Ace Technologies Corp & Ors vs Communication Components Antenna Inc on 10 April, 2023

Author: Vibhu Bakhru

Bench: Vibhu Bakhru

2023:DHC:2

IN THE HIGH COURT OF DELHI AT NEW DELHI

% Judgment delivered on: 10.04

+ FAO(OS) (COMM) 186/2019, CM Nos.35213/2019 & 34124/2022

ACE TECHNOLOGIES CORP AND ORS. ..... A

Versus

COMMUNICATION COMPONENTS
ANTENNA INC. ..... R

Advocates who appeared in this case:

For the Appellants : Mr. Sandeep Sethi, Sr. Adv. with Rohilla & Mr. Rohit Rangi, Advs.

For the Respondent : Mr. Gaurav Pachnanda, Sr. Adv. w Sidhant Goel, Mr. Mohit Goel, Mr. Goel, Mr. Deepankar Mishra, Ms. Av Sharma & K Kapoor, Advs.

CORAM
HON'BLE MR JUSTICE VIBHU BAKHRU
HON'BLE MR JUSTICE AMIT MAHAJAN

JUDGMENT

VIBHU BAKHRU, J

1. The appellants have filed the present appeal impugning the judgment dated 12.07.2019 (hereafter 'the impugned judgment') rendered by the learned Single Judge, whereby the applications filed by the respondent (plaintiff in the suit) under Order XXXIX Rules 1 and 2 of the Code of Civil Procedure, 1908 (hereafter 'the CPC'), being IA Nos.15222/2018, 1044/2019 and 1046/2019 in CS(COMM) 2023:DHC:2479-DB No.1222/2018 captioned Communication Components Antenna Inc. v. Ace Technologies Corp. & Ors., were disposed of.

2. The respondent had filed the aforementioned suit [CS(COMM) No.1222/2018], inter alia, seeking a decree of permanent injunction restraining infringement of Indian Patent numbered IN240893

(hereafter 'the Suit Patent') by the appellants (arrayed as defendants in the suit). In addition, the respondent prayed for a decree of damages in its favour or, in the alternative, for rendition of accounts. Further, the respondent had also prayed for directions for delivery of infringing antennae including packaging, labels, brochures, other printed material and any other document relating to the infringing antenna models.

3. The respondent's suit is premised on its claim that it is the holder of the Suit Patent, which is being infringed by the appellants by manufacturing of the antennae overseas and supplying the same in India.

4. In terms of the impugned judgment, the appellants have been directed to furnish a Bank Guarantee for a sum of ₹40 crores in respect of sale of antennae prior to the filing of the aforementioned suit and to further deposit a sum of ₹14.5 crores with the Registrar General of this Court. In the event of non-compliance of the said directions, the appellants would stand restrained from manufacturing, selling, offering for sale any models of antennae which infringe the Suit Patent.

2023:DHC:2479-DB Factual Context

5. The respondent (a company incorporated under the laws of Canada) had filed the aforementioned suit [CS(COMM) No.1222/2018], inter alia, claiming that it has a state-of-the-art antenna design facility located in Ottawa, Canada and is one of the fastest growing providers of cellular base station products in the world. It claimed that its innovative products are designed to allow cellular service providers to get the most out of their cellular base investments. It claims that its capacity expansion products allow a base station to grow radio count without increasing the number of antennas and without loss of coverage. The respondent's products include antennas, amplifiers, low loss combiners, tower mounted amplifiers, diplexers and other components. The respondent claims that it supplies specialty antennas, multi-beam antennas, bi-sector array antennas, small cell antenna and multi-port antennas to various service providers.

6. The Suit Patent belonged to TenXc Wireless Inc. The respondent claims that it acquired the assets of TenXc Wireless Inc. pursuant to the Asset Purchase Agreement dated 23.12.2011. The Suit Patent was assigned to the respondent in terms of Assignment of Patents Agreement dated 11.01.2012, executed by TenXc Wireless Inc. and its principal lender. And, a Bill of Sale dated 11.01.2012 was executed confirming the completion of the transaction.

2023:DHC:2479-DB

7. The respondent claims that the Suit Patent is for a product that did away with a significant number of limitations and disadvantages associated with technologies and prior art in respect of spectral efficiency of fixed beam antennas, including fixed beam antennas having active beam performing networks and elements.

8. The respondent claims that the distinguishing feature of the Suit Patent is that its beams have an asymmetric beam pattern/shape, which radically alters the conventional model of symmetric

sectorization. The respondent avers that initially omni-directional antennas were used at the centre of the coverage area. The signals of such antennae would provide a 360-degree coverage area. However, the omni-directional antennas in a cellular model have various limitations. It claims that the intensity of the signals was not satisfactory in the outer fringes of the coverage area, which resulted in the dropping of calls. The said problem was overcome by the concept of sectorization where instead of a single omni-directional antenna, a number of directional / sector antennas were deployed for receiving and sending signals. The respondent claims that in prior art, the most efficient arrangement of sector sites was found to be a tessellated grid of sites using 65-degree antennas emitting symmetrical beams. However, as demand for networks grew, adding more sectors, either by adding additional antennas or by using multi-beam splits sector antennas emitting symmetrical beams, was considered as a way of increasing capacity without building new sites. However, as new sectors were added, there was some overlap between the sectors even within the narrow beam 2023:DHC:2479-DB antennas. The area of overlap was an area of interference and indeterminate dominant signal, which led to dropping of calls and reduction in the number of calls / users.

9. The respondent/plaintiff claims that in the aforesaid background, novelty of the Suit Patent is that its beams are asymmetrical, which radically alter the conventional model of symmetric sectorization.

10. Appellant no.1 (Ace Technologies Corporation), which is a company having its principal place of business in South Korea, is engaged in manufacturing antennas. The respondent claims that sometime in the year 2017, it became aware of the infringing activities of the appellants. It came across a beam pattern of the appellants' dual- beam fixed antennas, which were compared with the beam patterns of the respondent's antennas as well as the beam pattern of another manufacturer named Rosenberger Hochfrequenztechnik GmbH & Co. by a cellular operator in India for its 4G / LTE network in the 2300- 2400 MHz band. The respondent claims that comparison of the beam patterns made it amply clear that the appellants were offering to sell and were selling split-sector antennas, which infringed the Suit Patent. The respondent claims that on investigating further, it discovered that appellant no.1 has two Indian subsidiaries - appellant nos. 3 and 4 (arrayed as defendant nos.3 and 4 in the suit). Appellant no.2 - a company incorporated in Hong Kong - is also a group company and allegedly involved in distribution of the infringing products.

2023:DHC:2479-DB

11. The respondent filed a suit alleging that two antenna models viz. XXDW-18-33i-IVT-DB8P (hereafter 'Model-1) and XXDH-20-33ie- VT-DB (hereafter 'Model-2'), manufactured by appellant no.1, infringe the Suit Patent. The respondent also reserved the right to include within the suit any other antenna model past or present or any future antenna that may be launched by the appellants (defendant) that infringes the Suit Patent.

12. The respondent also filed an interim application (IA No.15222/2018) seeking interim orders restraining the appellants in respect of the two models - Model-1 and Model-2 - as set out in the plaint. In, January 2019, the respondent filed two interim applications (being IA Nos.1044/2019

and 1046/2019) seeking interim orders in respect of two other models of antenna dealt with by the appellants, being XXDW-18-33i-IVT-DB8P-V2 (hereafter 'Model V2') and XXDGL-15-33i-IVT-DB-4P (hereafter 'Model 4P').

13. As stated above, the said applications were disposed of by the learned Single Judge in terms of the impugned judgment.

14. The learned Single Judge noted that the respondent / plaintiff had claimed that the appellants / defendants had infringed the Suit Patent in respect of Claim no.1 and Claim no.10. The learned Single Judge found that whereas Claim no.1 related to the methods for increasing subscriber capacity in a sectorized cellular communication network, Claim no.10 was a product claim. The Court noted that the various embodiments of the inventions were set out along with the drawings and the description 2023:DHC:2479-DB of the preferred embodiments set out the manner in which the existing antennas could be replaced. The respondent had also described the reduction of overlaps. The Court found that the invention sets out the manner in which an asymmetrical antenna could be used to maintain the total coverage area, reduce overlaps and interference without requiring splitting of cells.

15. The learned Single Judge examined the appellants / defendants contention that there was nothing novel about the Suit Patent and it could be anticipated by prior arts. The appellants / defendants had relied upon an article published on 01.03.2006. The Court found that, prima facie, the said article did not show any details whatsoever in the manner in which the results could be achieved; therefore, the said article was not sufficient to anticipate the Suit Patent. The Court noted that determination of this question would require evidence to show that a person skilled in the art would know how to make an antenna, which was the subject matter of the Suit Patent, by the information as disclosed in the aforementioned article. However, at the interim stage, the Court's opinion was that the same was, prima facie, insufficient to anticipate the disclosure of the invention.

16. The learned Single Judge was not persuaded to accept the grounds raised by the appellants / defendants for challenging the validity of the Suit Patent. The Court did not find that the claims in the Suit Patent were frivolous or vague. The Court noted that submissions were not advanced in support of the ground that the Suit Patent was invalid under Section 3(a) of the Patents Act, 1970 (hereafter 'the 2023:DHC:2479-DB Patents Act'); therefore, there was no clarity as to why the appellants / defendants contended that the claims are ambiguous. The Court also repelled the contention that the Suit Patent was invalid under Section 3(d) of the Patents Act. The Court noted that the objection under Section 3(d) of the Patents Act would be available against attempt to patent a mere discovery, or a new property or a new use. The said provision would have no application in cases where, on the basis of extant technology, new technology is developed or better efficiency is achieved. The Court also did not accept that the validity of the Suit Patent could be challenged under Section 3(f) of the Patents Act as it was not a rearrangement but a change in the manner in which asymmetry was introduced in an antenna leading to greater efficiency.

17. Insofar as the question of infringement is concerned, the learned Single Judge noted that the appellants / defendants had not produced the beam patterns of their antenna. Their denial of

infringement of the respondent's / plaintiff's antenna was bare denial. The Court also noted that the appellants / defendants had not produced any documents to show that they had followed any other invention or any other prior art document for constructing their antenna. The Court, thus, drew adverse inference against the appellants / defendants for withholding and not disclosing the beam patterns of the antenna. The Court observed that it had at the time of arguments called upon the appellants / defendants to make available their antenna for inspection by a scientific expert appointed by the Court but had not received any positive response.

2023:DHC:2479-DB

18. The appellants / defendants had contended that the United States Patent Office had rejected the Suit Patent as it was found that it was a combination of prior arts - Patent US5933787 (Gilhousen) and Patent US5581260 (Newman) and therefore, was not patentable. According to the appellants, the respondent / plaintiff had acknowledged the objection and incorporated an additional limitation to overcome the objection of obviousness. However, the additional limitation was not included in the Suit Patent. Thus, it was not patentable on the ground that it was anticipated by prior art. According to the appellants / defendants, the Suit Patent was required to be declared invalid being obvious to a person skilled in the art. The learned Single Judge rejected the said contention and found that the additional language added to the US claims before the United States Patent Office was clarificatory. The Court also found no merit in the contention that the respondent / plaintiff was guilty of concealment of facts.

Submissions

19. The appellants / defendants have assailed the impugned judgment on various grounds. First, they contend that the Suit Patent is vulnerable on the ground of credible challenge to its validity. Mr. Sandeep Sethi, learned senior counsel appearing for the appellants / defendants, referred to the judgment dated 10.08.2021 in CS(COMM) No.977/2016 captioned Communication Components Antenna Inc. v. Mobi Antenna Technologies (Shenzhen) Co. Ltd. & Ors.: 2021 SCC OnLine Del 3948 and pointed out that the Court had found that the Suit Patent was invalid and is liable to be revoked under Section 64(h) and 2023:DHC:2479-DB

(k) of the Patents Act. He submitted that although the said decision was set aside by the Division Bench by an order dated 01.12.2021, the same was only on a technical ground that there were no pleadings for revocation of the Suit Patent under Section 64(1)(h) and Section 64(1)(k) of the Patents Act. However, the substantive findings of the judgment were not set aside.

20. He also submitted that the Suit Patent had disclosed only one set of power and phase weightings and did not disclose the beam patterns generated from those power and phase weightings. He submitted, therefore, the Suit Patent was vulnerable on the ground of insufficiency of disclosure and that it lacked essential technical details. He submitted that the claims made were merely in the form of results to be achieved rather than explaining how the said results would be achieved. Further, Claim no.10 did not mention any physical or constructional features of an antenna and sought to cover any antenna made from any technology that uses multi-beam antenna(s) having asymmetrical

beam(s) to increase the subscriber capacity. He submitted that the European Patent Office as well as the Brazil Patent Office had also raised similar queries and had not granted the patent. He also referred to the order passed by the Chinese Patent Office revoking the corresponding patent on the ground that it lacked the necessary specifications. He stated that the Figures 7 and 8 of the specifications referred to by the respondent / plaintiff merely provided a conventional antenna area system, which is known to a person skilled in the art. He also submitted that the 2023:DHC:2479-DB specifications merely provided the context for the claim and did not expand its scope.

21. He submitted that the learned Single Judge had erred in holding that the additional language of prosecuting the United States patent was only clarificatory. He contended that the United States Patent Office had raised certain objections on the basis of prior art and the amendments were made to restrict the scope of the claim and overcome the objections. These amendments were not clarificatory. He also submitted that the learned Single Judge had erred in applying the test of purposive construction for construing the Claim. He submitted that the same was a rule to interpret the meaning of the Claims and not to widen or narrow their scope.

22. Next, he submitted that the learned Single Judge had not applied the correct test of infringement. He pointed out that the respondent's / plaintiff's expert had claimed that he had simulated a beam pattern by using the power and phase weightings as disclosed in the specification of the Suit Patent and compared the same with the beam pattern of the appellants' antenna, however, the Suit Patent did not disclose the power and phase weightings and therefore, the simulated beam pattern could not be considered as one emitted by the Suit Patent, for the purpose of comparison. He submitted that the respondent's expert had therefore compared the beam pattern of the appellants' antenna with a beam pattern, which is not claimed in the Suit Patent. The appellants' technical expert, Mr. Seung Cheol Lee furnished an opinion that the beam pattern claimed by the respondent could not be closely 2023:DHC:2479-DB approximated with the beam pattern as disclosed in the Suit Patent. Further, he submitted that the learned Single Judge had failed to appreciate that the beam patterns do not show any similarity. The beam pattern as set out in paragraph 62 of the written statement and Figure no.3 of the Suit Patent was ignored.

23. Next, he submitted that the interim relief granted by the learned Single Judge was beyond the relief as claimed in the plaint. He submitted that the relief claimed in the plaint is limited to two models of antennas, however, the learned Single Judge has also granted interim relief in regard to other models (Model V2 and Model 4P), which are not the subject matter of the suit.

24. He submitted that the learned Single Judge had grossly erred in drawing an adverse inference on the ground that the appellant had not produced the beam patterns of the antenna. He stated that in paragraph 62 of the written statement the appellants had disclosed the beam pattern of Model-1 and had also compared it with the beam pattern of the Suit Patent, however, the same was completely ignored. He further submitted that the respondent had not served any application for interrogatories or for discovery. Further, the Court had also not passed any order calling upon the appellants to disclose their antenna. Further, the Court had not issued any directions to create a confidentiality club or any mechanism for disclosing confidential information. He submitted that

the suggestion to produce the antenna was made during the course of the proceedings and the learned senior counsel appearing for the appellants did not have any instructions to respond to the same.

2023:DHC:2479-DB Thus, no adverse inference could have been drawn against the appellants on account of non-production of the antenna. He submitted that the appellants had not disclosed the beam pattern of the Model-2 as the same was not being sold to any customer from India.

25. Lastly, he submitted that the appellants / defendants were not manufacturing or selling the antennas in India. The same were being manufactured and sold in South Korea and Vietnam and were being imported by cellular operators. Thus, the impugned judgment is beyond the jurisdiction as the Patents Act did not extend beyond the territories of India.

26. Mr. Gaurav Pachnanda, learned senior counsel appearing for the respondent / plaintiff, countered the aforesaid submissions. First, he submitted that the learned Single Judge had dealt with the objections regarding validity of the Suit Patent. He submitted that there was sufficient disclosure as the Claims have to be read together with the specifications. He referred to the decision of the Supreme Court in Bishwanath Prasad Radhey Shyam v. Hindustan Metal Industries:

> (1979) 2 SCC 511 and the decision of the Coordinate Bench of this Court in 3M Innovative Properties Ltd. & Anr. v. Venus Safety & Health Pvt. Ltd. & Anr.: 2016 SCC OnLine Del 5232. He submitted that the claim read with specifications sufficiently discloses the Suit Patent.

27. Insofar as the contention that this Court does not have jurisdiction is concerned, he submitted that it was the respondent's case that the 2023:DHC:2479-DB appellants were offering the antennas for sale within India. He also referred to Section 48 of the Patents Act and the decision of this Court in Hindustan Lever Limited v. Lalit Wadhwa & Anr.: 2007 SCC OnLine Del 1077 in support of his contention that the respondent would have the right to seek relief from a court in India on account of the appellants offering the infringing product for sale in India.

28. He submitted that the impugned judgment granting interim reliefs regarding two other models of the antennas [Model V2 ad Model 4P] could not be construed as travelling beyond the plaint. He submitted that the ad-interim order dated 02.11.2018 was passed only in respect of the model of antennae as specified in the plaint. However, the appellants had filed applications (being IA No.194/2019 and IA No.5297/2019) seeking permission to supply models other than the two models specified in the suit (Model-1 and Model-2). It is in context of these applications that the Court had observed that the terms, if any, in respect of supplies made under the purchase orders would be determined by the Court after hearing the applications for interim injunctions. The respondent thereafter filed an application (IA No.1044/2019) seeking further interim injunctions in respect of Model V2 and Model 4P. The respondent claimed that Model V2 was another version of Model-1 and Model 4P is a low band antenna model of the appellants' infringing products. He also referred to the order dated 21.03.2021 passed by the Court in Nokia Technologies OY v. Guangdong Oppo Mobile Telecommunications Corp. Ltd. & Ors.:

2021 SCC OnLine Del 3948, whereby the Court, while granting 2023:DHC:2479-DB permission under Order II Rule 2 of the CPC, had permitted the plaintiffs to assert additional claims in respect of further devices and models by way of a separate affidavit to be filed with test reports prior to framing of issues. He further submitted that the Court would, in any event, have the jurisdiction to mould the relief in the facts and circumstances of the case.

Whether this Court had the jurisdiction to entertain the suit

29. The first and foremost question to be addressed is whether the impugned judgment is liable to be set aside on the ground that the Court did not have the jurisdiction to entertain the suit. The appellants state that they do not manufacture or sell antennae in India and the Patents Act does not have any extra-territorial operation.

30. Section 48 of the Patents Act expressly provides that a patent granted under the Patents Act in respect of a product, inter alia, confers upon the patentee exclusive right to prevent a third party, who does not have his consent, from the act of making, using, offering for sale, selling or importing for the aforesaid purposes, the patented product in India.

31. In the present case, the respondent has specifically asserted in its plaint that the appellants have been importing the infringing products in India from a period unknown to the respondent; however, as per the information available, the appellants have been carrying on infringing activities in India at least since the year 2016. The respondent alleges that the appellants were importing and selling infringing products in India. At the pre-trial stage, unless the admitted facts establish that the 2023:DHC:2479-DB court does not have the jurisdiction to entertain the suit, the averments in the plaint are required to considered as correct for the purposes of determining whether to entertain the suit. Undeniably, if the averments made in the Plaint are accepted as correct, the court would have the jurisdiction to try the suit.

32. In addition, there appears to be no dispute that the antennae sold by the appellants are used by buyers or operators in India. According to the appellants, the antennae are manufactured overseas and are purchased by cellular operators overseas. The goods are warehoused in Vietnam and transferred from Vietnam by the cellular operators to India. According to the appellants, they are not engaged in transporting or shipping the antennae to India. The question, whether the appellants directly export the allegedly offending product to India, is a contentious one. However, it is also not denied that the appellants are in the business of manufacturing or selling antennae. Further, it is also not disputed that the appellants are maintaining a presence in India for the purposes of their business. It is not disputed that appellant nos.3 & 4 are subsidiaries of appellant no.1. Prima facie, the

> presence of appellant nos.3 & 4 in India cannot be construed as disassociated from the principal activities of appellant no.1, that is, to manufacture and sell antennae. Prima facie, it also difficult to accept that the appellants are not actively engaged in selling their products in India.
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> 33. In any view of the matter, the disputed questions relating to the appellants' activities in India are a matter of trial. We are unable to accept that, ex-facie, the plaint does not disclose a cause of action or 2023:DHC:2479-DB there is no material on record to, prima facie, accept the respondent's averments regarding the appellants carrying on part of the allegedly infringing activities in India.
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> 34. Mr. Pachnanda also pointed out that the appellants had sought permission of the learned Single Judge for exporting the allegedly infringing products to India and no such permission would have been necessary if the appellants were not importing or selling their products in India. It is also material to note that if infringing products were imported to India by any person other than the appellants, the respondent would also have the right to interdict such imports as well.

Considering that it is not in dispute that the appellants have been selling their products to customers who are located in India and are carrying on activities in the country, the onus to show that no part of the transaction of sale and purchase of antennae was consummated in India, rests with the appellants.

35. We, accordingly, reject the contention that the impugned judgment is required to be set aside on the ground that this Court does not have the jurisdiction to entertain the suit.

Whether the interim relief is required to be rejected on the ground of credible challenge to the validity of the suit patent.

36. Before proceeding further, it is necessary to address the question whether the impugned judgment is liable to be set aside on the ground that the appellants have presented a serious credible challenge to the validity of the Suit Patent.

2023:DHC:2479-DB

37. The dispute in the present suit, essentially, relates to Claim nos.1 and 10, which are part of the Suit Patent. At this stage, it would be relevant to refer to the said Claims and the same are reproduced below:-

> "Claim 1. A method for increasing subscriber capacity in a sectorized cellular communications network having a plurality of subscribers and a base station supporting at least one sector, the at least one sector having an associated sector antenna at the base station having a critical coverage area extending therefrom and overlapping neighbouring sectors thereof in a sector handover zone, the method

comprising the step of:

replacing the at least one sector antenna with a split-sector antenna having a plurality of sub-sector coverage areas extending therefrom, at least one of which is asymmetrical' each corresponding to a sub- sector and overlapping a neighbouring sub-sector coverage area in a sub-sector handover zone, whereby a total critical coverage area of the plurality of sub-sector coverage areas is substantially equivalent to the critical coverage area of the at least one sector antenna."

"Claim 10. A sub-sector antenna for use in a sectorized cellular communications network having a plurality of subscribers and a base station supporting at least one sector, the at least one sector having an associated sector antenna having a critical coverage area extending from the base station and overlapping neighbouring sectors in a sector handover zone, The sub-sector antenna being constructed and arranged for replacing the at least one sector antenna and having a plurality of sub-sector coverage areas extending therefrom, at least one of which is asymmetrical, each corresponding to a sub-sector and overlapping a neighbouring sub-sector coverage area in a sub-sector handover zone, whereby a total critical coverage area of the at least one asymmetrical subsector coverage area is substantially equivalent to the critical coverage area of the at least one sector antenna being replaced."

38. The appellants claim that the suit patent is liable to be revoked under Section 64(1)(h), 64(1)(k) & 64(1)(a) of the Patents Act. The said clauses are set out below:

2023:DHC:2479-DB "64. Revocation of patents.--(1) Subject to the provisions contained in this Act, a patent, whether granted before or after the commencement of this Act, may, be revoked on a petition of any person interested or of the Central Government by the Appellate Board or on a counter-claim in a suit for infringement of the patent by the High Court on any of the following grounds, that is to say--

(a) that the invention, so far as claimed in any claim of the complete specification, was claimed in a valid claim of earlier priority date contained in the complete specification of another patent granted in India;

** ** **

(h) that the complete specification does not sufficiently and fairly describe the invention and the method by which it is to be performed, that is to say, that the description of the method or the instructions for the working of the invention as contained in the complete specification are not by themselves sufficient to enable a person in India possessing average skill in, and average knowledge of, the art to which the invention relates, to work the invention, or that it does not disclose the best method of performing it which was known to the applicant for the patent and for which he was entitled to claim protection;

** ** **

(k) that the subject of any claim of the complete specification is not patentable under this Act"

39. According to the appellants, the Suit Patent is liable to be revoked under Section 64(1)(a) of the Patents Act as it is disclosed by prior arts. It is contended that antennae emitting asymmetrical beams are not novel and therefore, the Suit Patent is invalid. It was further contended on behalf of the appellants that it is common ground that a person skilled in the art could construct the antenna and this was acknowledged in the patent filing. Mr. Sethi had referred to the description of the embodiments and had drawn our attention to the following passages in support of the aforesaid contention:

2023:DHC:2479-DB "Those having ordinary skill in this art will appreciate that there are a number of mechanisms by which a series of powers and phase coefficients could be generated to match a specified antenna pattern, including but not limited to array synthesis methods, solving constrained optimization problems or even by trial and error. In this instance, a simulation tool, such as is available from Zeland Sofware Inc. was used to predict the asymmetrical antenna array patterns and the expected array performance obtainable therefrom.

While, with the inventive asymmetrical beam patterns, network planning could be reduced, it may not necessarily be eradicated altogether. Those having ordinary skill in this art will readily recognize that when a single site is subject to higher order sectorization as contemplated by the present invention, design, techniques may be used to further reduce network planning. For example, alternating or adjacent beams may use common control frequency and/or code resources. With the excellent front-to-back ratio of modern antennas, there would be minimal co-channel interference between sectors and with the alternating beam approach described, the need for extra control channels or code offsets could be dispensed with, resulting in better spectrum efficiency. For example, in Figure 2, sub-sector beams 210 and 221 could be commonly controlled with minimal loss of performance."

40. Further, he contended that the Suit Patent was liable to be revoked under Section 64(1)(h) as it neither recites a process nor presents a new product but merely indicates results achieved by use of known products. He contended that Claim no.1 of the Suit Patent only relates to a method of increasing the subscriber capacity. Further Claim no.10 only relates to use or a feature of antennae but does not describe the physical product, which is claimed to be novel. The appellants submit that Claim no.10 of the Suit Patent does not provide any physical or other features for construction of the product claimed (antennae) but seeks to include all antennae made by use of any technology that emit 2023:DHC:2479-DB asymmetrical beams. Mr. Sethi also referred to objections raised by the European Patent Office as well as the Brazil Patent Office to the aforesaid effect. It is thus contended that the Claims, as made, are incapable of being patented.

41. For the purpose of addressing the aforesaid issues, it is necessary to understand the relevant Claims - Claim no.1 and Claim no.10. One of the questions raised in this regard was whether the description of the Suit Patent and the embodiments are required to be referred to for considering the grounds urged for revocation of the Suit Patent. According to the appellants, the questions, whether the Suit Patent is disclosed by prior arts; whether it does not disclose the method of construction; and whether it is incapable of being patented are required to be determined by reference to the Claims alone. However, the respondent contends that the said questions cannot be answered without reference to the description of the Claims and the disclosed specifications, as the same are relevant to understand the Suit Patent.

42. In our view, the said contentions are not destructive of the other. We agree with the contention that the embodiments cannot be read to expand the scope of the Claims. The question whether the appellants have raised a credible challenge to the Suit Patent is required to be considered in context of the Claims because the patent rights are in respect of the Claims and are broader than the preferred embodiments. However, the description of the Suit Patent and the preferred embodiments are relevant to interpret and understand the Claims.

2023:DHC:2479-DB

43. In Bishwanath Prasad Radhey Shyam v. Hindustan Metal Industries (supra), the Supreme Court had observed as under:-

> "43. As pointed out in Arnold v. Bradbury [(1871) 6 Ch A 706] the proper way to construe a specification is not to read the claims first and then see what the full description of the invention is, but first to read the description of the invention, in order that the mind may be prepared for what it is, that the invention is to be claimed, for the patentee cannot claim more than he desires to patent.
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> In Parkinson v. Simon [(1894) 11 RPC 483] Lord Esher, M.R. enumerated that as far as possible the claims must be so construed as to give an effective meaning to each of them, but the specification and the claims must be looked at and construed together."

44. The claims cannot be read in isolation. It is necessary that the same be read in the context of specifications and the description of the patent. There is no dispute that the specifications and description of the patent are necessary for interpreting and understanding the claims. However, the specifications cannot broaden the claim. As stated above, the monopoly that the Patents Act grants is in respect of the specific claims and not the preferred embodiments.

45. A plain reading of Claim no.1 and Claim no.10 indicates that they are somewhat similarly worded. However, Claim no.1 is in respect of a method and Claim no.10 is regarding "a sub-sector antenna". Claim no.1 is for a method of increasing subscriber capacity in a sectorized cellular communication network having plurality of subscribers and a base station supporting at least one sector and where the sector antenna, at the base station, has a critical coverage area which overlaps the neighbouring sectors thereof in a sector handover zone. The method of increasing subscriber

capacity as disclosed is to replace the one sector 2023:DHC:2479-DB antenna with the split sector antenna having plurality of sub-sector coverage area at least one of which is asymmetrical in a manner that the total coverage area of the plurality of the sub-sector coverage area is equivalent to the critical coverage area of at least one sector antenna.

46. Claim no.10 is in respect of the sub-sector antenna that is used in a sectorized cellular communication network having plurality of subscribers and a base station supporting at least one sector and at least one sector having an associated sector antenna having a critical coverage area extending from the base station and overlapping neighbouring sectors in a sector handover zone. The sub-sector antenna is constructed and arranged for replacing a sector antenna and having plurality of sub-sector coverage areas, at least one of which is asymmetrical. The total critical coverage area of at least one asymmetrical sub-sector coverage area is substantially equivalent to the critical coverage area of at least one sector antenna.

47. Apparently, Claim no.10 sets out the qualities of the sub-sector antenna. At least one of the beams emitted by the sub-sector antenna is asymmetrical and the sub-sector coverage area is substantially equivalent to the critical coverage area of the sector antenna that is replaced. It is the respondent's case that an antenna, as described in Claim no.10, would serve the purpose of enhancing the subscribers' capacity. The key feature of the product is that it is a bi-sector antenna, which emits controlled asymmetrical beams for enhancing the subscriber capacity.

2023:DHC:2479-DB

48. There does not appear to be any dispute that a prior art does disclose antennae emitting asymmetrical beams, however, construction of the said antenna with the features, as set out in Claim no.10, are claimed to be novel. In addition, the coverage of the beam(s), at least one of which is asymmetrical - that is, the total coverage area of the plurality of the sub-sector coverage area is equivalent to the critical coverage area of at least one sector antennae - is also claimed as novel.

49. The said Claims would be better understood by a reference to the description of the patents and specifications.

50. The title of the Suit Patent is "Asymmetrical Beams for Spectrum Efficiency". Thus, it does indicate that the scope of invention is to enhance spectrum efficiency by using asymmetrical beams. It is relevant to refer to the background as set out in the Suit Patent, to understand the novelty as claimed.

51. It is explained that in a wireless communication network, there are a number of factors that limit the subscriber capacity. The first and foremost being the frequency spectrum, which is the carrier. In order to increase the number of subscribers, multiple access techniques have been introduced. The most common being Frequency Division Multiple Access (FDMA), where only a small portion of the available spectrum is allocated to a subscriber; Time Division Multiple Access (TDMA), which permits the subscriber to transmit during short non-overlapping period of time; and Code Division Multiple Access (CDMA), where the 2023:DHC:2479-DB total spectrum is allocated to all the

subscribers, which are differentiated by use of allocated orthogonal codes.

52. Apart from the limitation as to the spectrum, there is also a limitation of finite transmission power. It was explained that to overcome the said limitation, the cellular concept was introduced for wireless systems where the available resources are used for small coverage area called Cells and the same is repeated for other Cells. Resultantly, the number of subscribers that can be served increases in proportion to the number of Cells in the network. However, if the Cells are placed close together, there is a risk of co-channel interference, which would decrease the link quality and also the number of subscribers.

53. It was explained that to improve the efficiency of the Cellular System, the sectorization concept was introduced in which an omni- directional antenna placed at the center of the Cell is replaced by a plurality of N-directional antennae, each defining a symmetrical coverage area. This would result in increasing the number of subscribers. The use of directional or sectoral antennae reduced the amount of interference in the network and resulted in a more spectrally efficient network. Although in theory, high spectral efficiency is achievable with the larger number of N sectors, however, large values of N result in a significant proportion of the subscribers to languish in continuous handover situations. It is also pointed out that the higher order sectorization is primarily a local phenomenon and is not distributed uniformly across the network. Thus, the need for increasing 2023:DHC:2479-DB subscriber capacity is required only in a few scattered sectors that encounter large distribution of subscribers.

54. It is explained that typically the value of N is 3 and in rare cases 4 and hardly ever 6. Higher value of N results in excessive overlap or cusping loss between adjacent beams. It is also explained that subscribers are not uniformly distributed and the need for increased subscriber capacity is localized in a few sectors in a network. One of the ways used for servicing increased subscriber concentration is Cell splitting, where the coverage of a Cell is reduced and another Cell site is added. However, the same is expensive and in urban areas finding multiple sites may not be possible. In view of the limitations, there is a need to optimize beam patterns.

55. In the afore-mentioned background, the 'Summary of the Invention' as presented by the respondent is set out below:

> "'SUMMARY OF INVENTION' Accordingly, it is desirable to provide an antenna with beam patterns that are tailored for specific sector coverage.
>
> It is further desirable to provide an antenna that can permit load balancing through the addition of capacity only where needed.
>
> The present invention accomplishes these aims by replacing a single sector coverage area with at least one coverage area, at least one of which is asymmetrical. The use of asymmetrical coverage areas permits the total coverage area to closely approximate the symmetrical sector coverage area being replaced, without creating excessively large sub-sector handover zones or introducing severe degradation in the network

performance.

> According to a first broad aspect of an embodiment of the present invention, there is disclosed, a method for increasing 2023:DHC:2479-DB subscriber capacity in a sectorized cellular communications network having a plurality of subscribers and a base station supporting at least one sector, the at least one sector having an associated sector antenna at the base station having a critical coverage area extending therefrom and overlapping neighbouring sectors thereof in a sector handover zone, the method comprising the step of: replacing the at least one sector antenna with a split- sector antenna having a plurality of sub-sector coverage areas extending therefrom, at least one of which is asymmetrical, each corresponding to a sub-sector and overlapping a neighbouring sub- sector coverage area in a sub-sector handover zone, whereby a total critical coverage area of the plurality of sub-sector coverage areas is substantially equivalent to the critical coverage area of the at least one sector antenna.
>
> According to a second broad aspect of an embodiment of the present invention, there is disclosed a sub-sector antenna for use in a sectorized cellular communication network having a plurality of subscribers and a base station supporting at least one sector, the at least one sector having an associated sector antenna having a critical coverage area extending from the base station and overlapping neighbouring sectors in a sector handover zone, the sub-sector antenna being constructed and arranged and having a plurality of sub-sector coverage areas extending therefrom at least one of which is asymmetrical, each corresponding to a sub-sector and overlapping a neighbouring sub-sector coverage area in a sub- sector handover zone, whereby a total critical coverage of the at least one symmetrical sub-sector coverage area is substantially equivalent to the critical coverage area of the at least one sector antenna being replaced."

56. It is also relevant to refer to the detailed description of the preferred embodiments. The relevant extract of the description of the preferred embodiments, which sets out the benefits of the invention, reads as under:-

> "DETAILED DESCRITPION OF THE P
> EMBOIDMENTS

In the present invention, rather than dealing with an increase in capacity by prior art mechanism such as higher order sectorization and/or cell splitting, an existing antenna is substituted with a new one, which has substantially the same coverage area as 2023:DHC:2479-DB the fixed cell sector being replaced, but divided into a plurality of complementary asymmetrical separate beams or sub-sectors.

For exemplary purposes only, consider an existing atenna having a 65° half power beam width (HPBW). If an operator were to replace it with a new antenna, it would be advantageous to have the

new antenna provide the same coverage (albeit with increased capacity) as the existing antenna, so that the operator may avoid significant network planning and adjustment of neighbouring sites. Accordingly, it would be beneficial to provide the new antenna with a beam pattern that is as close as possible to the critical coverage area (CCA) of the existing antenna, so as to provide minimal network planning. In the case of a 65° HPBW antenna, this is typically 120° Where, as with the present invention, the new antenna may produce a plurality of separate beams, each defining a new sub- sector with only a small overlapping area between them and which together provide substantially identical coverage to the sector supported by the original antenna, a single sector may be upgraded to become a plurality of sub-sectors without significantly affecting neighbouring sites.

It has been discovered that such new antennas may be created by introducing asymmetry into the generated beam pattern.

Heretofore, antenna beam patterns have consistently been symmetrical, such as is show in Figure 1, which shows 3 mirror- imaged pairs (110,111), (120,121) (130,131) of symmetrical sub- sector beams. Such a coverage pattern creates very large overlap regions between pairs of sub-sectors beams (e.g. 130,131), and between a sub-sector beam from two different adjacent sectors, e.g. 131, 110 (at 113).

However, if the symmetrical beam patterns were adjusted in order to ensure substantially the same roll-off at the extremities so as to provide substantially similar handover treatment from the sub-sectors defined by the new antenna to adjacent to unmodified sectors and vice versa, the new beams would introduce excessive overlap as between themselves. On the other hand, adjusting the beam patterns for the new sub-sectors so that the handover between sub-sectors is manageable could result in coverage holes with existing sectors.

2023:DHC:2479-DB As can be seen from a comparison of Figure 2, which shows 3 mirror-imaged pairs (210, 211), (220, 221), (230, 231) of asymmetrical sub-sectors beams to replace a traditional 3 sector configuration with a 6 sub-sector configuration, the use of asymmetrical beams ensures handover region reduction by means of the low overlaps 212, 222 and 232 of adjacent pairs of sub-sectors beams (210, 211), (220, 221) and (230, 231) respectively, and low.

overlaps between sub-sector beams of a first pair and sub- sector beams of a second pair, shown at 213, 223 and 233. This consequently reduces handover overhead for most wireless standards and results in a net capacity and throughout increase, while maintaining the initial coverage by matching the antenna radiation pattern at the edges of the original sector, so that network planning overhead is minimized or avoided. Furthermore, the use of an asymmetrical sub-sector beam maintains low cusping loss between adjacent beams so as to achieve good overall network coverage with no new coverage holes. This is show in Figure 3 which shows, for clarity of illustration, sub-sector beams 230, 231, overlaying conventional full sector beam patterns 310, 320, 330 shown in dashes outline."

57. It is apparent that the Suit Patent covers the method of replacing at least one antenna with multiple beam antenna, with at least one beam being an asymmetrical one and each beam of the multi beam antenna partially overlapping with the neighbouring beam. The critical coverage area of the multi beam antenna being at least equal to the total critical coverage area of the replaced

antenna. In essence, the method is to substitute a sectoral antenna with split sector antenna, where at least one of the beams of the split sector antenna being asymmetrical and the beams of the split sector antenna being at least equivalent to the replaced sector antennae.

58. It does appear from a plain reading of the invention that it essentially propagates the use of a split sector antenna emitting 2023:DHC:2479-DB asymmetrical beams for achieving the critical coverage area. It is not disputed that split sector antennae emitting asymmetrical beams are not novel and are taught by the prior art. Claim no.1 is essentially for use of those antennae as sub-sector antennae emitting asymmetrical beams in a base station for achieving the critical coverage area.

59. A patent for the use of sub antenna emitting asymmetrical beams would be vulnerable to challenge if the same was disclosed by prior art. However, the Suit Patent is for use of split-sector antenna in a configuration as described - with at least one beam being asymmetrical; the beams partially overlapping the neighboring sub-sector coverage area in a sub-sector handover zone; and having a critical coverage area being at least equivalent to the sector antenna being replaced in a base station having plurality of subscribers.

60. The suit is, thus, not for an antenna emitting asymmetrical beams; it is a split-sector antenna emitting at least one asymmetrical beam in a configuration as specified, which enhances the subscriber capacity. Thus, the necessary question to be addressed is not whether an antenna emitting asymmetrical beams was disclosed by prior art; it is whether an antenna with the given configuration, which enhances subscriber capacity in a cellular wireless communication system, was disclosed by the prior art. A mere discovery of a new use of a known process of a product would not be patentable under Section 3(d) of the Patents Act. However, a known product, which is specifically modified and configured to provide a specified result of an economic value, would be considered to be patentable as it would be a new product. Prima facie, 2023:DHC:2479-DB Claim no.10 does not cover any antenna emitting asymmetrical beam(s). It covers an antenna with the given configuration that emits asymmetrical beam(s) with the specified characteristics that enhance the subscriber capacity in a cellular wireless system. Prima facie, if the said product is novel and a distinct improvement over the known technology, its patent would not be vulnerable to challenge on the ground that antennae emitting asymmetrical beams were disclosed by prior arts.

61. It is not disputed that in the past, the focus of the inventors was to configure antennae to emit symmetrical beams and an asymmetrical coverage was considered as a flaw to be rectified. The focus of configuring the antennae was thus to avoid an asymmetrical beam in a given configuration, to enhance subscriber capacity. The Suit Patent is in respect of a method that describes a configuration for enhancing the subscriber capacity by using asymmetrical sub-sector coverage area. Claim no.10 is in respect of a product that is so configured to emit beams of the characteristics as described above. It is obvious that the beams are not uncontrolled beams but are controlled to achieve the desired purpose. A product of the given description would, prima facie, be patentable. It would be erroneous to assume that a patent in respect of such a product is required to be denied on the ground that it is covered under the broad classification of antennae that emit asymmetrical beams.

62. The appellants rely on the decision of a learned Single Judge in this Court in Communication Components Antenna Inc. v. Mobi 2023:DHC:2479-DB Antenna Technologies (Shenzhen) Co. Ltd. & Ors. (supra). The appellants contended that the benefit of the said decision was not available at the time when the impugned judgment was rendered. The said decision was rendered subsequently and the Court had, after examining the evidence, found that the Suit Patent was vulnerable to be revoked under Section 64(1)(h) and 64(1)(k) of the Patents Act. According to the appellants, the said decision establishes that the appellants have raised a credible challenge to the Suit Patent and the impugned order is liable to be vacated.

63. It is relevant to note that in Communication Components Antenna Inc. v. Mobi Antenna Technologies (Shenzhen) Co. Ltd. & Ors (supra), the Court had rejected the challenge that the Suit Patent could not be granted by virtue of Section 3(d) of the Patents Act. The Court was of the view that the Suit Patent had economic significance and enhanced the known efficacy of the beams. The relevant observations made by the Court in this regard are set out below:

> "37. That brings me to the ground of revocation under Section 64(d) of the Act i.e. of the complete specification not constituting an invention within the meaning of the Act. It is argued that neither a new product nor a new process has been invented, within the meaning of Section 2(j) of the Act. It is further argued that the invention even if any is a mere discovery of a new use of known process, machine or apparatus (within the meaning of Section 3(d) of the Act) i.e. of use of antenna/split-sector antenna, already known and in use, and of asymmetrical beams, also already known and in use, to achieve larger subscriber capacity.
>
> 38. I am unable to agree. The patent claimed is in the method for increasing capacity. The invention is thus not of any product but of a process to increase subscriber capacity of beams emanating from an antenna. As aforesaid, increase in subscriber capacity, by 2023:DHC:2479-DB adopting the method disclosed in the patent, is not controverted. Once it is so, it follows that the method has economic significance within the meaning of Section 2(ja), to constitute a inventive step. Though under Section 3(d) a mere use of a known process or a known apparatus is not an invention, but only if the same does not result in a new product and/or in the enhancement of known efficacy. Though the plaintiff uses known antenna/split-sector antenna but the combination, at least one of the beams emanating from which is asymmetrical, but since the resultant beam has increased subscriber capacity, it constitutes an enhancement of known efficacy of beams and Section 3(d) would not be attracted.
>
> 39. I am also unable to agree that the invention is a mere discovery of a scientific principle or formulation of an abstract theory. The invention, as aforesaid enhances the known efficacy and is thus not an abstract theory.
>
> 40. Thus the ground of revocation under Section 64(d) is not made out."

64. The Court had also rejected the contention that the Suit Patent was disclosed by prior art and was thus, liable to be revoked under Section 64(e) and 64(f) of the Patents Act. However, the learned Single Judge found that the words used to describe methods by which increase in the subscriber base is achieved are vague and include within its ambit all methods of increasing subscriber base. The Court was of the view that the Suit Patent was in broad terms and therefore, was incapable of being patented. Further, the Court held that the method in which the invention is claimed does not specify the particulars of the antennae to be used and/or the beams to be generated and the method described is vague. This would permit the patentee to claim infringement qua any method used for increasing the subscriber capacity as the same would involve the use of antennae / spilt-sector antennae emitting beams.

2023:DHC:2479-DB

65. It is relevant to note that the said judgment was set aside by a Coordinate Bench of this Court in an appeal preferred by the respondent [judgment dated 01.12.2021 in RFA(OS)(COMM)6/2021 captioned Communication Components Antenna Inc. v. Mobi Antenna Technologies (Shenzhen) Co. Ltd. and Ors.]. The Division Bench of this Court held that the learned Single Judge could not have entertained the grounds for revocation under Section 64(1)(h) and 64(1)(k) of the Patents Act, as no issue had been framed in that regard. The matter was restored by the Division Bench with the direction to the learned Single Judge to frame an additional issue with regard to revocation of the Suit Patent on the ground as set out in Section 64(1)(h) and 64(1)(k) of the Patents Act. In compliance with the said directions, an additional issue was framed in the said suit to the effect "Whether the Plaintiff's Patent Number IN 240893 is liable to be revoked on the grounds under Section 64(1)(h) or 64(1)(k) of the Patents Act, 1970 in the context of Section 10 of the Patents Act, 1970?". And, by a judgement dated 04.02.20221, the said issue was decided in the negative. The learned Single Judge held that the question whether a patent was liable to be revoked under Section 64(1)(h) of the Patents Act was required to be interpreted from a standpoint of "a person possessing average skill in, and average knowledge of, the art to which the invention relates". The Court also noted that the determination whether the specifications, as disclosed, is sufficient to enable a person possessing average skill in the art, to which Judgement in CS(COMM) 977/2016 and CS(COMM) 38/2017 2023:DHC:2479-DB the invention relates, to work the invention, necessarily requires the parties to lead evidence of a person skilled in the art.

66. In view of the above, the judgement of the learned Single Judge in Communication Components Antenna Inc. v. Mobi Antenna Technologies (Shenzhen) Co. Ltd. & Ors. (supra), would be of little assistance to the appellants. The same was set aside and on the second round the issue framed was decided against the defendant.

67. The question whether the complete specification sufficiently and fairly described the invention and the method by which it is to be performed, is required to be viewed from the standpoint of a person possessing skill in, and average knowledge of, the art to which the invention relates. The learned counsel for the appellants had not drawn the attention of this Court to any evidence of an expert to the aforesaid effect.

68. Mr. Sethi had referred to the evidence of Mr. Seung Cheol Lee (the appellants' witness). The opening paragraph of the said opinion indicates that it is limited to the question whether the beam patterns referred to by the respondents in paragraph 28 of the plaint were approximate to the beam patterns of the Suit Patent. Mr. Lee had expressly clarified that he was not providing an opinion regarding the inventiveness or the obviousness of the Suit Patent. Given the limited scope of his opinion, it is difficult to read the said opinion in support of the assertion that the specifications did not sufficiently and fairly describe the invention and the method by which it has to be performed.

69. The respondent does not deny that queries were raised by the Brazil Patent Office in respect of the application for grant of a patent involving identical claims as the Suit Patent, to the effect that the patent merely discloses the results and did not sufficiently disclose the method for achieving the said results. However, the respondent claims that it did not pursue the applications for patent with the European Patent Office or the Brazilian Patent Office.

70. We are unable to accept that the queries raised by patent offices overseas are sufficient to, prima facie, accept the said observations to be correct. The question whether the specifications sufficiently disclose the method for working the patent is a matter of evidence and is required to determined independent of any observations made by the patent office of any other country. It is also necessary to bear in mind that the patent in respect of the Claims covered by the Suit Patent was granted in some other countries as well, including by the United States Patent Office. The appellants state that the patent granted in China was revoked. The fact that a patent has been granted in some countries and revoked in another, underscores the point that the question whether the Suit Patent is liable to be revoked, is required to be considered by the Court independently. Some of the issues highlighted by patent offices of other countries may have some relevance but in the given facts, the relevance is limited because not only has the patent been granted in some other countries, the respondent has also been successful in resisting a challenge to the validity of the patent in the United States.

71. The contention that only the Claims have to be read for the purposes of adjudicating the challenge under Section 64(1)(h) or Section 64(1)(a) of the Patents Act, is unmerited. The Claims have to be read along with the specifications. The embodiments also aid in understanding and interpreting the Claims. The question whether the Suit Patent sufficiently discloses the method for working the patent is required to be examined with reference to the specifications.

72. Mr. Pachnanda had referred to the following extract from the detailed description of the preferred embodiment in support of his contention that the Suit Patent did disclose a product as well as the method of how the antenna worked:

> "In a preferred embodiment, the asymmetrical beams are implemented using antenna arrays in conjunction with passive and/or active networks. However, those having ordinary skill in this art will recognize that it is possible to implement the

inventive asymmetrical beam patterns without resort to antenna Arrays.

Figure 7 shows an exemplary implementation of an antenna array system, shown generally at 700, that could generate the sub-sector beam pair 230, 231. The array 700 comprises a 4x4 planar array of cross-polarized antenna elements 711-714, 721-724, 731-734, 741-744, such as is well known to those having ordinary skill in this art. Each polarization for each element in each row 710, 720, 740 of the array, for example, row 730 comprising elements 731-734, are combined together by means of beamforming network 750, which is shown in greater detail in Figure 8.

In receive mode, the beamforming network 750 combines the signals received at each of ports 1 through 4 851-854, at port 5

855. In transmit mode, the signal at port 5 855 is split and rotated in phase before it is distributed to each of ports 1 through 4 851- 854, which in turn drive antenna elements 731-734.

2023:DHC:2479-DB The proportions into which the power is split are inversely proportional to the relative widths of the conductive traces at each of the splitter junctions 801, 802, 803. In the embodiment of Figure 8, the powers at each of ports 1 through 4 851-854 are, by way of example only, in units mW relative to 1 mW at port 5 855: 0.02, 0.4178, 0.4178 and 0.082 respectively.

Furthermore, the relative phase rotations are determined by the relative lengths of each of the conductive traces corresponding to each of the ports. In the embodiment of Figure 8, the signal at port 5 855 is rotated by 98.3, 36.4 -36.4 and -98.3 degree before it arrives at ports 1 through 4 851-854 respectively, again by way of example only."

73. As stated above, we are of the view that the question whether the specifications fully disclose the method of working the Suit Patent - including the construction/configuration of the sub-sector antenna is required to be determined after the parties have had the opportunity to lead expert evidence/evidence of a person skilled in the art.

74. The appellants had also contended that the learned Single Judge had erred in holding that the additional explanation, as added in the claim before the United States Patent Office, was only clarificatory. According to the appellants, the said claim had included an additional limitation and had confined the scope of the patent as granted by the United States Patent Office. We are unable to accept that the view of the learned Single Judge is patently erroneous and therefore, warrants any interference in these proceedings.

75. Prima facie, we are unable to accept the view that the Suit Patent is vague or otherwise incapable of being patented under the Act.

2023:DHC:2479-DB Whether the impugned judgment travels beyond the scope of the suit

76. It is the appellant's contention that the suit is limited to two models of antennae (Model-1 and Model-2) however, the learned Single Judge has also directed deposit of 10% of the sale proceeds of two other models, namely, Model V2 and Model 4P, which were not the subject matter of the suit.

77. Concededly, there are no pleadings in the suit to support the allegation that the said models infringe the Suit Patent. However, averments were made in the application filed by the respondent seeking an injunction in respect of the two models to the effect that Model V2 is only a version of Model-1; therefore, an order restraining the appellants from manufacturing or dealing with the said model is required to be passed. The respondent averred that the other model was a low band model of the same product.

78. Mr. Pachnanda submitted that the suit was not limited to Model- 1 and Model-2 alone. He submitted that the respondent had specifically prayed for a permanent injunction with respect to sale of infringing products by the appellants "either directly or indirectly, so as to result in infringement of Indian Patent No.240893". He submitted that therefore, the impugned judgment is not beyond the scope of the suit. He further contended that the appellants had chosen to take the benefit of the orders passed by the Court and had sought permission to continue sale of all models of antennae and therefore, it was not open for them to now contend that models of antennae other than Model-1 and Model-2, 2023:DHC:2479-DB were not a subject matter of the plaint. Next, he submitted that the impugned judgment is also premised on the obstructive and evasive conduct of the appellants as they had not produced beam patterns of the allegedly infringing antennae. The learned Single Judge found that the appellants were withholding crucial information and had not produced the antennae manufactured by them for inspection by a scientific expert even when so suggested by the Court. He submitted that in the circumstances, the learned Single Judge was right in drawing an adverse inference with regard to the other two models as well. Further, he contended that the impugned judgment merely required the defendants to make a deposit and furnish bank guarantees, failing which, they would be restrained for manufacturing, offering for sale any models of antennae for the infringed Suit Patent. He submitted that therefore, the operative part of the impugned judgment was not beyond the scope of the suit. Additionally, he submitted that, in any event, the Court can mould relief where the circumstances so require. Lastly, he referred to an order passed by the learned Single Judge in an application filed under Order II Rule 2 of the CPC, IA No. 7708/2021 in Nokia Technologies OY v. Guangdong Oppo Mobile Telecommunications Corp. Ltd. & Ors (supra), whereby the Court had, in the context of further models and devices being added by the defendant in that case, granted liberty to the plaintiff to assert the same by way of an affidavit. He pointed out that the Court had observed that it was not necessary to move amendment applications under Order VI Rule 17 of the CPC, which would complicate and delay adjudication of the suit. The Court had, accordingly, permitted the plaintiff to file a separate affidavit along with 2023:DHC:2479-DB test reports, if any, to impugn further models prior to framing of issues. The Court had further clarified that if issues were framed, the same could be asserted by means of affidavits in evidence.

79. Before proceeding to address the controversy, it is relevant to refer to the averments made in the plaint. Paragraph 75 of the plaint is relevant and reads as under:

> "75. Accordingly, by way of this Suit, the Plaintiff seeks to assail the following antenna models of the Defendants, which the Plaintiff asserts to be infringing Indian Patent No.240893:
>
> a) XXDW-18-33i-IVT-DB8P
> b) XXDH-20-33ie-VT-DB.
>
> For ease of reference, the antenna models mentioned above are referred to as the "Infringing Products" in this Suit. It is submitted that the above is a non-exhaustive list of antenna models currently within the knowledge of the Plaintiff. The Plaintiff reserves its right to include within this Suit any other antenna model of the Defendants, past or present, or any future antenna model that may be launched by the Defendants that infringes Indian Patent No.240893."

80. Although the respondent had sought to reserve its right to include other models of the antennae, it has not taken any steps to amend the suit.

81. The contention that it is not necessary to amend the suit to include additional models of antennae for seeking relief in respect of such infringing products, is unmerited. Plainly, the plaintiff cannot be granted any relief unless the necessary foundation for seeking such relief has been pleaded and the defendant has had an opportunity to contest the same.

2023:DHC:2479-DB

82. The contention that it is open for the respondent to seek further relief by filing an affidavit or leading evidence at a subsequent stage in the suit, is impermissible. There is no provision in the CPC, which permits the plaintiff to press an actionable claim by filing an affidavit during a subsequent stage in the suit, without amending the plaint.

83. It is also important to note that there is no material on record to establish that further models manufactured or offered for sale by the appellants infringe the Suit Patent. Although the respondent had reserved their right to amend the pleadings in the event it discovered other infringing products, the respondent took no steps to either amend the plaint or to bring on record any material in support of its claim that the said models also infringe the Suit Patent. We are unable to accept that filing an affidavit during the pendency of the suit can be a substitute for amendment of the pleadings. A prayer for relief, which is not supported by pleadings and evidence, cannot be granted. It is also well settled that interim relief is in aid of final relief; if final relief cannot be granted, there is no question of granting any interim relief.

84. Having stated the above, it is also material to mention that the plaintiff had sought a blanket order restraining the appellants from infringing the Suit Patent. Thus, the court was not impeded in any manner in restraining the appellants from infringing the Suit Patent. It is also relevant to note

that a party that suffers an interim injunction, in respect of the subject matter of the suit, is required to follow the safe distance rule. It is necessary for the party suffering an order interdicting it from doing any act in relation to the subject matter of the suit, to 2023:DHC:2479-DB ensure that it does not commit any other acts which could be construed as violating the court order. It is not open for the party to try and overcome court orders by continuing its infringing activity in another form or manner. As an illustration, if the court finds that the defendant's trademark infringes the plaintiff's trademark and interdicts the defendant from using it; it is not open for the defendant to slightly modify or tweak its trademark and continue using it. It is incumbent upon the defendant to ensure that it does not use any trademark that can be construed as infringing a plaintiff's trademark. Similarly, if the appellants were interdicted from manufacturing or dealing with Model- 1 on the ground that the same infringes the Suit Patent; it would not be open for the appellants to launch another infringing model by slightly modifying or tweaking Model-1.

85. In the present case, the learned Single Judge has not issued any blanket order restraining the respondents from selling Model V2 or Model 4P. The Court has merely put the appellants to terms and directed that they deposit specified value of the sale proceeds (10%) with the Registry of this Court. It is up to the appellants to comply with the said terms. However, if the appellants do not comply with the said terms, the appellants would stand restrained from manufacturing, selling, offering from sell any models of antennae, which infringe the Suit Patent. We are unable to accept that the said order - that is, the order restraining the appellants from infringing the Suit Patent - travels beyond the scope of the plaint.

Whether the test applied for determining infringement is incorrect 2023:DHC:2479-DB

86. It was contended on behalf of the appellants that the learned Single Judge had not applied the correct test of infringement. Mr. Sethi submitted that the correct test of infringement would require a comparison of the alleged infringing beam pattern with the beam pattern as disclosed in the Suit Patent. He submitted that the beam pattern as referred to in the plaint and the beam pattern as disclosed in the opinion of the respondent's expert (Mr. Mark Cosgrove) were not similar to the beam pattern as disclosed in the Suit Patent. He further submitted that the alleged beam pattern emitted by the appellants' antenna was supposedly compared with a theoretical beam pattern simulated by using power and phase weightings of the Suit Patent but the Suit Patent does not disclose any power and phase weightings.

87. The opinion of the respondent's expert (Mr. Mark Cosgrove's opinion) relied upon by the respondent indicates that he had used the values of power and phase weightings as disclosed in the Suit Patent set in "Matlab" using typical values of antenna operating in 2300 MHz frequency band. He also stated that the tool used by him was written in Matlab programming environment, which used standard industry mathematical models to simulate the output from a series of elements. He had explained that the said tool can be used to simulate elements of different spacing at different frequencies and with different power and phase weightings profiles. He had stated that in order to ensure that the beam patterns simulated from the power and phase weightings disclosed in the Suit Patent is correctly compared with the available beam pattern of the appellants, it was necessary to ensure that correct 2023:DHC:2479-DB aspect ratio is maintained, and the same scale is used. He

had stated that the beam patterns of the appellants were on 40 dB scale and therefore he had simulated the beam pattern from power and phase weightings as disclosed in the Suit Patent at the same scale for making a correct comparison. He had then superimposed the simulated beam pattern over the available beam patterns of the allegedly infringing product.

88. The contention that the specifications of the Suit Patent do not disclose power and phase weightings is, prima facie, erroneous. A reading of the embodiments, as explained, do show power and phase weightings.

89. Prima facie, we do not find any error in the method of comparing the beam patterns for ascertaining whether the Suit Patent was infringed.

90. The appellants' contention that the beam pattern produced by the power and phase weightings was required to be compared with Figure 3 of the Suit Patent is unpersuasive. Figure 3 of the Suit Patent was only an illustration to explain the invention and not the actual beam pattern derived from the given power and phase weightings for the antenna area system and the beam forming network as disclosed in Figure 7 and Figure 8 of the Suit Patent. The scope of the patent is broader than the drawings used for describing the embodiments. The appellants did not produce any expert evidence to effectively counter the opinion as tendered by Mr. Mark Cosgrove.

2023:DHC:2479-DB

91. In view of the above, we reject the contention that an erroneous test was applied for, ascertaining whether the beam pattern of the antennae manufactured and dealt with by the appellants, are similar to the beam patterns as disclosed in the Suit Patent.

Whether any adverse inference against the appellants is warranted

92. It is contended on behalf of the appellants that the learned Single Judge had erroneously drawn an adverse inference on the basis that the appellants had not disclosed the beam pattern of the antenna. It is contended that the appellants had disclosed the beam pattern of Model- 1 in paragraph 62 of the written statement. The appellants state that they had not disclosed the beam pattern of Model-2 as it was not sold to any Indian customer.

93. There is a serious dispute as to whether the beam pattern, as disclosed by the appellants in paragraph 62 of the written statement is, in fact, the beam pattern of the antennae dealt with by the appellants. The written statement indicates the beam pattern as disclosed to be a pattern simulated by feeding the power in phase weightings disclosed in the Suit Patent in Model-1. However, the same is not the beam pattern as actually emitted by the said antenna.

94. Mr. Pachnanda had contended that the statement made in paragraph 62 of the written statement is misleading. He submitted that using the power and weighting as disclosed in the Suit Patent for generating the simulated beams is not the correct approach as the Suit Patent was not in respect to the power in phase weightings but in respect 2023:DHC:2479-DB of beam patterns,

which could be generated by using an appropriate power and phase weightings. He submitted that a fair disclosure would be to disclose the beam patterns as, in fact, emitted by the antennae manufactured and dealt with by the appellants. He also referred to the opinion of Mr. Mark Cosgrove in support of his contention.

95. The respondent's case is premised on the basis that the beam pattern produced by the antennae (Model-1 and Model-2) manufactured and dealt with by the appellants are similar to the beam patterns of the Suit Patent and thus, the appellant's products are infringing products. Thus, one of the principal controversies to be addressed is whether the beam patterns of the antennae manufactured and dealt with by the appellants are similar to the beam pattern, which emanate from the Suit Patent. Clearly, it was necessary for the appellants to fairly produce the beam pattern of the antennae manufactured and dealt with by them. Undeniably, the question whether similarity in the beam pattern would indicate violation or the infringement of the Suit Patent or whether the Suit Patent could extend to all devices emitting the particular type of beam pattern, is a contentious one. However, it was necessary for the appellants to either produce the actual beam patterns emitted by the antennae manufactured and dealt with by them or produce the antenna for examination by an expert as suggested by the Court.

96. We find no fault with the learned Single Judge in drawing an adverse inference on the failure on the part of the appellants to produce the antenna and agree to examination by a court appointed expert.

2023:DHC:2479-DB

97. Having stated the above, we must also take note of the contention advanced by Mr. Sethi that the suggestion for the appellants to produce the antenna for examination by the court appointed expert, was made during the course of the proceedings and the senior counsel appearing for the appellants did not have the instructions to respond to the suggestion immediately.

98. In view of the above, we consider it apposite that the appellants be granted one more opportunity to produce the allegedly offending antenna for examination of a court appointed expert. The appellants may approach the learned Trial Court for the said purpose and for modification/vacation of the impugned judgment. If the Trial Court considers it apposite, it would pass appropriate orders for appointing an expert for assistance in determining whether the allegedly infringing antennae emit beam patterns similar to the Suit Patent and consider the appellants application for vacation/modification of the impugned judgment.

Whether the impugned judgement warrants any interference.

99. The learned Single Judge had exercised her discretion and granted the interim relief. We do not find that the exercise of discretion to be arbitrary or capricious. We also do not find that any settled principles of law have been disregarded. Thus, on the test laid down in the case of Wander Ltd. & Anr. v Antox India P. Ltd.: 1990 Supp SCC 727, we do not find that the impugned judgment, placing the appellants to terms, warrants any interference in this appeal.

2023:DHC:2479-DB

100. The appellant had expressed the difficulty in depositing 10% of the sale proceeds to comply with the terms of the impugned judgment. It is also submitted on their behalf that the said amount is exorbitant. However, it is noticed that the learned Single Judge had examined a royalty agreement entered into between the respondent and another licensee for use of the patent and had apparently, determined the terms based on the said agreement. Therefore, we do not find any reason to modify the same. However, given the difficulty expressed by the appellants, we consider it apposite to modify the impugned judgment to a limited extent of permitting the respondents to deposit a bank guarantee for a sum of 10% of the sale proceeds instead of depositing the same in cash with the Registrar of this Court.

101. Before concluding, we consider it apposite to clarify that nothing stated in this judgment, or the impugned judgement would influence the final decision on the merits of the suit.

102. The appeal is disposed of in the above terms.

VIBHU BAKHRU, J AMIT MAHAJAN, J APRIL 10, 2023 gsr/RK/Ch