

# What a Chemist Needs to Know... ... about Patents

Prepared for  
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April 2014

# General Introduction

## Outline of day

- What is a patent? – the basics, the procedure and the timeline
- What are the patentability requirements?
  - Novelty
  - Inventive step
  - Disclosure of patent
- Reading patent documents; understanding chemical claims and selection
- Infringement
- Value of patents

## What is a patent?

- Monopoly right – right to prevent someone else from doing something
- What? – What is defined in the claims of your patent
- For how long? – 20 years from filing date (up to 5 more years with SPC)
- Provided that – the invention is new, inventive, and industrially applicable
- And that – you fully disclose the invention in your patent application
- And that – you pay renewal fees (annually in most countries; get higher each year to encourage you to abandon unwanted patents)
- But not – a right to practise the invention yourself

## Patents are national

- Ultimately, all patents are national rights in a single country
- Costs therefore roughly directly proportional to number of countries
- There are a number of ways to delay this cost

## Priority system

- Set up by the Paris Convention and the World Trade Organisation (TRIPS)
- Available in pretty much every significant country in the world
- Allows an application filed up to one year after a first application to have patentability judged at the earlier date
- Increases term by up to a year
- Can add/change disclosure during the year, but care needs to be taken for the priority right to be valid

## PCT system (International Application)

- Covers a lot of countries, but not many South American countries, Taiwan
- 10 working languages: Arabic, Chinese, English, French, German, Japanese, Korean, Portuguese, Russian, and Spanish
- Application must be converted into a national application within 30 months of priority date and translated into each national language
- Acts only as a delay for national filings
- Application is searched – may be used by national offices
- Optional examination system is non-binding, but useful way to get application ready for allowance in a centralised system

## European Patent system

- Single procedure at the EPO until grant; then becomes national right in each country of interest
- Can be filed in English, French or German
- Claims have to be translated into other two languages before grant
- London agreement countries require no translation, or translation of claims only, after grant
- Other countries require translation of whole specification after grant
- Separate annual renewal fees in each country after grant



## European Patent system

- Completely separate from and independent of the EU
- Member states are: Albania, Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Ireland, Latvia, Lithuania, Luxembourg, Malta, Monaco, Netherlands, Norway, Poland, Portugal, Romania, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland and Liechtenstein, Turkey, Great Britain, the Former Yugoslav Republic of Macedonia
- Extension states: Bosnia and Herzegovina, Montenegro

## European Patent - Opposition

- Within 9 months of grant, any person may oppose a European patent
- File at the EPO a document with arguments why patent should not have been granted (eg it is not novel)
- Frequency of opposition varies with technical field of patent
- Usually ends with hearing at the EPO in front of panel of (usually) 3 examiners
- Decision announced on the day

## European Unitary Patent

- Law has been passed but needs national ratification to come into effect
- Unitary patent will potentially cover most but not all countries of EU (prob not Spain, Italy or Poland)
- Convert European patent into Unitary patent at grant for eligible countries
- New court system (“Unified Patent Court”) will be responsible – central and local divisions
- Central division for Chemistry in London

## Other regional systems

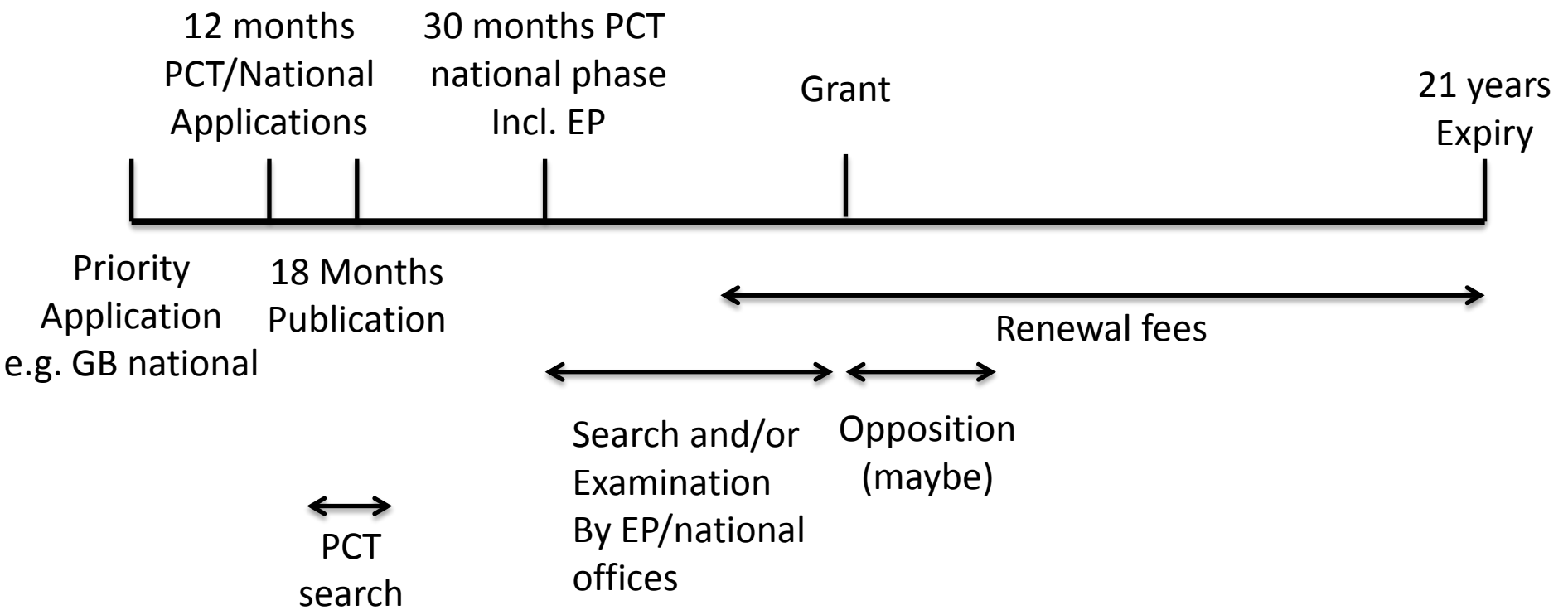
- Eurasian patent: Turkmenistan, the Republic of Belarus, the Republic of Tajikistan, Russia, the Azerbaijan Republic, the Republic of Kazakhstan, Kyrgyzstan, and the Republic of Armenia
- ARIPO - Botswana, the Gambia, Ghana, Kenya, Lesotho, Malawi, Mozambique, Namibia, Sierra Leone, Liberia, Rwanda, Somalia, Sudan, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe
- OAPI - Cameroon, Benin, Burkina Faso, Central African Republic, Congo, Ivory Coast, Gabon, Guinea, Guinea Bissau, Mali, Mauritania, Niger, Senegal, Chad, Togo and Equatorial Guinea
- In all other cases – national patent office only

## Publication

- Patent applications are published about 18 months after the priority date
- The invention is thereby disclosed to the public
- Once that happens, it will not generally be possible to obtain a patent in any country where an application was not already on file

# Procedure

# Timeline (based on EP via PCT)



## Priority filing

- Patent attorney drafts application with inventors
- Priority filing can be virtually anywhere
- Usually in applicant's home jurisdiction
- Some countries have restrictions on filing and require first filing in home country for security reasons
- May request search and/or examination to help decide whether to proceed with application and/or re-draft for refiling at end of priority year



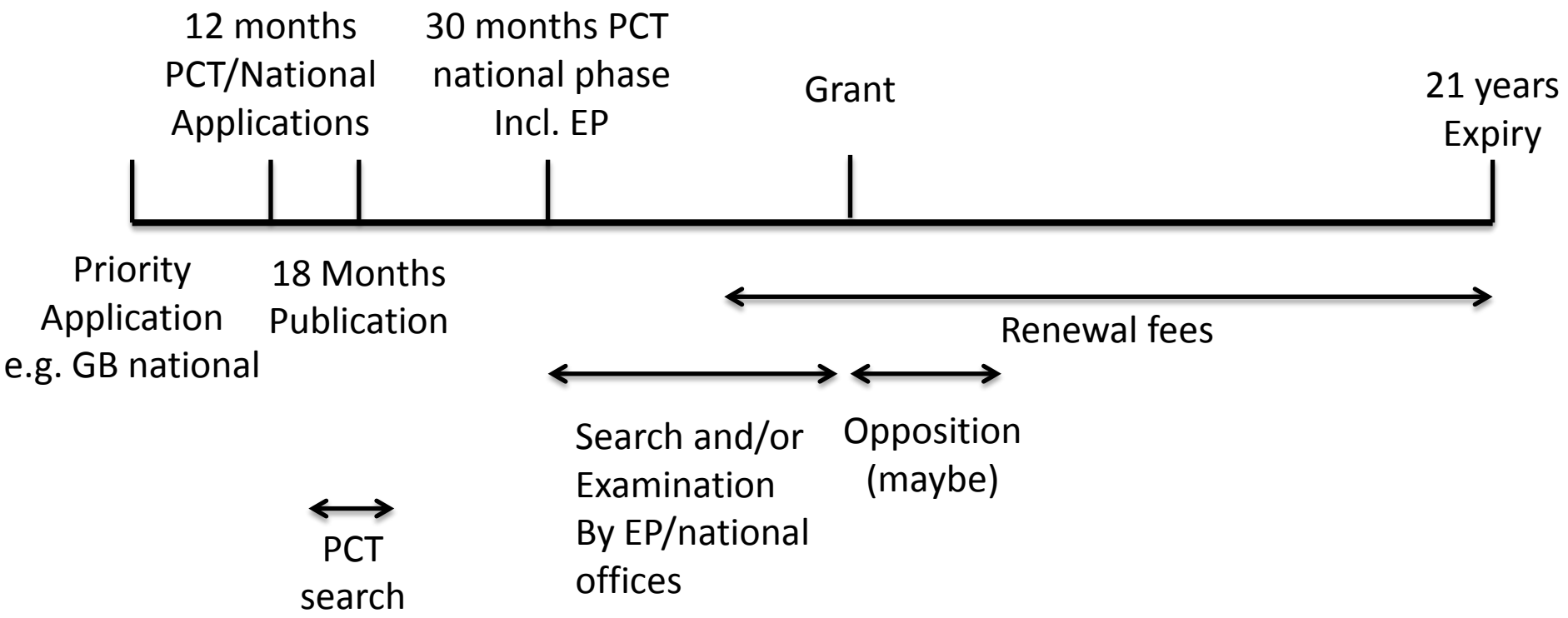
## Search and/or examination

- Some jurisdictions conduct search and examination separately, with different deadlines for each (eg GB, EP)
- Some conduct both together and do not distinguish (eg US)
- PCT application is always searched, and may be examined at option of applicant (use of PCT is itself optional)
- Different national patent offices rely on PCT search and/or exam to different degrees – in some countries PCT search replaces national search; in others an additional search is conducted
- Leads to either GRANT or REFUSAL (then may appeal)

## Renewal Fees

- Many countries have renewal fees after grant only
- Usually annually (hence called “annuities”), but less frequent in USA
- EPO and some national offices have renewal fees before grant, while application pending
- Tend to increase during lifetime of patent to encourage abandonment of unwanted patents

# Timeline



# Patentability

## Requirements for patentability (see later session)

- Novelty
- Inventive step
- Industrially applicable
- Not excluded from patentability

# Rights Conferred by Patent

## What does a Patent give you

- No active right to use the invention
- Still need to conduct due diligence to ensure that you do not infringe other people's patents
- The **option** to sue someone else for infringing your patent ...
- ... in a country where you have a granted patent in force
- *cf* insurance

## Infringement (see later session)

- A patent is infringed by:
  - Manufacture
  - Disposal
  - Offer to dispose
  - Use
  - Importation
  - Keeping
- of something falling within the scope of the claims
- in a country where the patent subsists.



## Infringement - defences

- Don't infringe
- Patent is invalid
- Innocent infringement (reduced damages)
- Experimental purposes / trials
- Continuation of acts before priority date of patent

## Infringement - procedure

- Only face a jury in the USA (try not to get sued there!)
- UK has emphasis on expert evidence, and oral cross-examination
- Can get disclosure of documents from the other side
- Other European countries have written evidence and no/limited disclosure

# Who owns it?

# Ownership

- Anyone may apply for a patent
- Patent may only be granted to inventor or successor in title
- In practice need to sort ownership within 16 months from first application (application requires “declaration of inventorship”)
- Inventions made by employees in UK generally belong to employer (although depends on normal duties of employee)
- Employee can seek extra compensation for invention of outstanding benefit to employer
- Some countries (eg Germany, Finland) give employees greater rights, and can receive compensation for all employee inventions

# Assignment

- Patent office will assume applicant is entitled unless this is challenged
- First applicant can pass ownership to another, i.e. sell the patent or application. This is called “assignment”.
- Assignment is a kind of contract
- Must be in writing, and signed by (ideally) both parties. Advisable to record at each patent office
- Assignor – the seller
- Assignee – the buyer
- Some countries have further requirements eg notarisation; need to comply in case of recordal

# Licensing

- Alternative to assignment
- “Exclusive” – only licensee can use
- “Sole” – licensee and licensor only can use
- “Non-exclusive” – licensee can grant many licences
- Can be for only part of the technical scope of the invention (eg “non-medical use”) or only part of the territorial scope (eg “Yorkshire”)
- Contract more complex than assignment because need to specify terms
- Can and should record at patent office

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