

## CANDIDATE'S ANSWER

### Amended claims

1. Ski (1) for use with a ski boot (3), the ski (1) comprising a radio transmitter (5)
2. ~~Ski (1) according to claim 1 further comprising~~ and a switch (4) connected to the radio transmitter (5), the switch comprising an actuator (4a) being moveable between a first position in which the radio transmitter (5) is inactive and a second position in which the radio transmitter (5) is active, characterised in that the switch (4) further comprises an elastic element (4b) configured to automatically move the actuator (4a) from the first position to the second position upon separation of the ski boot (3) from the ski (1).
2. Ski (1) according to claim 1 comprising a further switch (10) arranged to deactivate the radio transmitter (5).
3. One-piece ski binding (8) for use with a ski boot (3), the ski binding comprising a radio transmitter (5) and a switch (4) connected to the radio transmitter (5), the switch comprising an actuator (4a) moveable between a first position in which the radio transmitter (5) is inactive and a second position in which the radio transmitter (5) is active, characterised in that the switch (4) further comprises an elastic element (4b) configured to automatically move the actuator (4a) from the first position to the second position upon separation of the ski boot (3) from the ski binding (8).
4. Ski (1) according to claim 1 or 2 or ski binding according to claim 3 wherein the actuator (4a) is a metal plate, a U-shaped bar or a push button.

Dear Sirs,

In response to the communication issued on this application, I submit the following:

### Amendments

Claim 1 has been amended to include the features of original dependent claim 2. Claim 1 has further been amended to specify that the switch further comprises an elastic element configured to automatically move the actuator from the first position to the second position upon separation of the ski boot from the ski. Basis for this amendment may be found in par. [007] and especially par. [008] of the application as filed.

Amended claim 2 is based on original dependent claim 4. Original claim 4 was dependent on claim 2, whose features are now in claim 1. Basis for the combination of the features of original claim 4 with the additional features of amended claim 1 and basis for the invention of the word “further” into this claim may be found in par. [009] of the application as filed, which, in combination with pars. [006]-[008] discloses all features of amended claims 1 and 2 in combination.

Basis for independent claim 3 may be found in original claim 5, and in para. [010], [011], [012] and [008] of the application as filed. In particular, par. [010] discloses a one-piece ski binding (1st sentence). The ski binding is for use with a ski boot (par. [011], 2nd sentence). The binding comprises a radio transmitter and a switch (par.[010], 3rd sentence) connected to the radio transmitter (par. [010], 5th sentence) moveable between a first position in which the radio transmitter is inactive and a second position in which the radio transmitter is active (par. [010], 5th sentence). The switch further comprises an elastic element (helical spring 4b in par. [010], which may be replaced by any other elastic element since “the elastic element 4b (referring to helical spring 4b) ... can be the same as in the first embodiment” [012] and any elastic element may be used in first embodiment – [008]) configured to automatically move the actuator from the first position to the second position upon separation of the ski boot from the ski binding (par. [010], 6th sentence).

It is not necessary to specify that the one-piece binding of claim 3 comprises front and rear binding sections and an intermediate section (par [010]) since these are inherent features of a one-piece binding (see, for example, D3 [001]). It is also not necessary to specify that actuator is a metal plate as disclose in par. [010] since other actuators are also disclosed in the one-piece binding embodiment – par. [012] and par. [008] – see discussion below re amended claim 4.

Dependent claim 4 has partial basis in original claim 3 in combination with original claim 2 or original claims 2 and 4 (for ski according to claim 1 or 2 as amended with metal plate actuator). However, basis for combination of these features of metal plate actuator with the additional features of amended claim 1 may be found in par. [006], where embodiment according to amended claims 1 and 2 described in par.

[006]-[009]. Moreover, basis for U-shaped bar or push button for ski according to amended claim 1 or 2 may be found in par. [008].

Basis for claim 4 when dependent on claim 3 may be found in par. [010] (disclosing actuator as metal plate) and par. [012] and par. [008] (actuator may be same as first embodiment so may be U-shaped bar or push button as disclosed in par. [008]).

### Clarity Art 84 EPC

Claim 2 (based on original claim 4) has been amended to specify that the switch is a “further switch”. Therefore, the examiner’s objection under point 3 of the communication has been overcome since it is now clear that the switch in amended claim 1 (feature from original claim 2) is not the same as the further switch of amended claim 2.

### Unity (A 82 EPC)

The amended claim set includes two independent claims (claims 1 and 3). Claims 1 and 3 are unified within meaning of A 82 EPC and R 44(1) EPC since they comprise the same special technical features of an elastic element configured to automatically move a radio transmitter actuator from a first position (in which the radio transmitter is inactive) to a second position (in which the radio transmitter is active) upon separation of a ski boot from the claimed item (R 44(1) EPC, GL F-V,2). The above special technical feature defines the contribution of the invention over the prior art as will be discussed in detail below.

### Multiple Independent Claims

Claims 1 and 3 are allowable under R 43(2)(c) EPC as multiple independent claims in the same category since they are alternative solutions to the problem of finding a missing ski and it is inappropriate to cover these alternatives in a single claim since they relate to different products (i.e. a ski and a ski binding respectively).

### Novelty

Claims 1 and 3 require an elastic element configured to automatically move the actuator from the first position to the second position upon separation of the ski boot from the ski or ski binding respectively. In contrast, D1 discloses a beacon attached to a ski or ski binding ([001]) which requires the actuator to be manually switched from the inactive to the active position (“manually operable switch” [002] used to manually switch between transmitting (active) and receiving (inactive) modes [003]). Therefore, D1 does not disclose an elastic element configured as claimed in claims 1 and 3.

Similarly, D2 also does not disclose an elastic element configured as claimed in claims 1 and 3. The system of D2 may comprise a manual switch [004] for disabling the passive transmitter and the transmitter is activated (when not disabled by the

manual switch) by a stimulating radio signal ([002]). However, there is no actuator in D2 which is moved by an elastic element, especially not automatically upon separation of a ski boot. Moreover, D2 does not disclose a ski binding, as required by claim 3.

D3 does not disclose a radio transmitter as required by claims 1 and 3. In contrast, the actuator of D3 activates a lamp ([003]) or an acoustic signal generator ([005]) when a ski boot is engaged with the binding ([004]).

Moreover, D3 does not disclose a ski comprising a switch as required by claim 1; D3 only discloses a ski binding comprising a switch.

In light of the above, claims 1 and 3 are novel over each of D1, D2, and D3.

### Inventive step

The closest prior art is D1. D1 is an appropriate starting point for the consideration of inventive step since it is directed towards the same purpose of finding items lost in the snow (“enables a person buried in snow to be detected” D1 [001]).

In contrast, D2 is not an appropriate starting point for inventive step since the system of D2 is directed towards a different purpose (tracking skier along router D1 [001], [004]) and would be unsuitable for finding anything lost in the snow (since radio signal transmitted too weak to transmit through sufficient snow – application [0130]).

D3 is not an appropriate starting point for considering inventive step since it is directed at another different purpose of ensuring that ski boots are securely engaged with bindings (D3 [003]).

Therefore, D1 is closer in purpose and effect to the invention and therefore represents the most promising starting point for arriving at the invention.

The subject-matter of claims 1 and 3 differs from D1 by the feature of the characterising portion of an elastic element configured to automatically move the actuator from the first position to the second position upon separation of the ski boot from the ski or ski binding.

In contrast, in D1, the radio transmitter is manually switched into the transmitting mode when starting out, and may be manually switched into receiving mode if a team mate is lost (D1 [003], [002]).

The combined technical effect of the distinguishing features is that battery energy may be conserved, allowing for longer battery life, while still allowing a skier to find a missing ski when it has been separated from the boot.

The objective technical problem may be deduced from the application as filed by a person skilled in the art (Guidelines G-VII, 5.2) as follows:

The objective technical problem is how to provide efficient, long-lasting means for finding a ski lost in the snow.

The problem is not recognised in D1. D1 is concerned with finding a person in the snow, not a separated ski lost in the snow. Thus, the discovery of the unrecognised problem of finding a separated ski in the snow gives rise to an inventive step (T2/85) since the problem is not addressed in any of the prior art.

The system of D1 may be used for such a purpose if the beacon is located on the ski/ski binding which is lost, but would require another skier with another beacon to locate the ski. And, regardless, the skilled person would not use the system of D1 in this way since there is no disclosure or indication of such a use in D1. Since the skilled person would not use the system in this way (to find a lost ski rather than a lost person) would not optimise energy efficiency as claimed.

Moreover, the skilled person, starting from D1 and addressing the objective technical problem, would not arrive at the claimed invention. Following D1, the skilled person would not modify the system of D1 to comprise elastic element as claimed.

The purpose of D1 is to find buried skiers. Therefore, it is imperative for the system of D1 to work as described, that the transmitter transmit at all times, especially when the ski is attached to the boot. This is essential because buried person may not be capable of switching transmitter on after being buried so it must be on constantly. There is no advantage for the system of D1 to activate transmitter when boot separated since boot may not separate in avalanche and, even if it did, it is less important to find the ski than the person!

Therefore, the skilled person would not modify the system of D1 to save energy by automatically switching on the actuator when boot separated because the system of D1 would then not function as a means for finding skiers in avalanche, as described in D1.

D1 does not provide any motivation for the skilled person to modify the beacon to arrive at the invention.

If the skilled person were to adapt the system of D1 to provide ski-finding system, he would simply incorporate one of the beacons in a ski or ski binding (as in [001]) and have it constantly transmitting so that it could serve as either a ski-finding beacon or a person-finding beacon depending on the circumstances. He would not attempt to conserve energy by switching transmitter off at any point during skiing due to potential avalanche dangers discussed above.

#### D1 with D2

The skilled person would not consider D2 when trying to solve the problem above since there is no mention of the objective technical problem in D2 since D2 is not concerned with finding things lost in the snow.

Moreover, D2 is not compatible with D1. If the skilled person were trying to make system of D1 more energy efficient and/or longer lasting, he may attempt to replace transmitters of D1 with passive radio transmitters of D2 which do not require battery power. However, to find passive radio beacon, would require other beacon to be capable of both transmitting a stimulating signal (D2 [002]) as required to cause passive transmitter in lost beacon to transmit (D2 [002]) AND receive response signal simultaneously. But beacon of D1 not capable of performing both functions simultaneously – two different modes (D1 [002]). Therefore, teaching of D2 is incompatible with D1.

Regardless, even if passive transmitter of D2 were incorporated into system of D1, would not arrive at invention since no elastic element as claimed. Since the passive transmitter of D2 does not require battery power, no motivation to modify to move actuator automatically upon separation of ski boot since no energy to conserve.

### D1 with D3

The skilled person would not consider D3 when addressing the objective technical problem above since D3 is concerned with confirming engagement of ski boot with binding not conserving energy in system for finding ski. Therefore, D3 does not mention objective technical problem.

Moreover, even if the skilled person were to consult D3, would not arrive at invention of claim 1 or 3 since D3 does not disclose actuator activating system in response to boot separating – D3 discloses activation of light/acoustic signal when boot connected.

Moreover, D3 teaches that switch with elastic element is unreliable (D3 [004]) so skilled person would not incorporate into system for finding skier in avalanche since essential no malfunctions when life in danger.

There is no motivation in D1 or D3 for combining systems of D1 and D3 to arrive at invention of claim 1 or claim 3 since neither discusses system for finding separated ski, never mind a more energy efficient way to do so. D1 would not be modified as claimed since any such modification would make it unreliable for purpose of D1 (i.e. finding person after avalanche).

Therefore, in light of the above, the skilled person would not arrive at claimed invention of claim 1 or 3 starting from D1 and addressing technical problem. Therefore, claims 1 and 3 are inventive over D1-D3.

Reference numerals have been added to the claims and claims 1 and 3 are in the two-part form, as required.

Oral proceedings are requested should the examiner not consider application in order for grant.

<b>Examination Committee I: Paper B EM 2015 - Marking Details</b>			Candidate No	
Category		Maximum possible	Marks awarded	
			Marker 908	Marker 917
Claims	Claims	30	30	30
Arguments	Basis for Amendments	22	21	21
Arguments	Unity/Clarity	11	11	10
Arguments	Novelty	6	6	6
Arguments	Inventive Step	31	28	28
<b>Total</b>			<b>96</b>	<b>95</b>
Examination Committee I agrees on 95 points and recommends the grade PASS				