

WHITEPAPER

Virtual Reality (VR) in China

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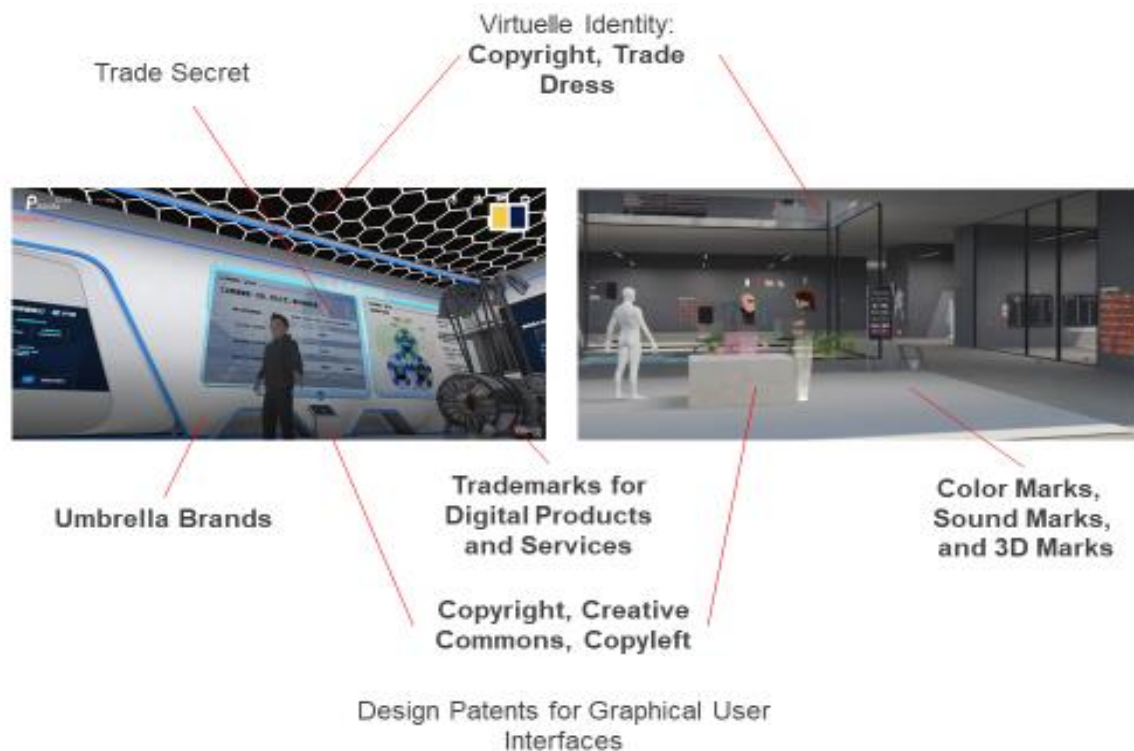


Regulatory Challenges and Protection Strategies

The development and implementation of Virtual Reality (VR) in China is occurring in a dynamic environment characterized by state promotion, regulatory control, and growing competitive pressure. The Chinese government is investing heavily in the Industrial Metaverse to enhance industrial processes and upgrade the real economy through digital innovation. Unlike Western markets, where VR technology is primarily consumer-oriented, China's focus lies on industrial applications, smart manufacturing, and integrating VR into traditional manufacturing processes. However, the strategic significance of this technology poses substantial challenges, particularly in **intellectual property protection (IP), cybersecurity, and data privacy**.

While Western companies apply global standards in VR applications, the regulatory framework in China is fragmented, relying on existing laws such as the **Cyber Security Law (CSL)**, **Data Security Law (DSL)**, and **Personal Information Protection Law (PIPL)**. With no specific VR legislation, companies must apply existing regulations to VR technologies. This means addressing not only traditional data protection issues but also IT security requirements, local certifications, and IP protection in a highly competitive environment.

Intellectual property is critical for companies implementing VR in China. Extensive patenting of VR technologies and registration of Metaverse trademarks in China require Western companies to conduct thorough **Freedom to Operate (FTO) analyses** to ensure their technologies do not infringe on existing Chinese patents. Additionally, VR technologies developed or implemented in China risk inadequate protection and potential copying by local competitors. We support companies with comprehensive **IP strategies** covering patents and trademarks, targeted registration of IP rights in China, and integrating business secret protection mechanisms, including encrypted data transfers and access control measures.

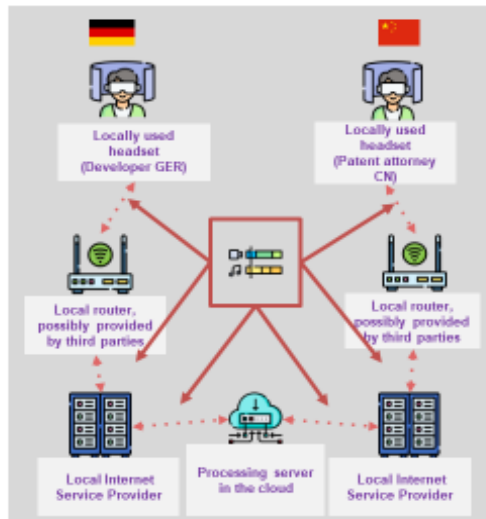


Holistic IP Protection in the Industrial Metaverse

Beyond IP protection, cybersecurity in virtual environments presents significant challenges. Companies operating VR applications in China must certify their IT systems according to the **Multi-Level Protection Scheme (MLPS 2.0)**, especially if connected to networks or cloud-based VR platforms requiring external servers. Lack of MLPS certification may result in authorities classifying companies as security risks, leading to penalties ranging from warnings to system shutdowns. We support companies in implementing MLPS 2.0 certification by analyzing current security measures, defining necessary protective steps, and preparing documentation for regulatory audits.

Data protection is another critical issue, particularly for VR applications processing personal data. This includes traditional user data, **audiovisual content, motion tracking, and avatar interactions**, all covered under PIPL. Companies must ensure personal data is processed securely, encrypted, and not transferred abroad without authorization. Our advisory services include conducting and implementing **Personal Information Security Impact Assessments (PISIA)**, assessing data types, analyzing data flows, identifying potential risks, and developing strategies for secure personal data management.

Cross-border data transfer represents an additional challenge, especially when VR content is hosted overseas or when training and interactions occur over international networks. Companies must undergo security assessments or utilize **standard contractual clauses (SCCs)** as a legal basis for international data transfers. We help companies analyze data flows and select suitable compliance mechanisms to minimize regulatory risks.



Protection Measures:

- Use of approved *Virtual Private Networks (VPN)* and *Multiprotocol Label Switching (MPLS)*.
- Use of reputable and audited servers.
- Ensure sufficient security for own servers.
- Devices with *third-party software*, *deep fake detection*.
- For *end-to-end encryption*, governmental access to data flow must be possible.
- *Encryption-in-transit must allow government access*.
- Data notarization.
- *Blockchain for authentication*.
- *Tokenization of machines (NFT)*.

Data Protection in the Industrial Metaverse

Content protection in VR applications is another key concern. Companies developing training programs or interactive VR content must address copyright and trademark registration issues. Many VR applications involve highly specialized content covered by Chinese copyright laws. Companies must not only secure their content legally but also implement measures to prevent unauthorized use or distribution. We support companies in developing **licensing strategies**, secure VR platforms, and protecting digital content through technological solutions like digital watermarks or blockchain-based authentication systems.

Additionally, **selecting a hosting location** for VR applications is strategically important. Companies must choose whether to host data in China, third countries such as Singapore, or within their internal infrastructure. Each option carries distinct advantages and disadvantages concerning **data transmission speed, security requirements, and regulatory compliance**. We support companies in developing **customized hosting strategies** meeting technical and regulatory demands and ensuring optimal performance.

In conclusion, VR technology offers significant opportunities in China but comes with regulatory complexities. Protecting intellectual property, ensuring cybersecurity, and safeguarding data privacy are core considerations companies must address early. Our consulting services provide comprehensive support—from **IP security and patent strategy to MLPS certification, data protection compliance, and analysis of cross-border data flows**. Companies aiming for successful implementation of VR technology in China benefit from strategic planning and robust legal safeguards, enabling them to remain competitive long-term while effectively navigating regulatory challenges. The future of VR in China closely aligns with industrial digitization; companies proactively adapting to these developments can secure sustainable competitive advantages and circumvent regulatory pitfalls.

For Further Informations

For more Informations about our services, please visit:

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