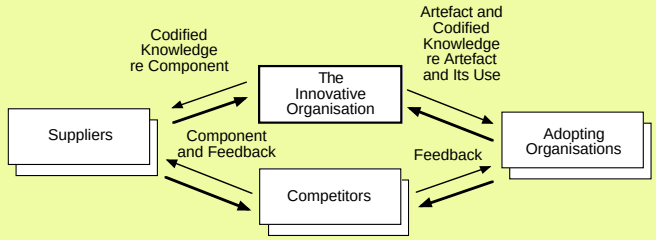
Tacit Knowledge

The expertise to interpret the recipe,
to apply known techniques and tools to the activity,
to recognise omissions and exceptions,
to deliver a superb omelette every time,
to sense which variants will work and which won't,
and to deliver with style

Info Flows Within the Innovative Organisation



Info Flows Within the Innovative Sector



Plus Consultants, Educational Institutions, Labour Mobility

Key Factors That Determine Whether First-Movers Win

- Fit to a Need
- Scale of Investment
- Time-to-Market
- Timing of the Launch
- Project Management
- **Imitability and Competability of the Innovation**
  - Business Acumen
    - Resources, Channels, Customers, and Control over Them
    - Brand-Image Establishment
    - Lock-in, Switching-Cost Strategies
  - The Pre-Competition Window:
    - **Accessibility of Codified Knowledge**
    - **Apparentness, and Ease of Discovery through Reverse-Engineering**
    - **Leakage of Tacit Knowledge**
    - **Exploitation of I.P. Law to Extend It**

Conventional Economics ('Rationalist', 'Neo-Classical')
Assumptions About Information

- Information is an outcome from innovation processes
- Information is highly appropriable, because:
  - Information about an innovation can be acquired, reproduced, communicated and assimilated quickly and for very low cost
  - Information is embedded in artefacts, and is extracted easily and cheaply

Conventional Economics ('Rationalist', 'Neo-Classical')
Assumptions About Innovation

- Innovation is important to progress
- Investment in innovation will not occur unless investors anticipate returns on that investment
- Imitators contribute little
- Imitators are 'free riders' on the innovator's creativity and investment
- There are few natural protections for innovators against imitators

Conventional Economics ('Rationalist', 'Neo-Classical')
Conclusions

- Innovators can't achieve returns without help
- Innovators need a 'limited monopoly', that will provide them with a window of opportunity, and hence assure return on investment
- Imitators must be punished for misappropriation

Information Economics
Assumptions About Information

- Information is both an output from, and an input to, innovation processes
- Information is difficult to appropriate, because:
  - Tacit knowledge cannot be extracted, reproduced, communicated or assimilated quickly or for low cost
  - Codified knowledge may not be reproduced, communicated or assimilated quickly or for low cost
  - Knowledge embodied in artefacts is in many cases not codified, and hence may not be readily extracted

Information Economics
Assumptions About Innovation

- Innovation is mostly cumulative, seldom 'big bang'
- Innovation is heavily dependent on contributions by users, adopters, suppliers, and competitors
- Imitators, in the absence of 'value-add', contribute little, and are 'free riders' on the innovator's investment
- There are many natural protections for innovators, especially the investment and lead-time involved in:
  - the development of tacit knowledge
  - its conversion into codified knowledge
  - development and marketing of competitive products

Information Economics
Conclusions

- Innovators can achieve returns without help
- A 'limited monopoly' hinders cumulative innovation, and its scope and length must be no more than that necessary to avoid stunting the initial innovation
- Mere imitators must be punished for misappropriation
- Encouragement must be given to:
  - Investigators of innovations
  - Enhancers of innovations
  - Extenders of innovations
  - Developers of competing innovations

Open Source Software

- Licences are available under liberal terms
- The rationale is to enable cumulative fixing and enhancement, by exposing the source-code to the view of many people
- **The 'Free Software' movement**, since 1982
  - **'free as in speech, not free as in beer'**
- Unix, Apache, Linux, OpenOffice, etc.
- **The 'Open Source Initiative'**, since 1998

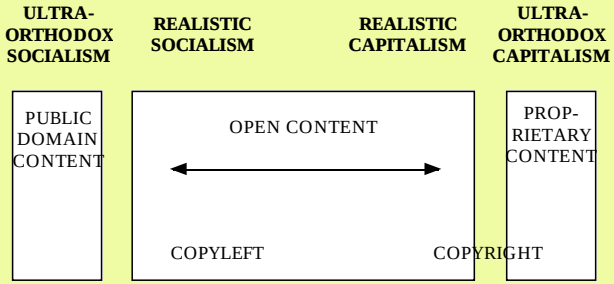
Open Source Software – Licence Terms

- Ready Availability of:
  - a licence
  - executable code and source-code
- Licence Permissions to:
  - run the executable
  - reproduce both executable and source
  - re-distribute both executable and source
  - adapt the source
  - distribute adapted executables and source
  - distribute within larger software packages
- Licence Constraints to:
  - ensure that redistribution is no less liberal
  - prevent subversion of the objectives

Open Content

- Content is available under liberal terms
- The rationale is to enable access
- The business model is based on:
  - reciprocity, possibly indirect and / or deferred
  - volume sales at low rates per access or copy
  - revenue from complementary services
- Shared Learning-and-Teaching Materials
- The 'Open Content' movement
- The 'Creative Commons' movement

The Ideologies of Copyright and Copyleft



Open Content Licensing Choices

- **Ownership**
  - Exclusivity
  - Sub-Licensing
- **Integrity Protection**
  - Entirety
  - Copyright Notice
- **Reproduction Control**
  - Permission
  - Use(s) / User(s)
- **Republishing Control**
  - Permission
  - Format(s) / Media
  - Incorporation
  - Protections
- **Adaptation Control**
  - Permission
  - Review
  - Distinguishability
  - Copyright Vesting
- **Usage**
  - Territory • Purposes
  - Person-Types
  - Fields of Endeavour
- **Liability Management**
  - Warranties
  - Indemnities
- **Pricing**
  - One-Time
  - Repetitive

Specific Open Content Initiatives

- **AEShareNet** U, P, S and C licences (1998, 2002)
  http://www.aesharenet.com.au/coreBusiness/
- **N.S.W. Crown Copyright** Licences
  http://www.agd.nsw.gov.au/__4a2565d200027216.nsf/0/f39cefdebdbcc270ca256e4d007bbaee?OpenDocument
- **Creative Commons** (U.S.)
  http://creativecommons.org
- Creative Commons (Aust.) – QUT / Blakes
  http://creativecommons.org/projects/international/au/
- **AEShareNet FfE – Free for Education** Licence
  http://www.aesharenet.com.au/FfE/

Social and Cultural Impacts

- The digital world enables both more freedom and more lock-down (technological protections)
- More power by I.P. owners increases the incentives to exercise proprietary power rather than make works publicly available
- Suppression occurs through take-down notices that are too difficult and expensive to fight
- Aust. consumers are in a far weaker position than U.S. consumers (Bill of Rights, 'fair use')
- Anton Piller orders; no personal use; DMCA; criminalisation; are 'chilling' mechanisms