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**Colloquium on publicly financed research
25 May 2011**

REPORT

The Free Market Foundation hosted a **colloquium on publicly financed research** from **09h00-12h00** on **Wednesday, 25 May 2011**, at the **School of Economics**, Middle Campus, **University of Cape Town**.

The colloquium's **objective** was to contribute to a thorough understanding of the legislation relating to publicly financed research and of the practical problems/benefits encountered in applying the legislation. It was a **closed session** amongst a few experts brought together to exchange ideas and experiences and was held according to **Chatham House Rules**, which are that what is said may be quoted or passed on to roleplayers, but that nothing may be attributed to an individual source.

The in-depth discussion on the *Intellectual Property Rights from Publicly Financed Research and Development Act* focussed on two aspects:

- pros and cons of the Act;
- progress and problems with implementation.

The following **documentation** was disseminated prior to the colloquium:

- *Intellectual Property Rights from Publicly Financed Research and Development Act*, Department of Science & Technology
- *White Paper on Science & Technology* (Chapter 10), Department of Science & Technology
- *The new IPR Regime for Publicly Financed Research – a Question of Balance*, by Dhesigen Naidoo
- *Perceived Pros and Cons of the Intellectual Property Rights from Publicly Financed Research and Development Act*, by Rory Moore
- *Could South Africa Produce the Next Google?*
- *The Bayh-Dole Act and Revisionism Redux*, by Howard Bremer, Joseph Allen, and Norman J. Latker

- *The Bayh-Dole Act Turns 30*, by Vicki Loise and Ashley J. Stevens
- *The Role of Public-Sector Research in the Discovery of Drugs and Vaccines*, by Ashley J. Stevens, Jonathan J. Jensen, Katrine Wyller, Patrick C. Kilgore, Sabarni Chatterjee and Mark L. Rohrbaugh,
- *The Economic Impact of Licensed Commercialized Inventions Originating in University Research, 1996-2007*, by David Roessner, Jennifer Bond, Sumiye Okubo and Mark Planting

Programme

- 08h45-09h00 Arrival and registration
- 09h00-09h20 **Dhesigen Naidoo**, Director: Research and Innovation Support at the University of Pretoria, *Pros and cons of the Publicly Financed Research and Development Act*
- 09h20-09h40 **Roux de Villiers**, Director at Werksmans Attorneys, *Progress and problems with implementation of the Publicly Financed Research and Development Act*
- 09h40-10h00 Tea break
- 10h00-12h00 Discussion

Participants

Gary Atkinson-Hope	Director: Technology Transfer/Industrial Linkages	Cape Peninsula University of Technology
Andrew Bailey	IP Manager	UCT (Research Contracts & IP Services)
Piet Barnard	Director: Research Contracts & IP Services	University of Cape Town
Tony Bunn	Director	Medical Research Council
Renfrew Christie	Dean of Research	University of the Western Cape
Roux de Villiers	Director: Technology Intellectual Property	Werksmans Attorneys
Pieter du Plessis	Director Finance	University of the Free State
Anu Idicula	Head of IP	Technology Innovation Agency
Rory Moore	Former Director of IP & Technology Transfer Office	University of KwaZulu-Natal
Hamlet Morule	Director: Government Affairs	Microsoft South Africa
Michelle Mulder	Manager: IP & Business Development	Medical Research Council
Dhesigen Naidoo	Director: Research and Innovation Support	University of Pretoria
Anita Nel	Director: Innovation and Business Development	Stellenbosch University
Temba Nolutshungu	Director	Free Market Foundation
Ekow Oppon	Project and Marketing Manager	Medical Research Council
Duncan Raftesath	CEO: Wits Enterprise	University of the Witwatersrand
Don Ross	Dean of Commerce	University of Cape Town
Glen Taylor	Director: Innovation and Business Development	University of the Free State
Joanne van Harmelen	Associate and Patent Attorney	Spoor & Fisher
Nondwe Zama	Tech Transfer Intern	Medical Research Council

Facilitator | Leon Louw, Executive Director, Free Market Foundation

Comments & thoughts (post-presentations; in no particular order)

The Act & IP policy – purpose

- Research output, ie new knowledge output, is coming from universities, but is/was unacknowledged
- Existing knowledge in South Africa must be transferred into meaningful tools to transform economy
- Therefore converting to economic capital via universities is a good idea
- Regulates internal relationships: Employees, tech transfer offices, contractors, students, visiting researchers – confirming contracts needed
- Policy sets terms of play inside the organisation ie how proceeds are to be shared
- Regulates external relationships via research contracts and licenses

The Act – general pros and cons

- Two issues: Act and its interpretations/Practical implementation
- Act is badly drafted, falls into every trap, no objective criteria, vague, ie bad statutory drafting
- This creates uncertainty which is bad for business
- Act vague and unimplementable; should not be on books; discourages foreign investment
- Objectives are right, leashes are too tight
- Can circumvent Act via royalty free licensing
- It has potential to go from addressing a “market failure” to inducing a “market conflict”
- Private sector has overreacted to IP Act
- There has been a lot of resistance, but universities must convince academics to co-operate for their own protection because state can appropriate their IP

Cons

- The reporting burdens and approvals regime
- Obstacles and red-tape, exclusive licensing and off-shore partnerships
- The march-in rights of the state “for the health, security and emergency needs of the republic”
- Problems with industrial designs with commercial potential; can’t report them all to Nipmo
- Uncertainty makes discussions with private sector very difficult
- Act has forced universities to make more prescriptive internal policies

Pros

- Act has a lot of positives; everyone ran their own show; no concerted efforts to sell technology
- The suite adds impetus to the building of a culture of innovation and entrepreneurship
- It’s a route to realising the vision of a knowledge-based society
- New solutions to improve quality of life and competitiveness
- Diversification of career options for young folk and the knock-on pull factor for higher degrees
- Greater state investments to leverage larger private sector investments
- Academe as a principal partner in development
- The Act forces universities et al to up the ante; all will get better deals as a result of Act

Scope of Act (and uncertainty)

- Different institutions have different interpretations of Act
- IP from publicly financed R&D: IP vests with institution unless co-creatorship
- Publicly financed R&D: “R&D undertaken using any funds allocated by a funding agency, but excludes funds allocated for scholarships and bursaries

- IP “...excludes copyrighted work such as thesis, dissertation, article, handbook or any other publication which, in the ordinary course of business, is associated with conventional academic work”
- Questions: Administrative and teaching duties versus research duties? Application to examples and tasks e.g. computer programs? Application to works of art, literature, music (as opposed to functional works)?
- What IP is not claimed? Textbooks & articles, Artworks?, Consulting work – defining scope, Student bursaries?
- What is function of humanities professor?
- Works of art, for example, JM Coetzee’s books: would you consider claiming IP in this regard?
- May fall under “academic work”
- If you think not and don’t disclose to Nipmo, theoretically state can claim rights to book or music
- At one university had to change IP regulations re music department; can’t attract top musicians to university as they might lose their music
- Awkward position: if disclose and it falls under Act, copyright falls under university not author
- Can’t hand back to author without giving state first option – unintended consequence
- “Conventional academic work” is not covered by Act, but is not defined in Act; what does this mean?
- “Conventional academic research” is part of conventional academic duties
- Research is part of academic work, therefore does all research fall outside Act?
- Ownership becomes uncertain
- One interprets this by splitting research duties from academic/teaching
- Huge amount of copyrighted materials produced (even memos and teaching materials) within universities
- Must be associated with a source of public financing that falls outside the university
- One organisation asks: does copyrighted work have social and commercial value? If yes, falls under Act
- Handbooks and training manuals fall in grey area, yes and no
- If you uses government funding to patent, it falls within the Act
- Lots of regulations not drafted in relation to Act
- Play it safe, try and get approval
- If taken to court might get thrown out
- If contract void, serious consequences
- Patent Support Fund: if receive funding on basis of policy, you have an obligation to cede
- When do we fail to commercialise for benefit of South Africans? No-one knows exactly what this means
- Creates immense uncertainty in licensing transactions ie fear of government taking away the patent
- Why would partners spend money in partnership?

Problems with implementation

- All universities are struggling with practical implementation of the Act
- Overseas funders pull funds because process is so onerous

National IP Management Office (Nipmo)

- Nipmo scope is clearly defined in Act
- Nipmo has a capacity issue
- In interactions with Nipmo, they are beginning to be less dictative ie they are asking questions and allowing interpretations from universities/lawyers

- Nipmo approvals can take six months; hope Nipmo will develop capacity to give approvals more quickly
- If Nipmo actually steps in to take away a patent (the big fear), that will be the end of this process
- Nipmo approvals and questions: IP Policy and Full Cost Policy/IP Assignments: Spin-off Companies/Exclusive Offshore Licensing: Meaning of Offshore?/Royalty Free Commercialisation Licences (Open source software collaboration/Regulation of local IP transactions?)/Voiding of contracts?

Solutions

- Intrinsic difference of drawing line between IP and other stuff that comes out of academic research
- In US public universities, ie agency funded universities, all academics must indicate how their hours are paid for ie how many hours paid by university
- So separate what falls under Act and what was done and documented as falling under university ie what falls outside the Act
- Employment contracts say they agree to comply with Act

Consulting

- Fuzzy mess in consulting
- Consulting work: defining boundaries very tricky: uses university infrastructure, some work in university time, some outside, who gets paid?
- Act says if publicly financed R&D, IP sits with university despite contract between academic/consultant
- Phd students fund themselves via background consulting; creates a problem
- Contracts between university who provides professor to company – can define IP and payment
- Problem arises between individual professor and company
- If permit consulting, create a massive risk
- In US, they tried to stop all individual consulting, so agreements only between university and company
- Happening in SA too
- Clear policies within institutions essential
- Or individual may not mention for whom he works, money goes into private account, may not use university time or space
- Some allow ten hours work for consulting, which is considered outside private work
- All agreed: research student who is publicly funded, IP vests with university and therefore falls under Act

Contracting

- Research contracts are lifeblood of university
- If don't get this right have little to license
- Research funding vs. licensing opportunities
- Universities should move away from research funding and move to licensing revenue which is an independent funding source vs. getting money from private companies for research
- Want as much as possible to sell but mustn't push away research funders
- Will attract better researchers via licensing opportunities
- IP is a saleable product
- Revenue can be self-sustaining, which would make one independent from other research grants
- Long term solution, won't happen quickly
- Want research funder to be happy, but university also wants a revenue stream

- Do not do development work at cost ie do not transfer IP

Software

- Economies of scale result in, for example, cheap software; many contribute to its development
- If outside funder provides portion of development costs, can use technology, not IP
- If substantial contribution to development, he gets technology he can use in his business, does not want it given/sold to competitor ie he wants exclusivity and competitive advantage
- Can limit exclusivity in two ways:
- Should not extend beyond his competitors ie should not be global if he operates in Keimoes only because otherwise university loses buyers
- Limit via period of exclusivity: depending on how much he contributed
- Especially re full costs plus profit eg where a company brings an existing IP that belongs to them and a university improves on it
- Favours exclusivity with limitations
- In software space only 2-3 year exclusivity (because becomes obsolete)
- Software developer would not develop a product at cost of time only and hand over code

Commercialisation and revenue sharing

- It's a global market for everyone – now including higher education more vividly
- Universities and other public research institutions looking much more to third-stream income as a mechanism for sustainability
- Academic/business partnerships maturing in the SA landscape
- The transactional preferences for commercialisation are inward-looking and potentially red-flags to investment partners
- Revenue sharing: shareholding; equipment; tax
- Pre-arranged default structures; Agree variations and shares case by case; Preferably apply sharing in all cases
- Focus should not be on IP, but on revenue and licensing ie on commercialisation
- If IP vests with a private company, should share benefits with university and vice versa
- Need a detailed structure ready for discussion with outside funders ie a framework contract
- Avoid joint ownership of IP because complex and private sector and academia have different drivers
- Act says if used public funds, IP vests in university
- Unless private company also provides developer, then may share IP
- Route to market is arduous and lengthy, therefore should not transfer IP rights
- Long time before patents are ready for private sector uptake
- Patenting is expensive and can cost more than funding received from funder
- If give exclusive rights, funder should pay for patent as well as research
- Problem if they just want two year exclusivity, for example
- Want a bilateral transaction rather than including a third party ie Nipmo
- Full cost is a bilateral transaction
- But disincentive is state walk-in rights etc which put private entity off
- Also offshore transactions need clarity
- If university can sell outside competitive area to private funder, perhaps share profits with private company to encourage them to fund
- Big concern is licensor gets liquidated; creates risks for licensee
- Universities will not get liquidated

- Research Funding v. Licensing Opportunities; Full Cost = IP Transfer?; Limited Contribution = Rights to Use; Substantial Contribution = Business Exclusivity
- Enables non-competitive licensing & royalty sharing
- Full Cost (+ Profit) = Possible IP Transfer
- Joint Creatorship = Joint Ownership

Conclusions

- Early days for IP Act
- Not much movement in environment to date
- Useful negotiation tool
- Many uncertainties create risk for institutions, research partners and licensees
- As a community, universities support the spirit and intent of the new IPR regime
- Need to help mould an amenable implementation protocol
- Should ensure an environment in which the innovation passion can thrive
- Should operate as a public-private partnership

Way forward

- Universities have been bound by Act since August 2010, but as there are no guidelines they have no idea how to implement it
- Nipmo can wield a stick or help find a way forward
- Nipmo is open to influence at this stage
- Need good policy guidelines rather than changing Act, then can make clear to licensee what the Act means and how it would be applied
- Nipmo must draft guidelines and universities can influence these now
- Recommendations: tighter less discretionary criteria
- Act does not give Nipmo or Minister authority to make local regulations re IP
- Universities must make sure authority from whom they get approval has the power to give approval
- Informal approach may be better
- Southern African Research and Innovation Management Association (Sarima) a good vehicle
- Should Sarima write a letter to DG, as a group would like to make submissions to DG: would they be in agreement to accept submission?
- If formalised through Sarima, takes on different dynamic
- Prefers informality at this stage because we haven't drawn down from overseas experiences
- Want to set a precedent of way of working which will formalise itself over time
- Government usually prefer a draft guideline/policy rather than an informal approach
- Universities should tell Nipmo how they will operate, ie tell Nipmo what is excluded/included
- Want Nipmo on university side ie not legal route unless Nipmo interprets the Act otherwise – then pursue clarity some other way
- Universities as a collective are more powerful than alone
- Universities should cooperate to outline what they want from Nipmo rather than allowing Nipmo to dictate
- Must see Nipmo as partner not enemy
- Invite Nipmo into next colloquium to get their interpretation
- Rather send them a written submission (PDF attached to email)
- Some are already doing submissions to Sarima/Nipmo
- Sarima may fund a consultant to collate submissions from various organisations/universities
- Submission should go to DG of DST rather as no real power vests in Nipmo at the moment; this is a problem

- FMF hosts an annual IPR conference dealing with short and long term issues; there seems to be consensus on the pros of the Act; perhaps experts should be brought together at the conference for a comparative analysis on how to deal with the cons; this might form the basis of a submission to Nipmo
- Must put submission to Nipmo to clarify things that concern universities
- Lawyer to draft and circulate for comment, or perhaps all universities to submit comments on issues they are experiencing
- Essentially asking for legal opinion on problems encountered when trying to implement the Act
- If send collective legal opinion, hard to resist, ie Nipmo will have to say yay or nay
- Perhaps a starting point: take relevant parts of university IP policies (ie interpretation of Act) to be compared
- Policymaker would like universities to make their job easier ie universities must be proactive re drafting better legislation from the state
- Probably can't change legislation, but could change/influence how it is implemented
- Must remove ambiguity
- Must formalise via very explicit recommendations to DG of DST
- Especially for the long term ie change regulatory framework
- Short term is to get decent guidelines
- Nipmo will need to set up guidelines so this is a good time to make a submission
- Submission to point out uncertainties and say how universities would prefer these to be interpreted
- Preferred outcome of colloquium: universities to together present something to Nipmo about how they want to operate; submission to narrow grey area and reduce uncertainty

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