Selection and Training of IP Professionals

Who am I

and what do I know

about it?

Peter Back

Personnel Management of Patent Examiners

At the United Kingdom Patent Office

During the last few years

- I have been responsible for the recruitment of about 250 patent examiners
- That’s about two thirds of all the patent examiners working at the UKPO

Selection

- What are we looking for?
- Science and engineering skills
- OF COURSE!
- But what else?

More than just science and engineering

- The analytical and critical skills to judge novelty and inventiveness in the light of what has been done before
- The communications skills to express technical and legal analysis in clear cogent English, both in writing and orally

More than just science and engineering

- Self-motivated and willing to take responsibility for your own decisions
- The ability to work on your own as well as in a team
- Comfortable working with a personal computer

How do we identify these qualities?

Actually not very difficult

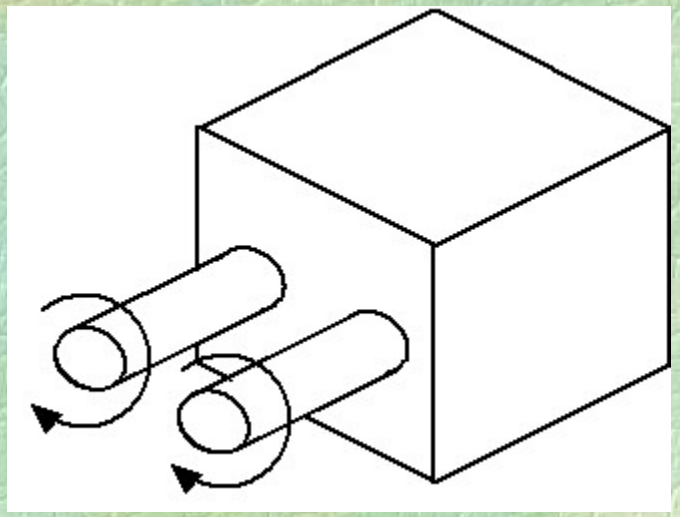
Some simple tests reveal a lot

BLACK BOX PROBLEMS

- A good starting point
- These are a few simple tests
- To identify a quick grasp of simple mechanics
- Here are a few examples - you've already seen some

BLACK BOX PROBLEMS

Two parallel shafts arranged such that rotation of one causes the other to rotate in the same direction



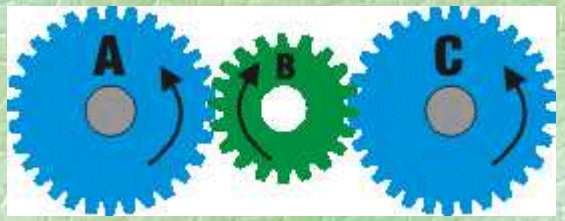
What's happening in the box?

BLACK BOX PROBLEMS

Spur gears will do it …
but just using two
won't do

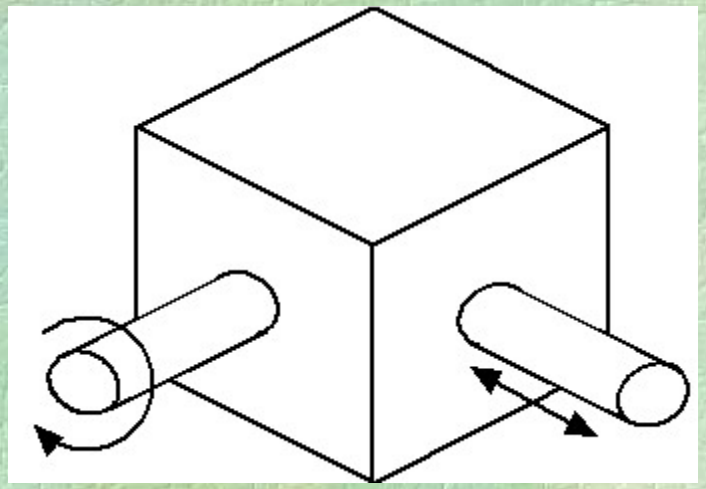
This gives rotation in opposite directions.

Must use an odd number for rotation in the same direction - at least three.



BLACK BOX PROBLEMS

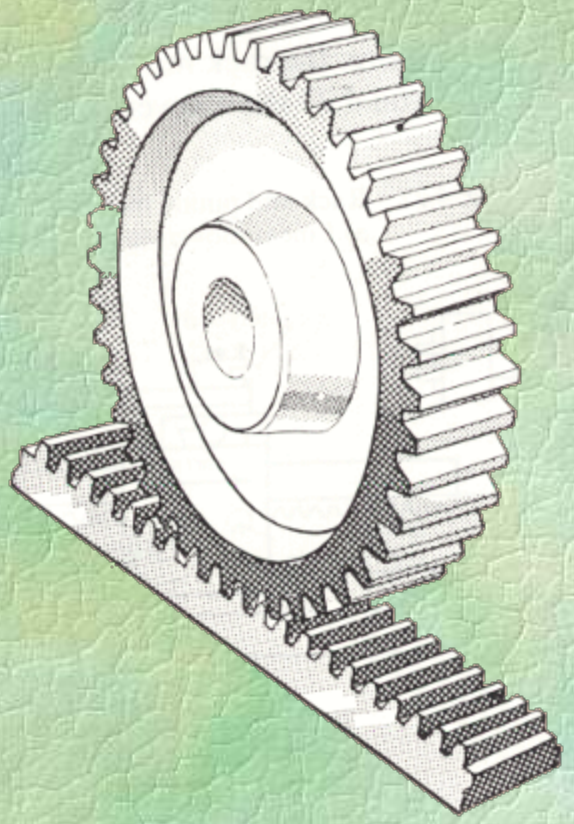
Two members arranged such that rotation of one member causes the other to move along a straight line



What's happening in the box?

BLACK BOX PROBLEMS

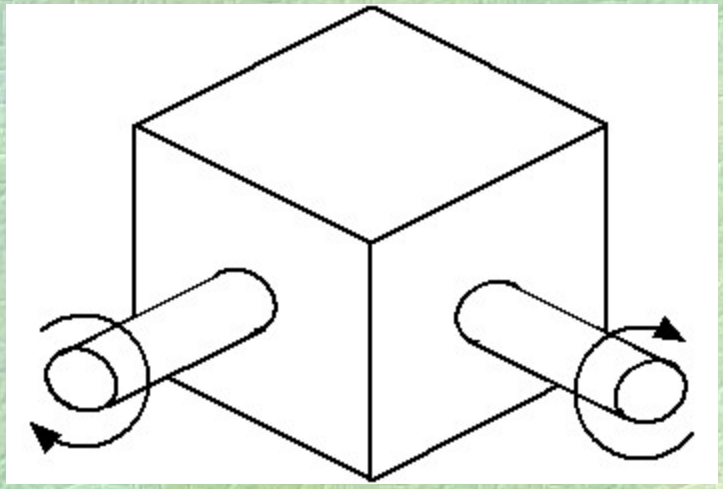
Rack and pinion is a good example



Any other suggestions?

BLACK BOX PROBLEMS

Two shafts arranged such that rotation of one shaft causes the other shaft to rotate about an axis at right angles to the axis of the first shaft.



What's happening in the box?

BLACK BOX PROBLEMS

Beveled gears are one way of doing it, but there are others

Suggestions ?

A worm gear will do it too

Some others in the same style:

A member mounted so as to be displaced in response to variations in air pressure and associated with means to produce an electrical signal in response to the displacement.

Any other ideas ?

Some others in the same style:

An arrangement in which the direction of propagation of a light beam is caused to be varied cyclically

Any other ideas ?

Understanding technical terms:

Superconductivity

Modulation

Digital

Pseudo-random

Understanding the words

- An electrically operated water immersion heating device comprising a base section adapted to be connected to a power source, an upper section defining a water retaining vessel having an immersion heating means located therein …..

Understanding the words

- …. and power connection means between said upper section and said base section allowing said upper section to be detached, when desired, from said base section ….

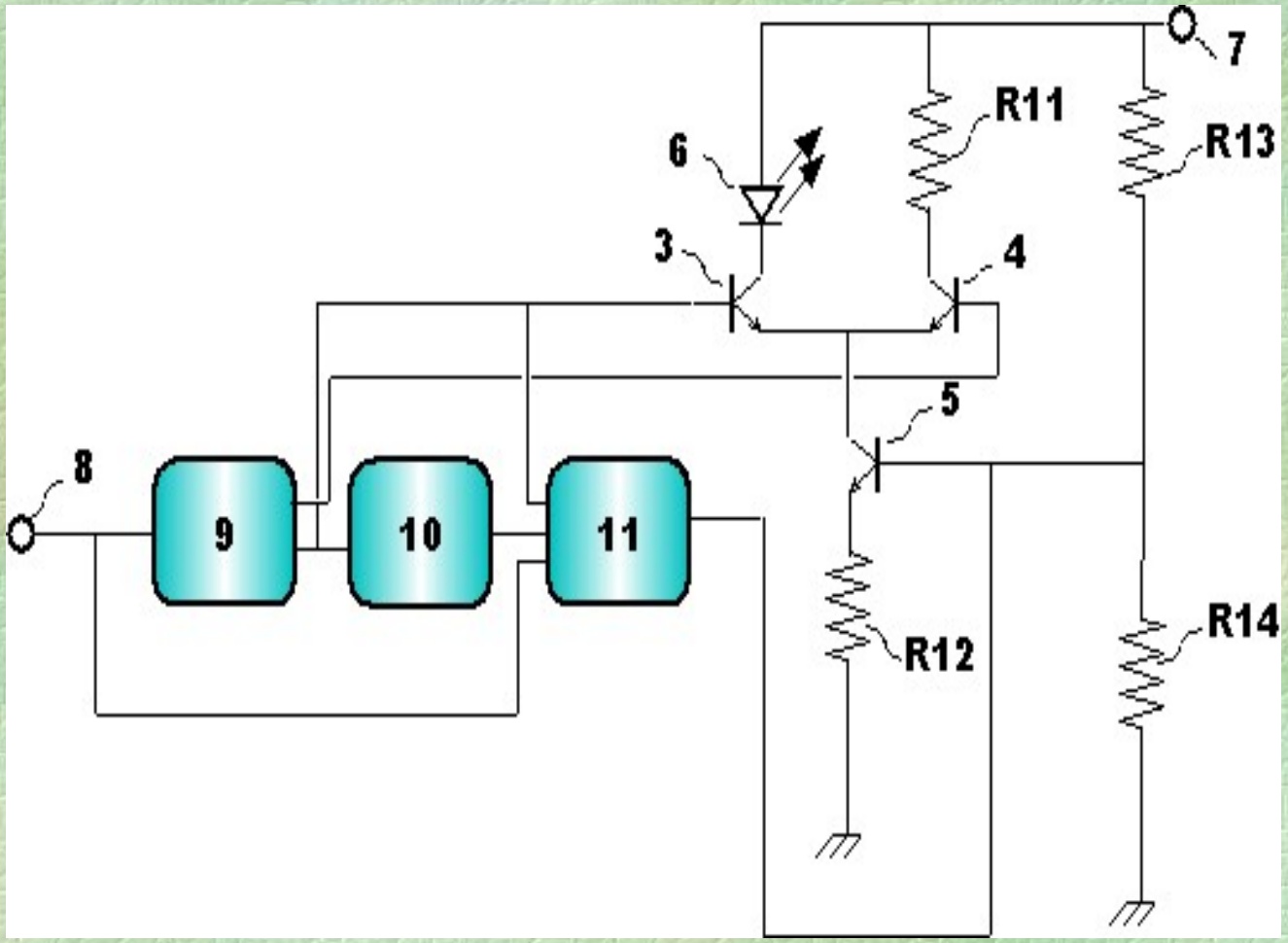
Understanding the words

- …. said power connection means enabling electric power to be supplied to said immersion heating means when said upper section is operably connected to said base section.

What about Electronics?

- Again, simple tests can identify basic skills
- And the ability to see things quickly
- Some more examples …….

A light emitting diode driver circuit



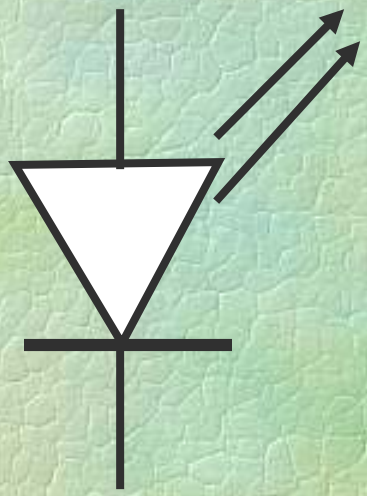
The description

A light emitting diode driver circuit including a differential amplifier having emitter coupled transistors, a light emitting diode connected to a collector of one of the emitter coupled transistors and a current source circuit connected to the common emitter of the emitter coupled transistors, characterised by

A first delay circuit for generating a first delayed signal and an inverted signal opposite in polarity to the first delayed signal by delaying and input signal, a second delay circuit for delaying the first delayed signal and an OR circuit receiving the input signal, the first delayed signal and the output of the second delay circuit,

Wherein the first delayed signal and the inverted signal drive the emitter-coupled transistors and the output of the OR circuit drives the current source circuit.

Find the LED



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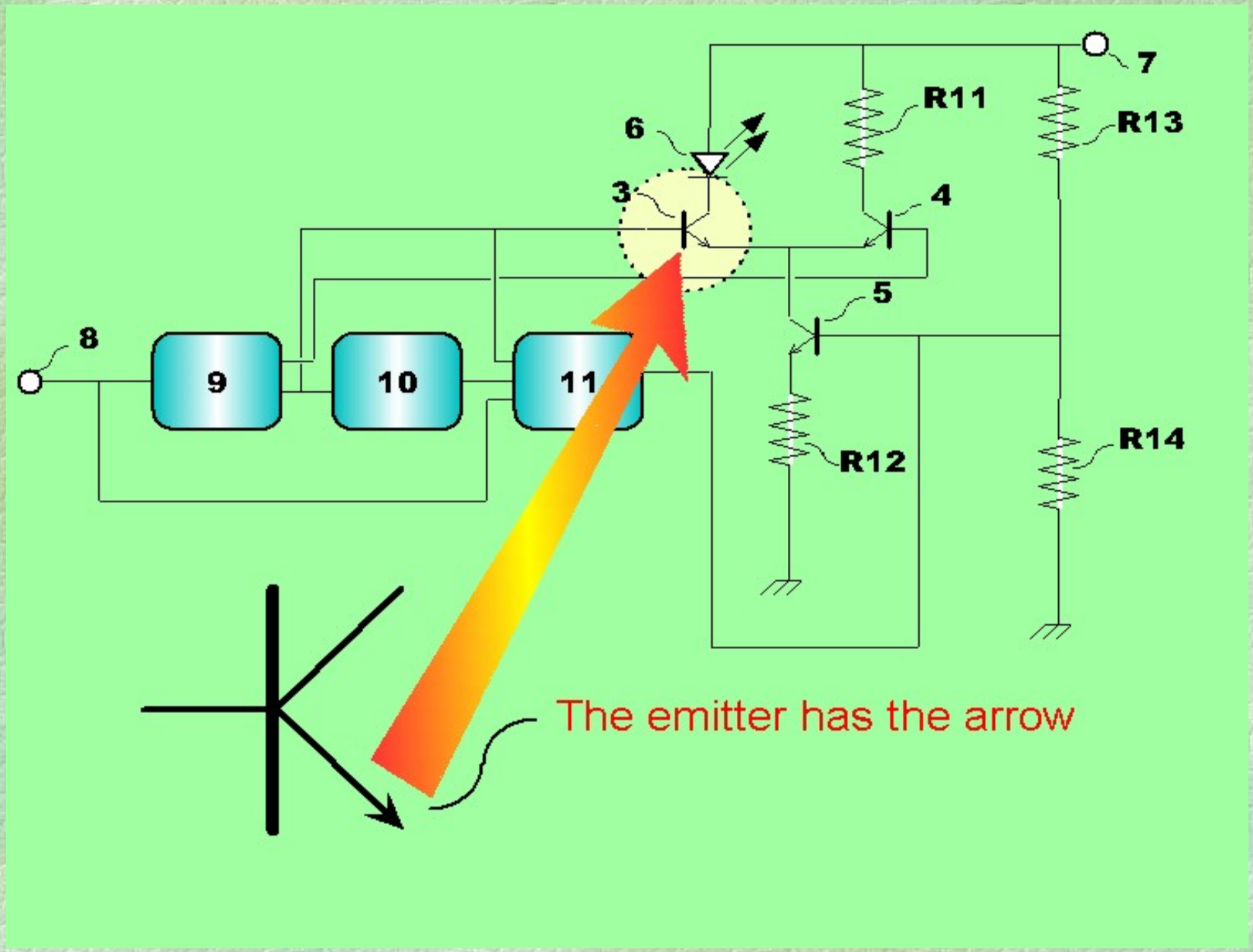
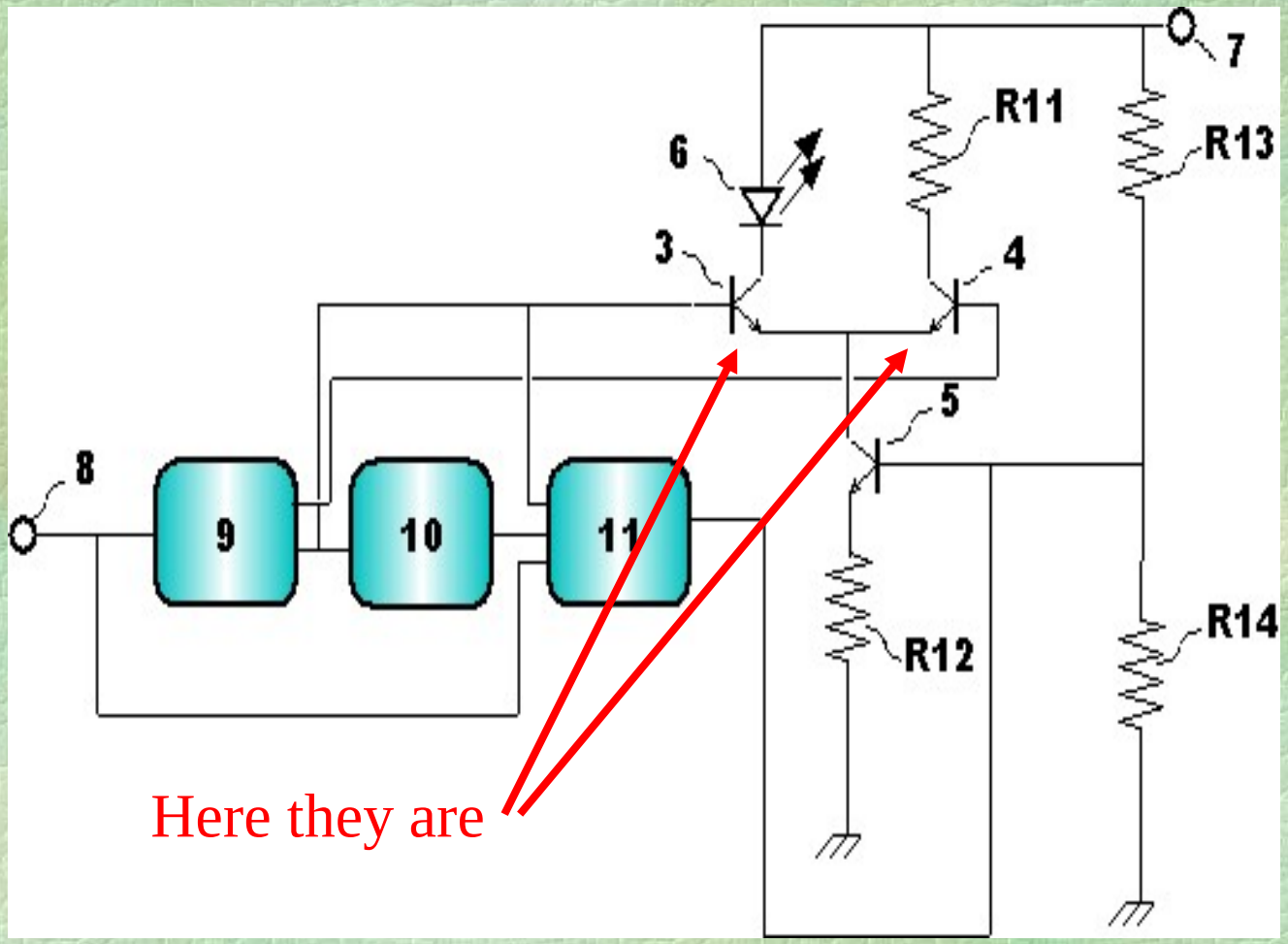
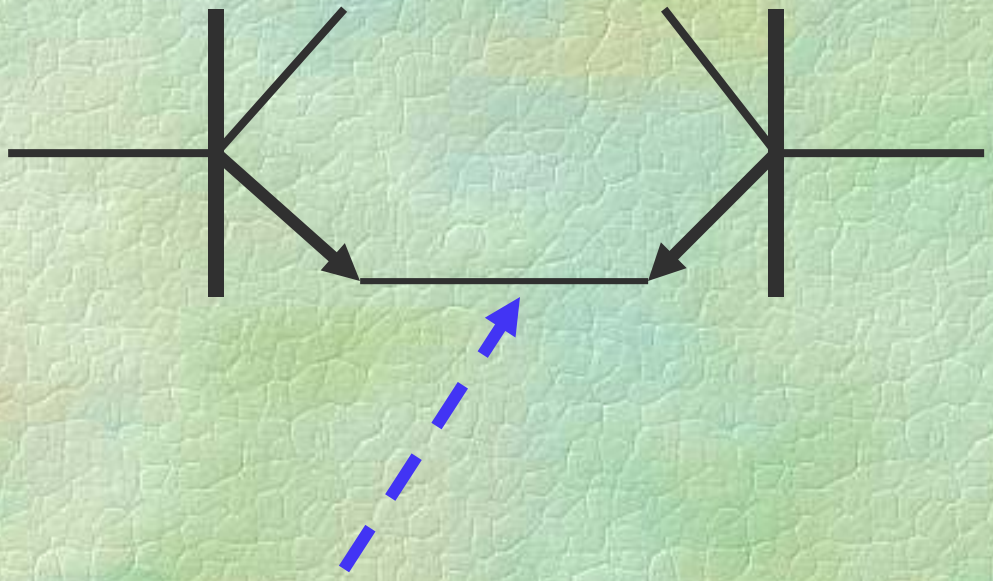

7
R11
R13
6
3
4
5
8
9
10
11
R12
R14
The emitter has the arrow

A light emitting diode driver circuit



Emitter-coupled transistors



The emitters are joined here

The description

A light emitting diode driver circuit including a differential amplifier having emitter coupled transistors, a light emitting diode connected to a collector of one of the emitter coupled transistors and a current source circuit connected to the common emitter of the emitter coupled transistors, characterised by

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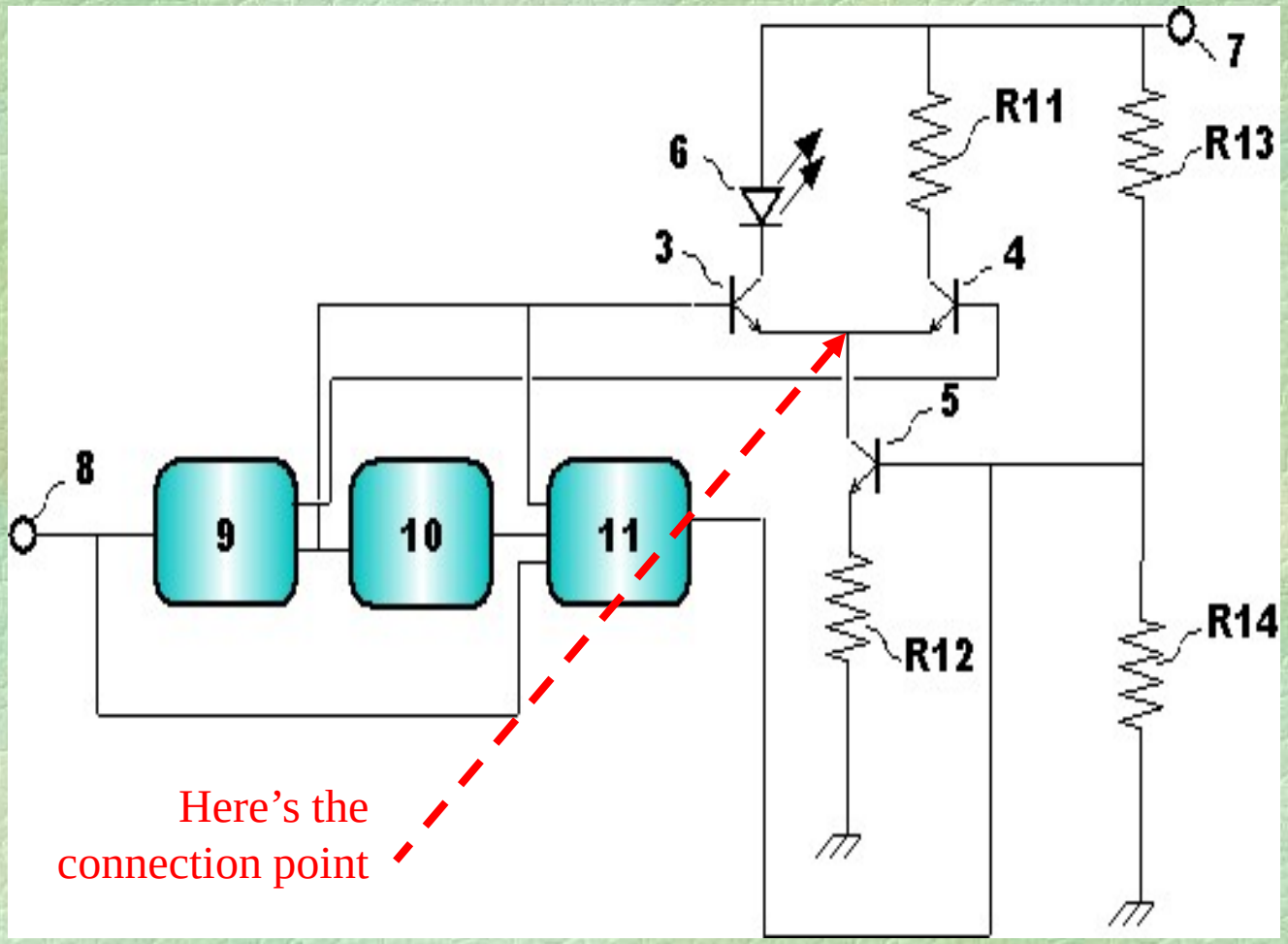
Wherein the first delayed signal and the inverted signal drive the emitter-coupled transistors and the output of the OR circuit drives the current source circuit.

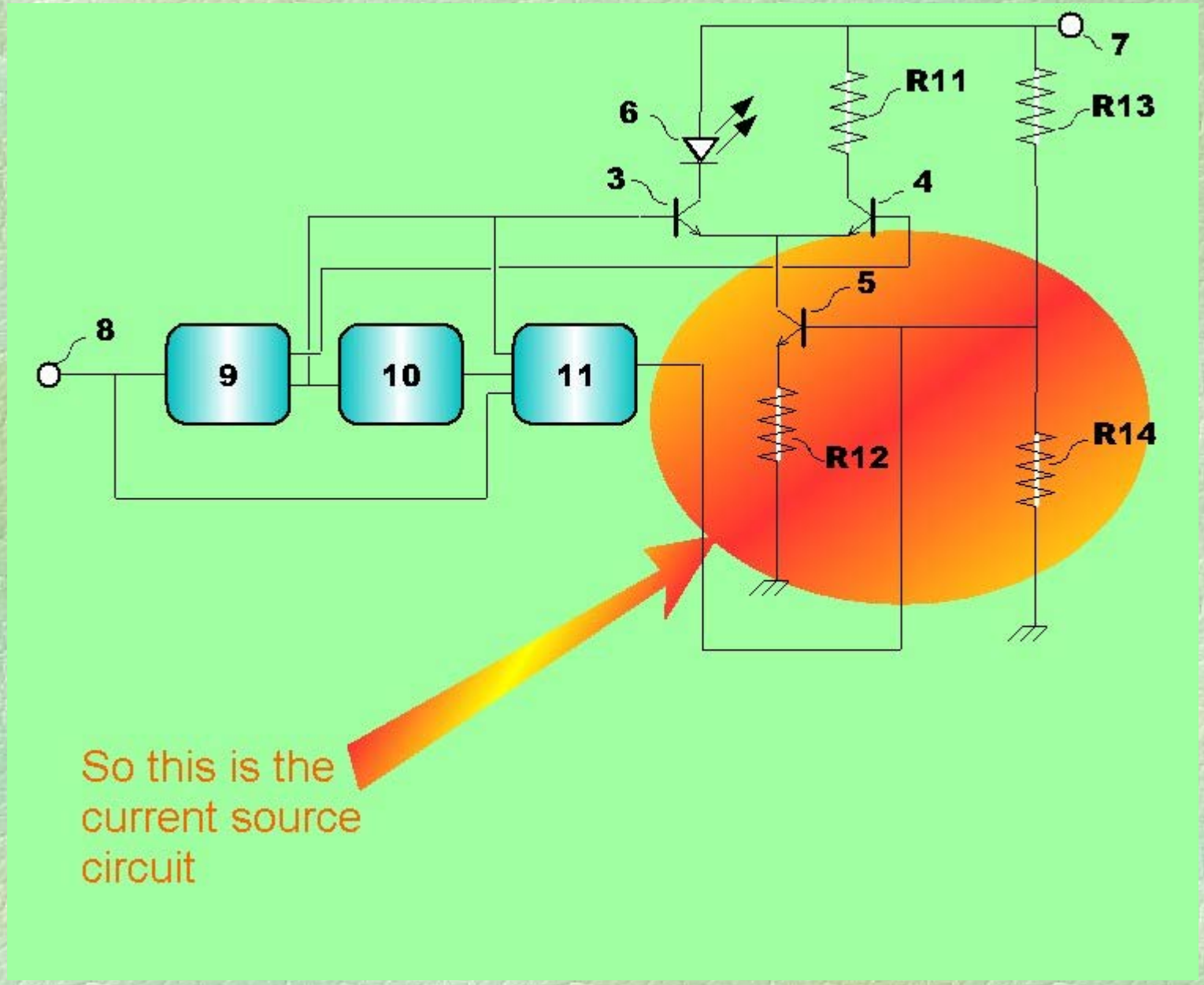
We've already found the emitter-coupled transistors

The emitters are joined here

So we need something connected to this point

So let's have another look ….




7
R11
R13
6
3
4
5
8
9
10
11
R12
R14
So this is the
current source
circuit

TRAINING - The problems

- The need to recruit large numbers
- Dwindling population of experienced examiners
- Growing backlogs of work

The Old Way

- One to one training

… or .. **“Sitting with Nelly”**

So, what's wrong with this?

- NOTHING!
- If you have the resources
- If you have enough examiners
- If you're examiners are experienced enough
- If you're workload allows it

- If all of these things, it's very effective

Resources

- We have large backlogs of work, and …
- Too few Examiners

- We needed to recruit, but ….
- Training resources are limited.

Resources

- An experienced senior patent examiner can manage only two new recruits.
- This will take up to 75% of his/her time
- Can’t do normal work when training
- So loss of productivity

A better way ?

- How can we use existing resources to train more people?
- Can we find additional resources?
- Can we reduce the need to recruit and train by working “smarter”

Who does the training?

- In the past we only used very experienced senior patent examiners
- Not many of these left now and they're all retiring soon
- Can this continue? **NO**

New Trainers

- We have started to use more junior staff as trainers
- These are experienced examiners but at a lower grade
- This works well

New Trainers

- Experience isn’t the only requirement
- Good training skills are just as important
- Some of our young examiners are very good at this.

Changing the way we train

Lectures,
Tutorials
and
Seminars

Advantages

- One senior examiner can train far more people in a lecture environment.
- All the new intake stay together and can help each other
- Small group of dedicated trainers ensure consistency

The New Approach

- Five week introductory course
- Held off-site at a local college
- All new recruits together
- Trained by a team of 6 patent examiners

The New Approach

- This team can train up to 50 new examiners
- Much more efficient use of scarce resources
- Gives the new recruits some basic skills before they come to the Office

What does it cover

- Basic patent law
- Legislation relating to search, examination and grant
- Just the important stuff at first

Patent Law

- This part of the course is delivered by a university lecturer
- From this, students earn credits which they can later build on
- To gain a Diploma in IP Law

Examiner Skills

- The remainder of the course focuses on examiner skills
- Delivered by patent examiners
- The basic skills needed to get started

What skills?

- Inventive step
- Divisional applications
- Third party observations
- “Private applicants”
- Priority
- Time limits
- Plurality

What skills?

- Biotechnology
- Software & Business methods
- Excluded inventions
- Commercial searches

Other skills

- Online searching - EPOQUE
- Use of IT systems

The next step

- Only when this initial training is complete
- Will examiners start to work on real
- Applications in the Patent Office

Questions ?