

Development of Open Banking API portal – a secure framework enabling applications developed by third party service providers (TSP) to access clients' bank systems through the portal and with bank client authorization.

Keywords:

- Open Banking API; API gateway; unified interface; OAuth 2.0 authorization; Access; Barrier, Bridge portal, plug-and-play; dynamic
- transaction analysis; credit assessment; machine-learning

Problems addressed

- Bank clients can only use applications provided by banks to access their bank accounts
- Poses high barrier to developing fintech applications for accessing accounts of different banks
- Deters the introduction of innovative Fintech applications by third parties

ASTRI addresses the issues by applying open banking API technology in support of HKMA's initiative. ASTRI develops an API bridge portal to provide bank system connectivity to fintech applications developed by TSP. ASTRI also develops plug-and-play interface for dynamic deployment of TSP services to the API bridge portal.

Innovations

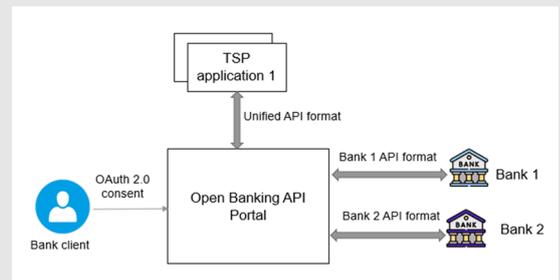
ASTRI develops an open banking API bridge portal that provides unified API interface to TSP for accessing various bank systems. The portal maps the unified API with different APIs of different banks. The portal also serves as a platform for dynamically deploying Fintech applications.

- **Modular architecture** enables:
 - **dynamic addition** of bridge connectivity to new bank systems
 - **dynamic deployment** of TSP Fintech applications
- Applies **OAuth 2.0 authorization** framework to enable bank clients to specify scope of operations the API bridge portal can do with their bank accounts
- Implements framework that allows bank client to **examine** the list of deployed TSP applications and **select** the ones to **subscribe**
- Supports TSP applications in the form of **Web or mobile phone application**

Key impact

- Enriches bank & Fintech innovation ecology through inclusion of TSP developed solutions
- Empowers bank clients to better manage and utilize bank assets by accessing their bank accounts in all banks through the portal.
- Enables close interoperation of bank system with other systems for greater application capability and scope
- Promotes collaboration between bank industry and Fintech industry

Innovation snapshot



Project completed

- Ongoing

Applications

- Credit assessment on bank transactions
- Investment advising and execution service on bank account assets
- Mobile payment application with credit card recommendation powered by bank account information analysis

Patent(s)

- US App. No. 17/858,508

[ASTRI Patent Search](#)

Commercialisation opportunities

- IP licensing
- Technology co-development

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