



**African Regional Intellectual Property Organization**

## **INTRODUCTION TO PATENT DRAFTING**

**Making better use of Intellectual Property for business  
competitiveness and development in Africa**

# Never ever give up

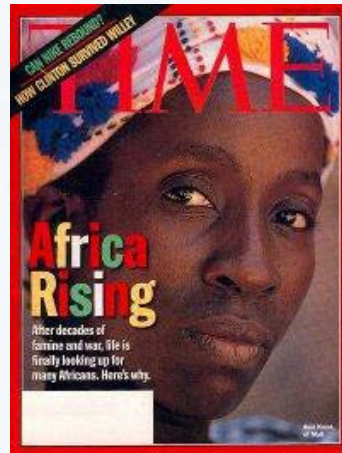
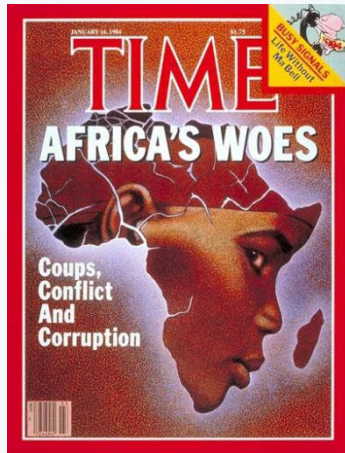
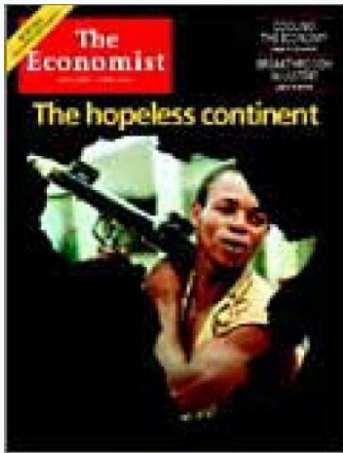
“Success is going from failure to failure without a loss of enthusiasm”-

*Winston Churchill*



***INTELLECTUAL PROPERTY HAS  
BEEN TRANSFORMED FROM A  
SLEEPY AREA OF LAW AND  
BUSINESS TO ONE OF THE DRIVING  
ENGINES OF A HIGH TECHNOLOGY  
ECONOMY – New York Times (1999)***





“ The biggest reason to be hopeful is that it takes time for results from past investment to come through, and many such benefits have yet to materialise. ”

*The Economist*

“ The irony is that 90% of the media coverage is concerned with the West, whereas 90% of the opportunity is in emerging markets. ”

*Stephen Jennings, CEO, Renaissance Capital*

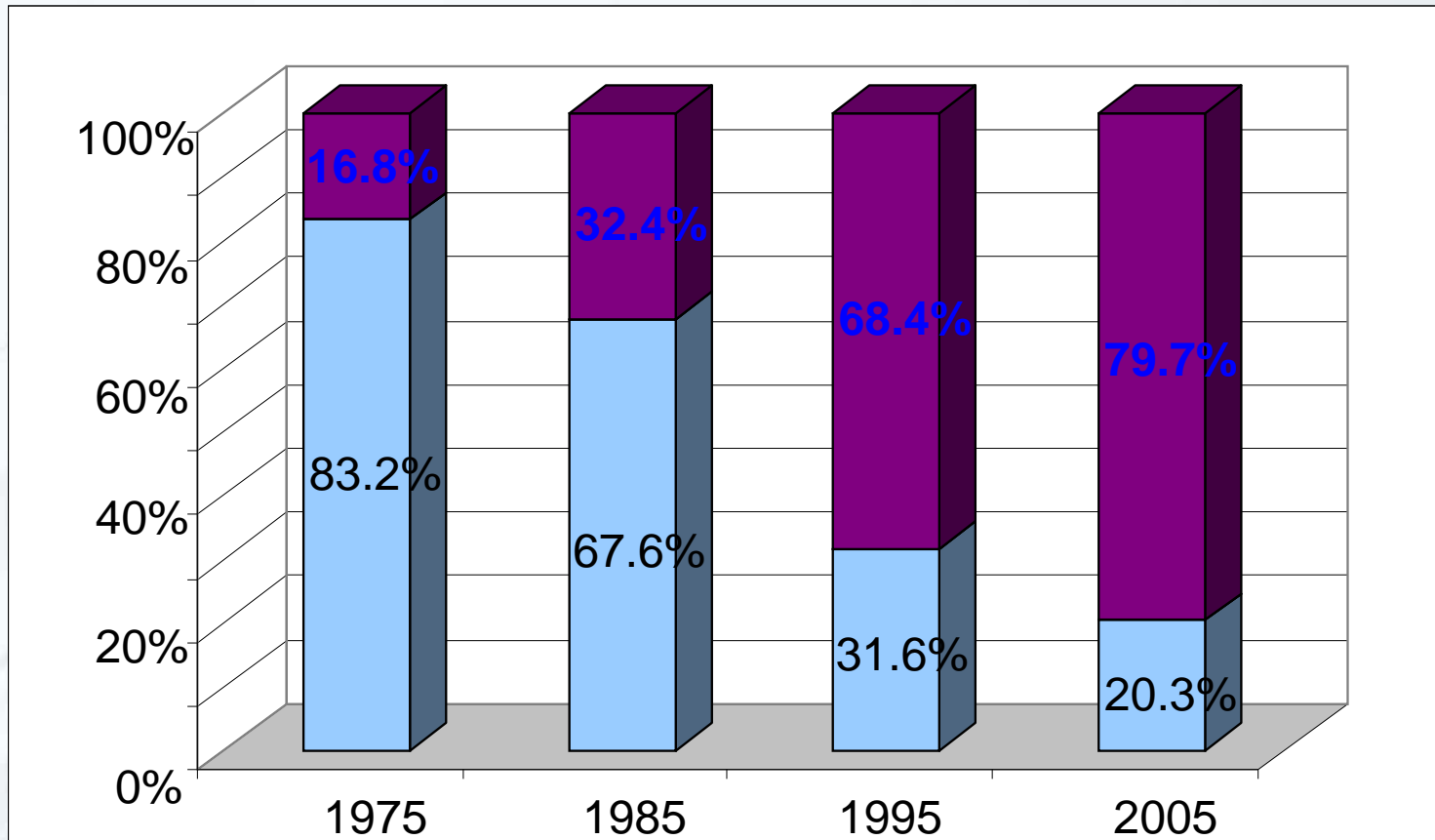
“ Hope is Africa's rarest commodity. Yet buried though it is amid the despair that haunts the continent, there is more optimism today than in decades. ”

*TIME Magazine*





# Market value of Tangible and Intangible Assets



■ Intangible Assets

■ Tangible Assets



# Value of Intangible Assets

- Intangible assets more valuable than tangible assets
  - **Europe - Intangible assets account for 40 to 60 per cent of hidden value of wealth**
  - **US - Three quarters of the value of publicly traded companies are intangible assets**



# IP creates wealth



- ✦ IBM earns \$1billion p/a through licensing it IP rights.
- ✦ Microsoft files 3 000 patents per year.
- ✦ More than 50% of foreign currency earning of the US is through IP.



# INTELLECTUAL PROPERTY FOR DEVELOPMENT

Powerful economic tool for the generation of **global knowledge**  
“proprietary” **platforms** for companies  
and nations





# INNOVATION AND COMPETITIVENESS



The **future of global competitiveness** is strongly connected to the **commercial exploitation of the rights** over proprietary innovations

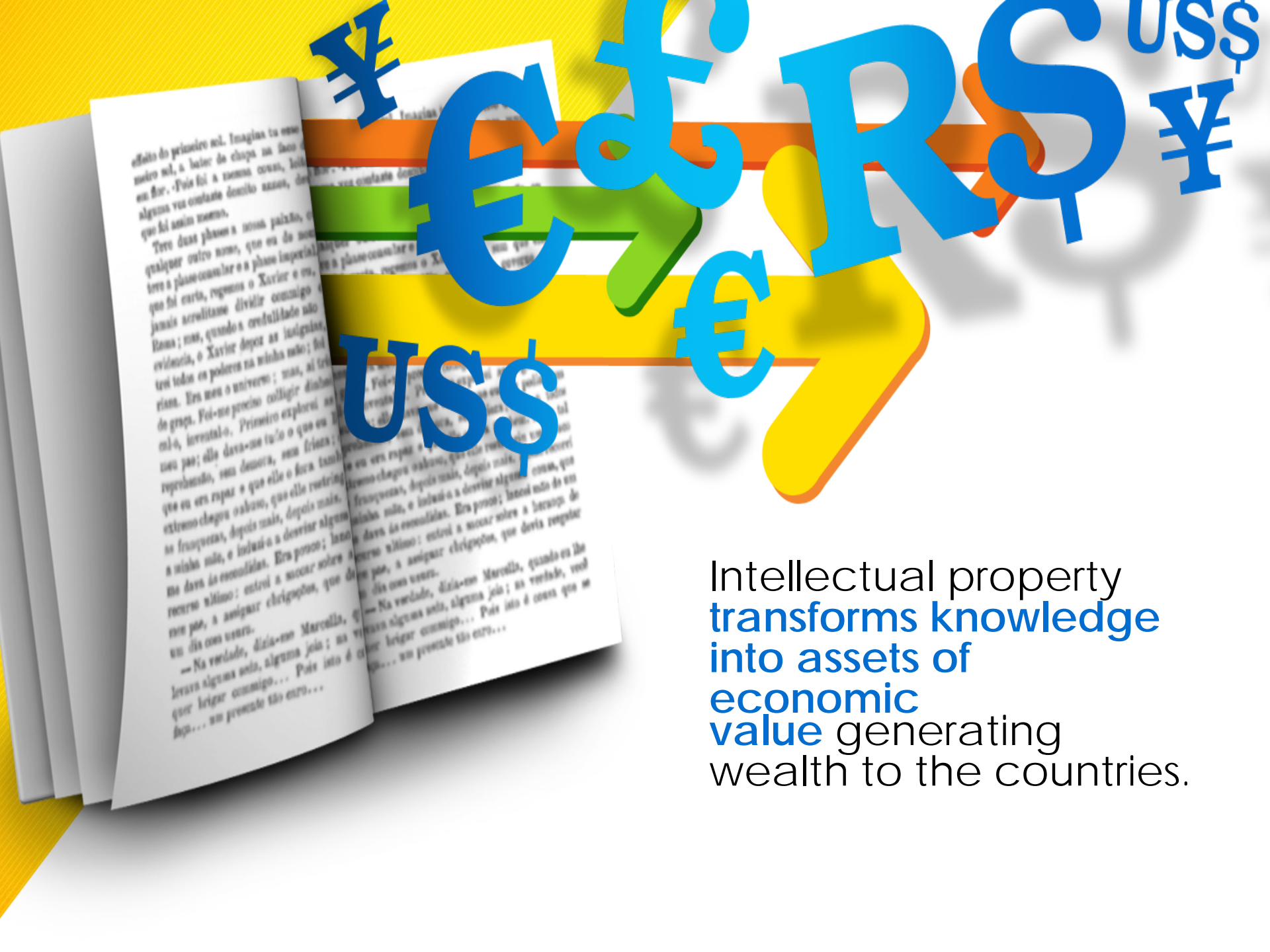
# INGREDIENTS FOR TECHNOLOGICAL INNOVATION

Brains +  
Information +  
Capital



Protected Inventions +  
New products + New  
markets





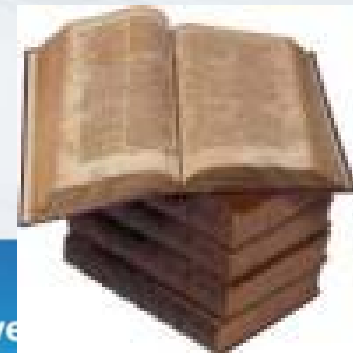
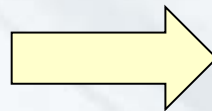
efeito do primeiro sol. Imagina tu esse  
 metro sol, a bater de chapas na face  
 en flor. -Pois foi a mesma coisa, lá  
 alguns vez constante dentro azas, de  
 que foi assim mesmo.  
 Tere duas phasas a nossa paixão, e  
 qualquer outro nome, que eu de nome  
 teve a phasa consular e a phasa imperial  
 que foi esta, regemos o Xavier e eu,  
 jamais acurritam dividir connigo  
 Roma; mas, quando a crendidade não  
 evidencia, o Xavier depois as insignias,  
 tri todos os poderes na minha mão; foi  
 riana. Era meu o universo; mas, si tri  
 de grupo. Foi-me preciso colligir diabo  
 mi-o, inventalo. Primeiro explorei as  
 meu pao; elle dava-me tudo o que eu  
 reprehendo, sem demora, sem frias;  
 que eu era rapaz e que elle o fora tam  
 extremo chegou oabso, que elle reucria  
 se fraquezas, depois mais, depois mais,  
 a minha mão, e insuava a deitar alguns  
 me dava as essentialas. Era pouco; lano  
 recurso ultimo: entrei a socor sobre  
 me pae, a assignar chregos, que de  
 eu dia com uera.  
 - Na verdade, dizia-me Marcella, quando eu lhe  
 levava alguns sois, alguma joia; na verdade, real  
 quer leigar connigo... Pois isto é coiza que se  
 faz... um presente tão caro...

Intellectual property  
 transforms knowledge  
 into assets of  
 economic  
 value generating  
 wealth to the countries.



# Why does this not apply to us?

- ✚ Why should the developing world export cheap labour only?
- ✚ Why do we not create and export knowledge?





# WHAT ARE IP TOOLS?

TWO BRANCHES:  
COPYRIGHT AND RELATED RIGHTS  
And  
INDUSTRIAL PROPERTY



# COPYRIGHT AND RELATED RIGHTS

**Definition :** A bundle of rights which empowers a copyright owner to exclude others from certain uses of their works and also authorize others for certain uses.

Moral rights

Economic rights

- literary work,
- artistic work,
- musical work,
- sound recording,



# COPYRIGHT AND RELATED RIGHTS

- audio-visual work,
- choreographic work,
- derivative work, and
- computer software or programmes.
- *Expressions of folkore:*
  - *Kente*
  - *Adinkra*
- the resale right (*droit de suite*) in original works of art and original manuscripts of writers and composers. (article 14ter).



- REQUIREMENTS
- Original
- Fixed
- Duration: life of the author +70 years





# Non copyrightable matter

- Ideas
- Mathematical concepts
- Style or technique
- Historical incidents
- News
- Scientific principles



# RELATED RIGHTS

- Neighbouring rights
- Phonograph producers
- Broadcasting organisations
- Performers



# Fields of Industrial Property

- In contrast with copyright, the common denominator to industrial property (patents, trademarks and designs) lies in the fact that protection requires registration
- This implies completing an application form for registration and the payment of fees



# INDUSTRIAL PROPERTY

- PATENTS (UTILITY MODELS)
- INDUSTRIAL DESIGNS
- TRADEMARKS
- GEOGRAPHICAL INDICATIONS
- GENETIC RESOURCES
- TRADITIONAL KNOWLEDGE
- INTERNET DOMAIN NAMES
- INTERGRATED CIRCUITS
- TRADE SECRET
- UNFAIR COMPETITION





# WHAT IS AN INVENTION

'Invention' means a new product or process involving an inventive step and capable of industrial application.



# CREATING AN INVENTION

- Fundamental research
- Improvement on existing art
- Solving unsolved problems of art/unaddressed issues
- Different approach



# IP LAW & PRACTICE

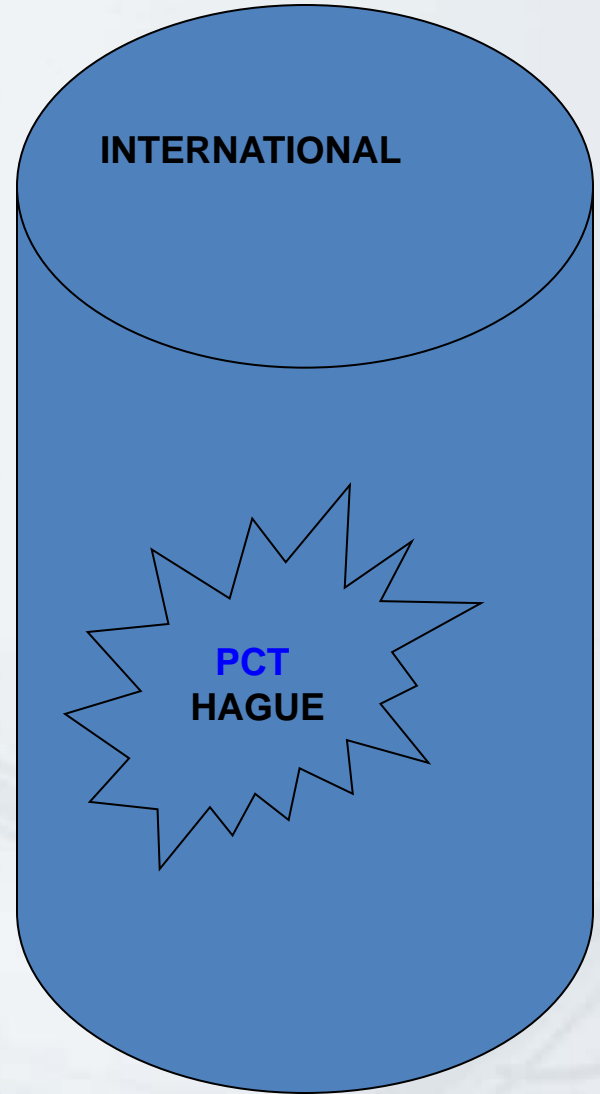


First to file  
system



Making better use of Intellectual Property for business competitiveness and development in Africa

# PATENT FILING ROUTES



Cost

Coverage

Registration and  
Administration

Time



Making better use of Intellectual Property for business competitiveness and development in Africa

# PATENT DRAFTING – GETTING STARTED

- BEFORE DRAFTING
- DRAFTING OF PATENT APPLICATIONS
- POST DRAFTING



# BEFORE DRAFTING

- What is the invention ?
- Is invention patentable ?
- Is invention novel, inventive ?
- Prior art/prior disclosure ?
  - Oral disclosure ?
  - Prior printed publication available to the public ?
  - Prior public use ?





# BEFORE DRAFTING:

## VERIFY THE FOLLOWING:

- ✓ Conduct search
- ✓ Enlist problems in prior art
- ✓ What is the problem sought to be solved by the invention?
- ✓ What is the novelty?
- ✓ Is the solution obvious?
- ✓ Is it artificially excluded ?
- ✓ Has publication ensued?
- ✓ Ascertain the type of application -whether complete or provisional is to be filed
- ✓ Decide the area and nature of protection- Paris convention, PCT, ordinary application.



# WHAT IS NOT PATENTABLE?

Inventions that cannot be patented are:

- Frivolous
- Contrary to well established natural laws
- Contrary to morality or injurious to public health (animals/plants) or to environment
- Scientific principle or abstract theory
- New property or use of a known substance
- Mere admixtures (as opposed in synergistic mixtures) and processes thereof
- Mere arrangement or rearrangement of known devices each functioning independently of one another in a known way
- Method of agriculture or horticulture
- Treatment of human being, animals including diagnostic methods
- Plants and animals in whole or any part thereof
- Essentially biological processes
- Mathematical or business methods, computer programme per se or algorithm
- Literary, dramatic, musical or artistic work
- Method of playing games
- Presentation of information



# PUBLIC DOMAIN

- Public knowledge - known to persons in the art. A part of the mental equipment of those concerned in the art under consideration
- Common general knowledge: All available public knowledge and all that is published



# PUBLICATION

Kinds of publications: documents

- papers or publications should provide unmistakable direction/disclosure of the invention
- even single disclosure is sufficient - extent of publication/availability of publication-immaterial



# PATENT SPECIFICATION

**Description**

**Claims**

- **Description discusses the invention**
- **Claims define boundary of monopoly**



# WHAT IS A COMPLETE SPECIFICATION

*" ... specification shall fully and particularly describe the invention and its operation or use and the method in which it is to be performed; discloses the best method of performing the invention which is known to the applicant and for which he is entitled to claim protection..."*





# PATENT SPECIFICATION

Read by:

- Patent Office
- Licensee/Assignee
- Court
- Technical peers/skilled persons
- Competitors
- Commercial players
- General public



# DESCRIPTION

- Description must describe the invention comprehensively
- Should fully explain the problem to be solved with examples
- No ambiguity
- Should be adequate and sufficient so as to enable a person skilled in the art to perform and repeat the invention without inventor's further inputs



# CONTENTS OF THE DESCRIPTION

- Title
- Field of the Invention
- Background of Invention
- Prior Art details
- Objects of Invention
- Statement of Invention
- Detailed description of Invention



# TITLE

- A concise statement providing the crux of the invention
- Care should be taken to incorporate all major aspects claimed
- Product-Process-Apparatus



# BACKGROUND

Provides the technical background of the invention



# PRIOR ART

- Is a brief write-up of what is known before the invention; sets out the problems associated with each of the known art; and describes the problem proposed to be solved by the invention





# OBJECTS OF THE INVENTION

- Provides purpose of the invention
- Main object(s) and Ancillary object(s)
- Essential aspects and preferred/optional aspects.



# STATEMENT OF THE INVENTION

- Statement forms the main claim or claims in verbal agreement
- It is essential only when there is an omnibus claim(s).



# DETAILED DESCRIPTION OF INVENTION

- Sets out best mode of performing the invention
- Describes the invention in greater detail with examples/illustration/tables/graphs/diagrams, etc
- Description sufficient to enable a skilled person to put the invention into practice



# CLAIMS

The main claim defines the essential features and the sub-claims define the preferred / optional / additional features



# CLAIMS

The important, main properties need not be merged into the other claim.

A separate claim has to be formed for the important feature(s).



# CLAIMS

- Is the operative part of the specification
- Defines the monopoly to be conferred by the patent
- Define the metes and bounds of the invention: at the time of infringement proceedings, only claims will be interpreted
- If you do not claim, you disclaim





# DRAFTING OF PATENT APPLICATIONS



Making better use of Intellectual Property for business competitiveness and development in Africa

# Patent Applications

- What kind of a document is a patent?
  - A patent memorializes the agreement between the inventor & the government
    - **Thus, a patent application is analogous to a contract**
  - Drafting a high quality patent application is similar to drafting a high quality contract
    - **Patent application drafting also has some similarities to writing a technical or scientific paper**



# Patent Applications

- Who is the Audience for a patent?
  - A patent examiner
  - A judge
  - An investor
  - A competitor
  - An infringer
  - An infringer's legal counsel
- The patent draftsman/person should draft the application with these important audiences in mind



# Preparing Patent Applications

- The patent agent also needs to know:
  - Where the client wants to protect his invention?
    - **Different countries have different laws and different requirements for patents**
  - Has something already happened that jeopardizes the client's ability to protect the invention in the desired countries?
  - How soon does the client intend to do something that might jeopardize his ability to protect the invention in the desired countries?



# Meeting with the inventor

- Obtain invention disclosure from the inventor
- Identify patentable inventions
- Understand the invention



# Drafting Patent Applications

- Once the patent agent understands the invention, then he can begin preparing the patent application.
  - Prepare draft claims for the invention as the first step.
    - The patent agent may want to sketch out draft claims in the disclosure meeting with the inventor
    - This procedure will often confirm for the patent agent that he has understood the invention since he can obtain immediate feedback from the inventor





# Drafting Patent Applications

- In the initial draft claims, the patent agent may wish to use a “picture” claim
  - A picture claim essentially “draws a picture” of the invention in words
  - A picture claim is not typically the broadest claim & does not use highly abstract language
  - But a picture claim can be helpful in beginning the process of finding the broadest possible claim



# Drafting Patent Applications

- A picture claim may be helpful in the initial meeting with the inventor since inventors are often unfamiliar with patent claim language
  - The patent agent will likely develop the most abstract terms possible for the claims later after further consideration of the invention



# Claims

- The claims are the legally operative part of a patent application
  - everything in a patent revolves around the claims
    - The majority of patent agents prepare several draft patent claims as their first step in drafting a patent application
- When the claims are prepared before drafting the specification, then the patent agent knows precisely which terms need to be described clearly in the specification



# Claims

- A few situations may suggest drafting the claims after writing the specification.
  - For example, assume a patent agent receives a technical paper from an inventor & the inventor tells the patent agent that the patent application must be filed “today”
    - The patent agent will likely not have time to draft his own patent specification but will instead use the inventor’s technical paper as the basis for the specification
  - Even in this circumstance, the patent agent may still want to sketch draft claims before proceeding



# Title of Patent Applications

- A patent application's title should:
  - Broadly describe the invention
  - Help the Patent Office classify the invention & assign it to the proper group of patent examiners
  - Avoid limiting language



# Detailed Description

- The “detailed description” section, sometimes known as the “disclosed embodiment of the invention” section, should:
  - Breath life into the claims,
  - Provide a sufficient disclosure of the invention that an artisan of ordinary skill in the relevant field could make & understand the invention,
  - Demonstrate that the inventors were in mental “possession” of the claimed invention
- The detailed description section must be closely tied to the drawings





# Detailed Description

- The patent agent must always be cautious in his use of language in a patent application. Language choices:
  - Will be helpful during patent prosecution.
  - May be critical when the patent is litigated.
- The patent agent must be especially careful in using absolute words, such as “must,” and “always.”
  - If an inventor says that a widget “always” does something – then the patent agent must make sure that this is “always” the case.



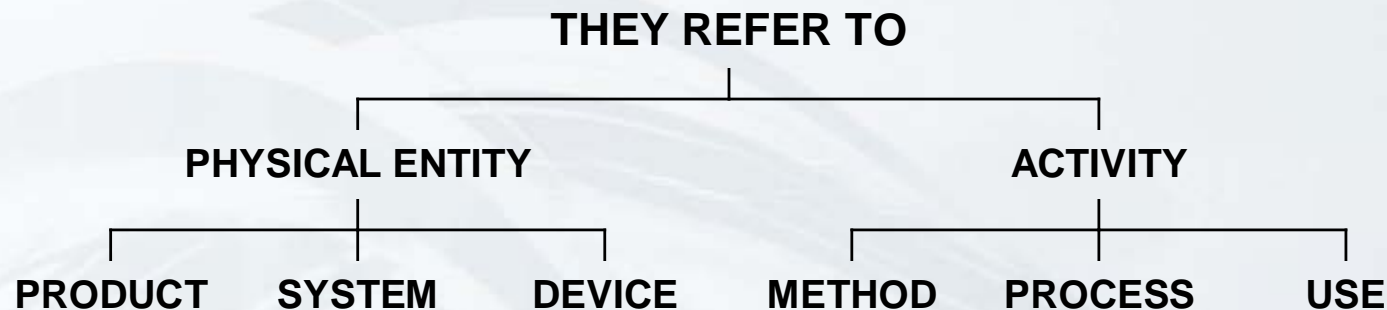
# Drawings

- The patent agent should prepare exceptionally descriptive visual materials that illustrate the invention and support the claims
  - The drawings should explain the invention in sufficient detail that reading the detailed description section merely confirms in words the information provided by the drawings.
  - Some patent offices require that each claim term be shown in a drawing
  - Many patent agents believe the drawings are the most important part of the patent application after the claims

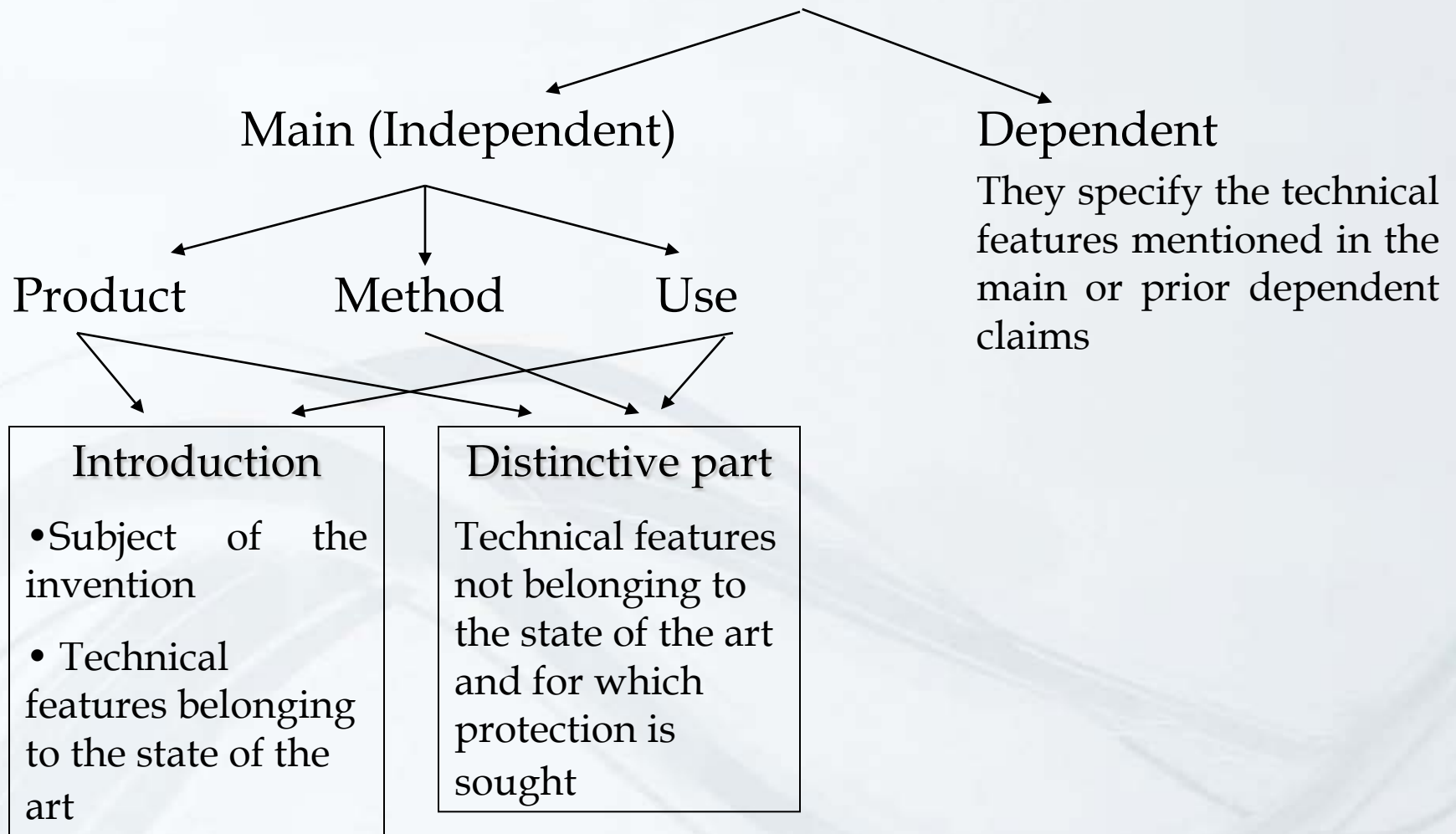


# Drafting Claims

***purpose*** : they define the extent and the content of the protection on the basis of the technical features of the invention.



# DRAFTING THE CLAIMS



# Patent Claim Format

- A patent claim has 3 parts:
  - preamble
  - transitional phrase
  - body
- A claim is written as a single sentence.



# Patent Claim Format

- Preamble
  - Defines a category for the invention
    - Ex.: An electronic ...
  - Often identifies the type of invention
    - Ex.: A method for ...
  - Usually consistent with title of invention





# Patent Claim Format

- Example:
- Title of invention:
- "Rice Cooking Apparatus"
- Preamble might read:
- 1. *An apparatus for cooking rice,...*



# Patent Claim Format

- Example: But suppose that the inventor knows that the apparatus could be used for cooking any type of grain, then a broader preamble might read
  1. *An apparatus for cooking grains,...*



# Patent Claim Format

- Example: Now suppose that the inventor knows that the apparatus could be used for cooking vegetables and melting cheese, then a broader preamble might read
  - 1. *An apparatus for cooking,...*



# Patent Claim Format

- In drafting claims and their preambles, it is important to know:
  - What the invention is
  - How adaptable the invention is to related technologies
  - How the client plans to make money from the invention



# Patent Claim Format

- Transition
  - Open or Closed
  - Follows the preamble
  - May begin with a comma
    - The device, comprising
  - What’s an “open” word and what’s a “closed” word varies around the world



# Patent Claim Format

- Open
  - Recited elements are the minimum needed for infringement
  - The presence of other elements in an infringing device does not defeat infringement claim
- Closed
  - Recited elements are everything required for infringement
  - The presence of other elements in an infringing device defeats infringement claim





# Patent Claim Format

- “Compromising” and “Including”
  - Have been construed to mean “including the following elements but not excluding others” in many jurisdictions
  - Open-ended phrases
  - A few jurisdictions have, however, found “comprising” to be a closed phrase



# Patent Claim Format

- Example:
- If invention relates to a pencil with an eraser and a light attached to it ...
- Claim might be:
  1. *An apparatus, comprising:  
a pencil;  
an eraser attached to an end of the pencil; and  
a light attached to a proximal center of the pencil.*



# Patent Claim Format

- “Consisting of”
  - Has been construed to mean that the claim covers only the elements named & nothing more
    - The claim is “100%” of everything protected
  - Confers a close-ended connotation



# Patent Claim Format

- Use Close-ended phrases sparingly
  - Your client will usually not want to limit the claim to just the recited elements
  - Imagine how easily a competitor could make a trivial addition and avoid infringement



# Patent Claim Format

- Body
  - Follows the transitional phrase
  - Recites the limitations of the claim
  - Explains how different limitations exist in relationship to one another



# Patent Claim Format

- For example:
- The body of an apparatus claim on a table might read:

***1. An apparatus for holding items, comprising:***

- *a top; and*
- *at least one leg configured to support the top.*





# Patent Claim Format

- A patent claim cannot typically be a mere list of parts.
- The recited elements must usually relate to each other in some way.



# Patent Claim Format

- This claim would most likely not be allowed –

## **1. An apparatus for holding items, comprising:**

- *a top; and*
  - *at least one leg.*
- Because no relationship is provided between (or among) the recited limitations.



# Post-Drafting

- Professional ethics
- Confidentiality





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**Making better use of Intellectual Property for business  
competitiveness and development in Africa**