

OLED REVERSE ENGINEERING FOR

PATENT INFRINGEMENT ANALYSIS

CHALLENGE

The global display manufacturing company faced several challenges in assessing patent claims related to encapsulation layers in OLED technology and monetizing their patent portfolio

Insufficient Literature: The available literature on competitor products was inadequate to conclusively determine patent infringement.



To address these challenges, a comprehensive approach was adopted:

Competitor Product Analysis:

Detailed analysis of the competitor's products was conducted, initially revealing positive indicators for infringement.

Material Comparison:

Encapsulation layers were identified and compared against a database of commonly used materials in OLED layers, aiding in patent claim validation. Ion Milling: Ion milling was employed to uncover layers beneath the screen, providing additional insights.



Reverse Engineering:

Reverse engineering of the OLED display was pursued to identify and analyze the encapsulation layers thoroughly.

Advanced Imaging:

Advanced imaging techniques such as SEM, TEM, and X-ray imaging were utilized for semiconductor-level analysis and to support claim validation.

RESULT

The collaboration yielded significant results:

Infringement Confirmation: Reverse engineering efforts confirmed infringement on the client's patent related to encapsulation layers in OLED technology.

Detailed Claim Charts: Detailed claim charts and supporting documents were provided, strengthening the client's position in potential legal proceedings.

CONCLUSION

The data collection process involves conducting secondary searches across various paid and unpaid databases, investigating trade journals, associations, company annual reports, product releases, published studies and surveys, and supplier's association publications. The collected information includes figures related to the number of businesses, market size, historical usage trends, country-level warehouse numbers and sizes, numbers of corporations and SMEs in each geographic zone, and statistics related to various industries. In cases where exact data is unavailable for specific geographies or industries, educated estimations will be made, and clear hypotheses will be provided to support these estimations.

As an example, data extrapolation for the United States was performed, estimating the number of SMEs, large corporations, and warehouses owned or leased by them. Similarly, an estimate of the average number of pallets and boxes in a warehouse was calculated based on warehouse size and typical stacking heights.