

An Essential Technical Feature: A Necessity for Patentability in China

In China, an independent claim is required to include all features described in the specification as being necessary to carry out a claimed invention. Such a requirement, despite an omission in the Chinese Patent Law, is explicitly specified in Rule 20.2 of the Implementing Regulations, i.e., “[a]n independent claim shall outline the technical solution of an invention or utility model as a whole and record the essential technical features necessary for solving the technical problem.” Failure to meet the requirement would result in denial or invalidation of a patent.

This short article, by analyzing an invalidation case, sheds some lights on how an essential technical feature will be determined and how it relates to other patentability requirements.

Case Analysis

In this case, the Patent Reexamination Board (the “Board”) discusses how to determine essential technical features of an invention in its recent decision No. 32665.

Claim 1 of the patent in dispute is as follows:

“A method for performing a first step of initial cell search by a user terminal, comprising the steps of:

dividing data of each subframe into M time slices;

receiving signals in first time slices in successive subframes and correlating the received signals of each subframe with all 32 downlink sync codes, accumulating corresponding data stored in a calculation structure and a memory, finding a maximum value from the accumulated correlated results, and recording the corresponding value, the downlink sync codes and the relevant position;

with the same method as above, sequentially obtaining maximum values of correlated results, the corresponding downlink sync codes and the relevant positions for each of the time slices;

taking the downlink sync code corresponding to the greatest value among the M maximum values as the downlink sync code detected by the first step of the cell search, and obtaining a position of a subframe frame header detected by the first step of the cell search through the time slice and position information corresponding to the greatest value.”

The invalidation requestor asserts claim 1 is invalid for lacking essential technical features. Reaching the assertion, the requester considers that the technical problem to be solved by claim 1 is “how to shorten the initial cell search time in the TD-SCDMA system and reduce the power consumption of the user terminal” and “how to obtain the position of the subframe frame header

detected by the first step of the cell search”. As to “obtain the position of the subframe frame header detected by the first step of the cell search”, there is no limitation to the time slice length, but a time slice length greater than 64 slices is an essential technical feature; and how to select the time slice starting point appropriately so that the SNYC-DL code will not be located in the middle of two time slices, is also an essential technical feature.

Taking the background, the technical problems, and the technical effects described in the specification and other factors into account, the Board considers that the technical problem to be solved by the invention is “how to reduce the computational complexity of the correlator, the power consumption, and how to shorten the initial cell search time under lower signal to noise ratio”.

In order to solve the above-mentioned technical problem, claim 1 recites: dividing data of each subframe into M time slices; receiving signals in first time slices in successive subframes and correlating the received signals of each subframe with all 32 downlink sync codes, sequentially obtaining maximum values of correlated results, the corresponding downlink sync codes and the relevant positions for each of the time slices; and comparing the results to obtain a position of a subframe frame header detected by the first step of the cell search. Therefore, it can be seen that the essential technical features for solving the above-mentioned technical problem have been recited in claim 1.

For the position of the subframe frame header, the Board further considers that “obtaining a position of a subframe frame header detected by the first step of the cell search” is a technical feature defined in claim 1. According to the recitation in the background of the specification, how to obtain a position of a subframe frame header detected by the first step

of the cell search obtain the cell search is not the technical problem to be solved by the present patent. This patent is only a further improvement of the complexity, power consumption, and search time faced by the first step of the initial cell search, for a detected position of the subframe frame header.

In sum, the Board finds that independent claim 1 does not lack the essential technical features, and accordingly holds claim 1 is valid.

Summary

In the above case, to determine whether the technical solution of a claim lacks the essential technical features, the Board first determined the technical problem to be solved by the claim, based on the technical problems provided in the specification and taking into account the relevant background art and the technical defects, and then assessed the beneficial effects achieved by the patent with respect to the background art. Accordingly, we believe that the technical effect produced by the technical feature will provide the key to answering the question of whether or not the feature contributes to solving the technical problem.

Relationship with Other Patentability Requirements

We discuss below the relationship between Rule 20.2 of the Implementing Regulations of Chinese Patent Law on essential technical features and Article 26.3, Article 26.4 of Chinese Patent Law respectively on sufficiency and clarity/support.

If a technical solution in the specification has not yet reached the sufficient disclosure relative to the technical problem to be solved, it is impossible for the technical solution of the claim to be clear and complete. If the specification has been sufficiently disclosed, but a claim lacks the essential technical features, it actually belongs to the issue of "support." As for the case that the specification has not yet reached the sufficient disclosure such that a claim lacks the essential technical features, it can be referred to as "substantively lacking essential features"; as for the case that the specification has been sufficiently disclosed but a claim lacks the essential technical features, it can be referred to as "formally lacking essential features."

In practice, had a claim been "substantively lacking essential features," it would be rejected or invalidated for failing to meet the "sufficient disclosure" requirement under Article 26.3 of the Patent Law; had a claim been "formally lacking essential features," it would be rejected or invalidated for failing to meet the "support" requirement under Article 26.4 of the Patent Law. This indicates that there is overlap between the provision of Article 26.3 or Article 26.4 of the Patent Law and the provision of Rule 20.2 of the Implementing Regulations.

Comparison with relevant European Laws

Article 84 of the European Patent Convention prescribes that "the claims shall define the content of the claimed invention, the claims shall be clear, concise and supported by the specification". The interpretation of this provision in the European Patent Examining Guide states that if certain technical features not recited in the independent claim are essential for the implementation of invention or indispensable for the solution of technical problem, then the claim is not clear and does not meet the provision of Article 84. It can be seen that where a claim lacks essential technical features, Article 84 will result in a rejection by taking "the claim is not clear" as a ground for refusal.

In "Case Law" written by the European Patent Office, two cases T115 / 83 and T32 / 82 are introduced. It stated that a meaningful interpretation of Article 84 of the European Patent Convention must be made not only to understand the claims from a technical point of view but also to clearly define the subject matter of the invention, that is, to state the essential features of the invention. All technical features relating to the technical problem to be solved by the invention should be regarded as "essential technical features". Besides, the case T582 / 93 (HYMO) indicates that the applicant may recite non-essential technical features in a claim. The claim written by the applicant may have a narrower scope than what is allowed by the law, which is the applicant's own choice.

Reference: Jurisprudential Analysis of "Essential Technical Features" HU Xueying, WANG Shuirong

The newsletter is not intended to constitute legal advice. Special legal advice should be taken before acting on any of the topics addressed here.

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