P6 2011

Examiners' Comments

General

The P6 paper for 2011 related to a distance measuring gauge. Although there was some requirement to understand technical concepts (for example parallax) everything necessary was clearly explained within the paper and could be taken at face value. The pass rate was 43%.

Although the time permitted for the paper this year remained extended at five hours there was evidence of some candidates running out of time. Time management is an integral part of this paper and it is perilous to ignore its importance. Many papers included good construction and infringement sections but then little or no validity analysis or advice. The marking schedule is always structured with a good spread of marks available for each section. Therefore candidates who miss out entire sections are significantly reducing their chances of passing.

Some candidates wasted time starting their answer by describing in detail what they were subsequently going to do in their answer. This is unnecessary; the answer should preferably begin immediately.

Candidates are reminded, as always, that no credit can be given if the Examiner cannot read their answers. It is appreciated that candidates are always under time pressure but legibility must be maintained.

Construction (20 marks)

Although a separate construction section is used by most candidates (and the Courts), candidates were still awarded marks if the points of construction were included in the analysis of validity/infringement (or indeed elsewhere). A separate construction section may, however, assist in fostering a thorough and consistent approach.

Candidates are encouraged to reach conclusions and to carry those conclusions through the remainder of the paper. Not doing so can lead the Examiner to think that the candidate does not have the required skills to evaluate the options and reach a consistent conclusion that can form the basis for clear advice to a client.

Many candidates broke the integers of the claims too much so that often they were not construing integers in context. Candidates that did this generally failed.

Some candidates imported features into integers which are not required. For example some candidates indicated that the gauge of claim 1 must have jaws by virtue of dependent claims including this term.

Claim 1 (11 marks)

"A distance measuring gauge"

Distance – how far apart things are. When unqualified, usually relates to linear separation. Angular distance is a recognised concept, but not mentioned in Document B, e.g. P6 LL2-3: discusses the size of mechanical parts. However, marks were available for plausible arguments that distance measurement includes angular distance measurement.

"comprising"

Including the following features, with or without others.

"a moving scale slidable adjacent a fixed scale"

The terms "moving" and "fixed" are relative. "Fixed" suggests this scale establishes a reference frame against which distance measurements are taken, e.g. this scale is on a part of the device that is held stationary (e.g. by placing its attached jaw against the object to be measured) when measurements are taken, or the prior art slider moving along a main scale as described P6 LL10-11 and shown in Fig. 1.

However, P6 LL28-29 states the contrary: fixed and moving are used in the statement of invention (and therefore presumably in the claims) simply in a relative sense, i.e. there merely has to be relative movement between two scales: pick one at random and call it fixed, then the other is a moving scale. This is problematic, as

then claim 1 is arguably obvious or even lacks novelty over the acknowledged prior art, whereas this is not the case under the "fixed = fixed in use" interpretation. In Fig. 1 the coarse measurement is read from the main, stationary scale and the fine measurement is read from the secondary scale moving on the slider. Hence there are also grounds for saying that the claims should be given the narrower interpretation, despite the broadening statement of invention. See below for discussion of "coarse" and "fine".

Slidable adjacent – movable one along the other and next to each other.

"so that graduations on the moving scale are alignable with graduations on the fixed scale"

Graduations – the markings forming the scale.

Align<u>able</u> – this claim therefore also covers the device when not in use. With regard to at least the moving scale graduations, the alignment that provides the (coarse) measurement need not be an exact alignment with a fixed scale graduation. As with the acknowledged prior art, the idea of the invention is that accurate measurements by eye are still possible even when there is no exact alignment between a main scale graduation and a pointer moving along that scale (see P6, LL2-8, and compare P6, LL10-18 and Fig. 1). The claimed invention presumably has the same advantages as the Fig. 1 device, and should also address the problems identified at P6, LL18-21.

"so as to indicate a coarse measurement on the moving scale and a fine measurement on the fixed scale,"

The moving scale is "read" to provide a relatively crude, or less accurate, distance measurement (= coarse measurement).

The fixed scale is read to provide a relatively fine, or more accurate, distance measurement (= fine measurement).

"the fine measurement corresponding to less than the increments on the moving scale"

The fine distance measurement therefore represents a fraction of the distance between adjacent moving scale graduations.

Increment – no antecedent. The distance between adjacent graduations. See e.g. statement of invention, P6 LL27-28.

Claim 2 (5 marks)

"A distance measuring gauge as defined in claim 1,"

Dependent on claim 1 – has all the features of claim 1, and the following features:

"in which the moving scale consists of n + 1 graduations"

Consists of – has this many graduations, no more and no less. But then the mathematical expression n is used, usually denoting an integer variable. So the moving scale can have any (integer) number of graduations. More sophisticated argument may arrive at n>=1 or even n>=2. However, n+1 is the total number of graduations on the scale concerned.

"and covers a distance denoted by n graduations on the fixed scale."

But the entire moving scale must cover the distance marked out between one fewer than this number of graduations on the fixed scale.

This is inconsistent with the illustrated embodiment, in which it is the total length of the fixed scale which covers a distance marked out between one fewer graduations on the moving scale than the total number of graduations on the fixed scale. That is, there appears to be an error in claim 2: "fixed" and "moving" need to be swapped around.

Under this corrected interpretation, the fixed scale must be shorter than the moving scale and must have graduations which are more closely spaced than those on the moving scale.

Claim 3 (1.5 marks)

"A distance measuring gauge as defined in claim 1 or 2,"

Dependent on claim 1 or 2: has all the features of either claim 1 or (claim 1 and claim 2), together with the following:

"in which the 0th graduation on the fixed scale is made to align with the 0th graduation on the moving scale when jaws of the gauge are touching."

0th graduation: that at the extreme end of its respective scale, closest to the respective jaw – P6, LL36-37.

Claim 4 (2.5 marks)

"A distance measuring gauge as defined in any preceding claim,"

Dependent on claim 1, 2 or 3: has all the features of either claim 1 or (claim 1 and claim 2), or (claim 1 and claim 3), or (claim 1 and claim 2 and claim 3), together with the following:

"in which the moving scale is attached to a moving jaw"

This is the same language as the specific description P7 L21. In the illustrated embodiment the moving jaw 16 moves in unison with moving scale 12: necessary for accurate measurement.

"and slides in a slot formed along a main body on which the fixed scale is provided."

Does main body therefore preclude a body which slides along another, e.g. the slider 2 in Fig. 1? Is it a fixed body thereby providing a fixed or reference scale?

Infringement (22.5 marks)

It is important that candidates give a conclusion as to whether a feature is present or not, and that sufficient reasoning is given to explain why the conclusion has been reached. A discussion as to why an integer is or is not present and reference to the item under consideration is necessary. Long explanations are not usually required, but simply stating, for example, "see Figure 2" is not enough.

General infringement considerations (4 marks)

The following general considerations were awarded marks when discussed either as part of the infringement section or later as part of the advice section.

1. No-one appears to be commercially exploiting Stawm's invention yet, so no infringement.

2. If the interested manufacturer makes the device on its own account under licence from Stawm, then it potentially infringes.

3. Stawm might be liable for infringement damages awarded against the manufacturer, depending on the licence terms and any indemnities.

4. Stawm could be liable as a joint tortfeasor (part of a common design).

5. If Stawm subcontracts the manufacture, then both Stawm and the manufacturer are potential infringers. Indemnities could again apply, depending on the terms of the manufacturing contract.

Claim 1 (9 marks)

"A distance measuring gauge,"

Used for very similar purpose to the size gauge of document B – see P3 LL3-4. Measures how far apart things are – outer surfaces of a part, P3 LL10-11.

Feature present.

"comprising"

(conditional upon the following being present).

"a moving scale slidable adjacent a fixed scale"

Scale 28 moves along and next to scale 12.

Feature present.

"so that graduations on the moving scale are alignable with graduations on the fixed scale"

Graduations 30 on one scale 28 are brought into (non-exact) alignment with the graduations 14 on the other scale 12 as a measurement is taken.

Feature present.

"so as to indicate a coarse measurement on the moving scale and a fine measurement on the fixed scale,"

But the fine measurement is taken from scale 28 and the coarse measurement is taken from scale 12. So if fixed and moving simply mean relatively movable as discussed above, then feature present, as scale 28 can be chosen as the fixed scale (e.g. if jaw 22 is first placed in contact with the object to be measured) and scale 12 is then the moving scale.

However if fixed means the reference scale or the scale on a main body, then this feature is absent: in the client's device the coarse measurement will then be obtained from the fixed scale and the fine measurement from the moving scale, not vice versa.

It could also be argued that alignment of the two scales as such does not enable a distance measurement to be taken. Index mark 26 also has to be used.

"the fine measurement corresponding to less than the increments on the moving scale"

The readings taken from scale 28 represent fractions of the distance between graduations on the scale 12: see e.g. P4 L35 – P5 L4. Feature present.

Conclusion: Claim 1 infringed/not infringed, mainly depending on the meaning of "fixed" and "moving".

Claim 2 (2.5 marks)

"A distance measuring gauge as defined in claim 1,"

Depends on conclusion reached re: claim 1

"in which the moving scale consists of n + 1 graduations"

Scale 28 [i.e. the "fixed" scale of claim 1 for the fine measurement] has several graduations.

"and covers a distance denoted by n graduations on the fixed scale."

As shown in the drawings, the graduations 30 on scale 28 are more widely spaced apart than the graduations 14 on scale 12. So even if claim 1 is found to be infringed, claim 2 is not infringed.

Conclusion: Claim 2 not infringed.

Claim 3 (3 marks)

"A distance measuring gauge as defined in claim 1 or 2,"

Depends on conclusion reached re: claim 1. No infringement when dependent on claim 2.

"in which the 0th graduation on the fixed scale is made to align with the 0th graduation on the moving scale when jaws of the gauge are touching."

For the calculation described at page 5 LL8-13 to hold good, there must be no zero offset. That is, when the jaws 18, 22 are touching, the index mark 26 will be aligned with the 0th graduation on scale 12 and with the zero graduation on scale 28. But the latter is not the 0th graduation as defined – instead the "-5" graduation lies at the extreme end of scale 28, closest to jaw 22. Feature not present.

Conclusion: Claim 3 not infringed.

Claim 4 (4 marks)

"A distance measuring gauge as defined in any preceding claim,"

Depends on conclusion reached re: claim 1. No infringement when dependent on claim 2 or 3.

"in which the moving scale is attached to a moving jaw"
Scale 12 is attached to jaw 18 (the two appear in Fig. 1 to be formed as a single piece; P4, LL14-15).

(Scale 28 cannot be a moving scale as claimed, as it is used for fine measurement, not coarse).

"and slides in a slot formed along a main body on which the fixed scale is provided."

There appears to be a slot beneath transparent block 24 in which scale 12 slides. See also P4 L16. Although it is part 16 that is described as the "main body", there is a risk that the carriage 20 could instead be held to be a main body as claimed, in that it is reasonably substantial and could be seen as the reference part of the device and hence its main part, e.g. if jaw 22 is first brought into contact with a part to be measured, thereby making scale 28 a "fixed scale".

Conclusion: Depending on interpretation of "main body", claim 4 possibly infringed, but only when dependent on claim 1 and no other, and then only to the extent that claim 1 is held to be infringed.

Novelty (30.5 marks)

Some candidates considered novelty and inventive step claim-by-claim. This is perfectly acceptable, but the more thorough approach (used by the majority) is to consider novelty first and then inventive step. If candidates form a view of the whole claim set then this helps put all the claims and associated integers in context and so interpretation becomes easier. As is the case when candidates analyse integers in minute details without reference to the other integers in a single claim, the overall meaning of the claim can be overlooked.

When discussing novelty, selecting the main points for discussion does not mean only commenting on any single feature of a claim that is missing from the cited art. This risks missing out on the majority of allocated marks.

In order to obtain the maximum number of marks all features of a claim should be considered, rather than stopping as soon as one feature has been found not to be present. Furthermore, all of the sub-claims should be considered.

Care should be taken when deciding what is prior art. Some candidates did not use Figure 1 from Document B even though it was clearly labelled as prior art. The purported prior art contained in the introduction to Document A and the similar material discussed at the very beginning of Document B was treated relatively

briefly by the stronger candidates, who realised that it was unpromising because it involved the use of only one scale.

Below is a table summarising the points for consideration with regard to novelty.

Novelty

Claim 1 (15.5 marks)

	B Fig. 1 scale	**C**
A distance measuring gauge,	×/✓ P10 L10 refers only to a display scale for a scientific instrument. The position of the edge 5 of the slider can be read off the two scales 3, 7, but is this distance measurement? Have scientific instruments been made with the disclosed scale which are/were distance measuring instruments?	×/✓ Is angular measurement distance measurement?
comprising		
a moving scale slidable adjacent a fixed scale	✓ Slider 2 moves along main scale 3 (P6 L10) and carries secondary scale 7 (LL15-18). Scale 7 therefore moves along and next to scale 3. [Scale 7 gives fine measurement	✓ Unmodified astrolabe does not have relatively movable scales. Modification mentioned in notebook P10 L17 and scientific paper arguably provides relatively

	and is therefore the "fixed" scale as claimed; scale 3 gives the coarse measurement and is therefore the "moving" scale.]	slidable scales. Under narrower interpretation, scale on astrolabe body is fixed and scale on alidade is movable – unless very narrow view of "slidable" is taken.
so that graduations on the moving scale are alignable with graduations on the fixed scale	✓ P6 LL15-18 - Unless a very narrow view of "alignable" is taken.	✓ P10 L18-19
so as to indicate a coarse measurement on the moving scale and a fine measurement on the fixed scale,	✓/× Feature present only if "fixed" and "moving" are interpreted as meaning the scales are relatively movable, e.g. on the basis of P6 LL28-29. Then the fine measurement scale 7 could be termed fixed and the coarse measurement scale 3 moving. Otherwise more natural to call	×/✓ Enabling disclosure? Notebook does not clearly explain how the accurate measurement is obtained. Still apparently necessary to use a look-up table. It is not clear that the respective scales give the coarse and fine measurements. On the other hand, the physical

	scale 7 on the slider the moving scale, which gives the fine measurement, not the coarse.	arrangement described could be similar to the illustrated embodiment in doc. B. If (speculation!) a quadrant on the alidade was marked out in 89 increments and the face plate quadrant was marked out in 90 (1°) increments, then the only differences are that the scales are curved rather than straight, and the value of n is not particularly convenient – hence the need for the look-up table. The alidade scale would have to be extended as mentioned P10 L17, in order to obtain useful measurements beyond 1/89 part of a quadrant. So some evidence for this being the arrangement envisaged by Nunes (speculation therefore reasonable?), but is

		it "planting the flag"?
the fine measurement corresponding to less than the increments on the moving scale	✓ Scale 7 is used to subdivide the measurement indicated on scale 3: see e.g. P6 LL15-18.	×/✓ See above. In the speculative arrangement postulated above the fine measurement would indeed be obtained from the (fixed) faceplate scale and the coarse measurement from the (moving) alidade scale, so then this feature would be present under both interpretations of fixed/moving. P10, LL18-20.
Conclusion	Claim 1 is new/old, depending on interpretation of fixed/movable and distance measuring.	There is a case for lack of novelty, but difficulties re: angular measurement = distance measurement and enabling disclosure.

Claim 2 (5 marks)

Dependent on claim 1.		
A distance measuring gauge as defined in claim 1,	✓/×	✓/×
in which the moving scale consists of n + 1 graduations	✓ [Note "moving" should read "fixed"]. (Fixed) fine measurement scale 3 has several graduations…	✓ (Fixed) scale on an astrolabe body has several graduations...
and covers a distance denoted by n graduations on the fixed scale.	× [Note "fixed" should read "moving"]. But (moving) coarse measurement scale 7 covers a measured distance which is the increment between two adjacent graduations on scale 3. Also, is physically shorter. Scale 7 does have fewer graduations in a given length than scale 3. But the n, n+1 relationship is not there. The	× The proposed alidade scale, being a nonius scale, would have a different number of graduations to the main body scale, but there is no explicit disclosure in the cited documents that the total length of the main body scale would equal the distance on the alidade scale denoted by one fewer alidade scale graduations than

	entire length of scale 7 corresponds to a distance denoted by about 4 graduations on scale 3. So take n as 4. There are 11 graduations on scale 7, which is approximately n+7, not n+1.	there are total graduations on the main body scale. [But perhaps an obvious choice? – see comments on claim 1 in obviousness section below].
Conclusion	Claim 2 is new.	Claim 2 is new (but obviousness is an issue).

Claim 3 (4 marks)

Dependent on claim 1 or 2		
A distance measuring gauge as defined in claim 1 or 2,	✓/× when dependent on claim 1 only × when dependent on claim 2	✓/× when dependent on claim 1 only × when dependent on claim 2
in which the 0th graduation on the fixed scale is made to align with the 0th graduation	× Description of Fig. 1 device does not mention measuring jaws or the like.	× No jaws. But in the proposed modified astrolabe, would it be sensible to make the zero marks on the main body and alidade

on the moving scale when jaws of the gauge are touching.		scales align when looking at a star at 0°? Obviousness needs consideration.
Conclusion	Claim 3 new.	Claim 3 is new, but need to look at obviousness.

Claim 4 (6 marks)

Dependent on claim 2 or 3		
A distance measuring gauge as defined in any preceding claim,	✓/× when dependent on claim 1 only × when dependent on any other claim	✓/× when dependent on claim 1 only × when dependent on any other claim
in which the moving scale is	× no jaws	× no jaws

attached to a moving jaw		
and slides in a slot formed along a main body on which the fixed scale is provided.	× if 7 is the moving scale and 3 the fixed scale. 7 is mounted on carriage 2 which has a slot by which it is mounted on scale 3. ✓ if 3 is the moving scale, 7 the fixed scale and slider 2 the main body.	× No constructional details mentioned. No linear movement.
Conclusion	If fixed/movable means relatively movable, claim 4 as dependent on claim 1 alone, is new only by failure of the B Fig. 1 prior art to mention distance measuring jaws attached to scale 3 and slider 2.	Claim 4 new.

Inventive Step (14 marks)

There were marks available for discussion of inventive step of each of the claims. Marks are awarded for selecting a suitable starting point and applying the analysis.

Although, as noted above, examiners want candidates to show that they can reach a decision or conclusion on issues, one should exhibit extreme caution before unequivocally advising a client that a patent is invalid because the subject matter is obvious over prior art. It is possible very easily, with the wisdom of hindsight, to miss counter-arguments. One should put oneself in the position of the patentee and consider what arguments might be put forward to support patentability. However technically simple the subject matter may appear, a finding of obviousness should seldom be reached without consultation with a skilled person.

Once again the vast majority of candidates scored poorly on inventive step, with less than 10% gaining more than a third of the available marks.

Use of the Pozzoli/Windsurfer approach was expected. However, many candidates simply referred to the case and said nothing about how the case relates to the situation outlined in the paper.

Who is the person skilled in the art? A metrologist? A scientific instrument maker? [More likely]. A user of measuring callipers?

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What is included in the common general knowledge of the PSA? Callipers as acknowledged in Doc A P3 LL7-12 & Doc B P6 LL3-8? Astrolabe?

Claim 1

If fixed/moving simply means relative movement between two scales, then arguably claim 1 is old in view of B Fig. 1. Inventive concept of claim 1 might be viewed as increasing measurement accuracy by using a second scale to take the guesswork out of finding where a pointer lies between graduations on a first scale. This concept is found in the B Fig. 1 instrument. If "fixed" means on a main body of the device or a part of the device which is held, then making the slider 2 of B Fig. 1 somewhat larger might be an obvious workshop modification.

Nunes's notebook suggests putting an extended nonius scale on the alidade. A nonius scale commonly has one fewer increment than an adjacent scale. If the alidade scale is extended without increasing the distance between its graduations, then you end up with a scale which is curved but otherwise similar to that of B Figs. 2-4. Is this form of extension an obvious choice? (not many alternatives).

However, Nunes does not envisage taking direct measurements without having to use a look-up table. Is it obvious to choose a value of n allowing direct measurement?

It did not occur to Nunes, who was clearly a person of extraordinary skill in the art, and it took several centuries before this step was made by the inventor of B.

However Nunes's notebook might have been unknown for that time (evidence needed).

Once Nunes's work was published in the metrology journal, it did not take long to make the invention.

Nunes died shortly after making his suggestions. He may not have had time to fully develop his ideas.

What else was in the notebook and journal paper?

Claim 2

Likewise obvious to apply the B Fig.1 distance measuring scale or the Nunes modified astrolabe scale in a [CGK] calliper: addresses same problem of being able to measure small distances by eye, without having a cluttered scale. Extended nonius scale in modified astrolabe gives the n+1, n relationship of corrected claim 2?

Drafter of B acknowledges B Fig. 1 as relevant prior art, so modified astrolabe also relevant prior art? (It was considered relevant for inclusion in the metrology journal too.)

Claim 3

Zero alignment when jaws touching is an obvious choice? Necessary if the scale reading is to represent the jaw separation, which in turn is how the [CGK] callipers work.

Claim 4

Enlarging the slider 2 of the B Fig. 1 calliper would result in a moving scale 6 which slides in a slot formed along a main body 2 on which the fixed scale. If used in a calliper it would appear to be routine to mount a jaw on the moving scale 6.

Amendment (4.5 marks)

In general this section was not well dealt with.

Page 7, lines 24-25 states that the two scales are linear and parallel. Introducing this limitation into the claims may help to distinguish the invention from B Fig.1, as the scale 6 is not linear and the two scales are not parallel. Then could take a broad interpretation of "fixed" and "moving" without invalidity in view of B Fig. 1 prior art.

Such a limitation may be less helpful in distinguishing the invention from the modified astrolabe. Adapting that kind of (curved) scale to e.g. the prior art callipers as described P3LL7-10 and P6LL3-6 would result in linear and parallel scales. Need evidence that PSA would have no difficulty in adapting curved scales of the modified astrolabe to a linear calliper.

The amended claims would still be infringed by the client's calliper to the same extent as the originally granted claims, as the client's device uses parallel, linear scales.

Correct/amend the typographical error in claim 2.

Sufficiency (1 mark)

No issues? n, n+1 relationship essential to invention?

Advice (7.5 marks)

In this section of the paper marks are awarded for summarising conclusions and giving general advice.

The advice of most candidates was generally formulaic and concentrated on telling the client exactly which claims were infringed, which were novel and which were inventive, without any practical advice at all.

Many candidates seemingly believe that applying for an interim injunction and suing the alleged infringer should be the first port of call – despite advising the client that their patent is invalid.

Points for discussion:

Client is in danger of infringing patent B if he exploits his invention commercially. Hold launch.

Patent B is of dubious validity, even after amendment (on obviousness grounds). But the arguments are not clear cut.

The client is an individual, the patentee is a large corporation in a much stronger financial position and the patented product is commercially important to them. Therefore the risk of the patentee choosing to take action is high.

Client's potential licensee may or may not be more evenly matched, but the infringement risk could make them walk away.

Try to do a deal with Megalabs – e.g. licence or sell the invention to them. Would need to demonstrate commercial/technical advantages of client's invention (if any) over the calliper described in Pat B – e.g. ease of use. Megalabs could still be a dog in the manger if they chose to.

Watch for non-renewal of patent B.

Get an IPO Opinion/Declaration of non-infringement to clear the path.

Validity issues are a potential further lever for a licence under Patent B.

Carry out further searches for relevant prior art.

The "real" Examiners' Comments

Construction a bit confused (not too bad); infringement analysis OK; novelty a bit weak; all parts attempted; OK to pass.

Analysis simply not deep enough, over-divided features and lost sight of features as a whole.

Writing difficult to read at end; may have missed points.

Very good indeed; easy pass.

Construction too sparse. Very little done on novelty. A fail - too many areas weak.

Easy pass; excellent.

Construction very frustrating - merely attempted dictionary definitions of words of claims. Infringement OK; inventive step confused; novelty too little analysis. Fail.

Construction very confused (or confusing). Whole script messy; did attempt whole paper but on balance I would say too confused to pass.

Construction good if brief. However, only con, infringement & novelty attempted. Must fail.

Construction of dependent claims poor, infringement OK; novelty very sparse. Inventive step, amendment, sufficiency and advice not attempted. Must fail.

Excellent construction all points identified. Infringement analysis excellent. Novelty analysis thorough. Easy pass

Analysis not deep enough; skirted around points. Not a pass.

Construction: good point about alignment differentiating from Fig 1 of B. A shame not enough of the paper completed.

Confused infringement and novelty sections. Did not consider validity of B.

Pretty good overall.

Clearly ran out of time.

Didn't get anywhere near to finishing.

Didn't seem to understand the paper well.

Very good paper. Picked up all the major points.

A real shame. Missed out several parts. Otherwise good.

Some confusion. Not enough depth or substance to answer.

Fail. Troubling ideas about claim dependencies in Inf section.

Good solid answer.

Definite fail. Some dangerous advice.

Some strange construction ideas, but consistent.