



## Empowerment through Artificial Intelligence

### COMPANY PROFILE

*Nervesis Sdn Bhd (534937-P)*

Nervesis website: <http://www.nervesis.com>

Zygy platform: <http://www.zygy.com>

MIDAS website: <http://midas.nervesis.com>

## THE COMPANY

Nervesis is a technology company that uses its' software module, 'Zygy', to create Artificial Intelligence products to serve Internet and telecoms companies across the region. The products are Zygy Gatekeeper and MIDAS.

Zygy Gatekeeper is a platform that cross-connects a person's digital life and work in multiple sites to be actioned. The platform performs Single Sign On (SSO) into multiple sites, collates vital information, available functions and transactions, and cross-connects them in one place to be actioned by users.

Zygy Gatekeeper also performs Identity Management to enable an organization's administrator to manage user IDs in one place and to put in place central enforcement of policies such as password policies, access rules, privileges and more.

MIDAS is a Page-Not-Found advertising platform. When a user mistypes a non-existent domain in browser, for example, www.airasib.com, the user will see a full page advertisement (ads), instead of a blend Page-Not-Found page. MIDAS will push ads based on the user's intent.

## MISSION STATEMENT

Our mission is to develop artificial intelligence technologies to empower human intelligence to excel better.

## PRODUCT: ZYGY GATEKEEPER



### Overview

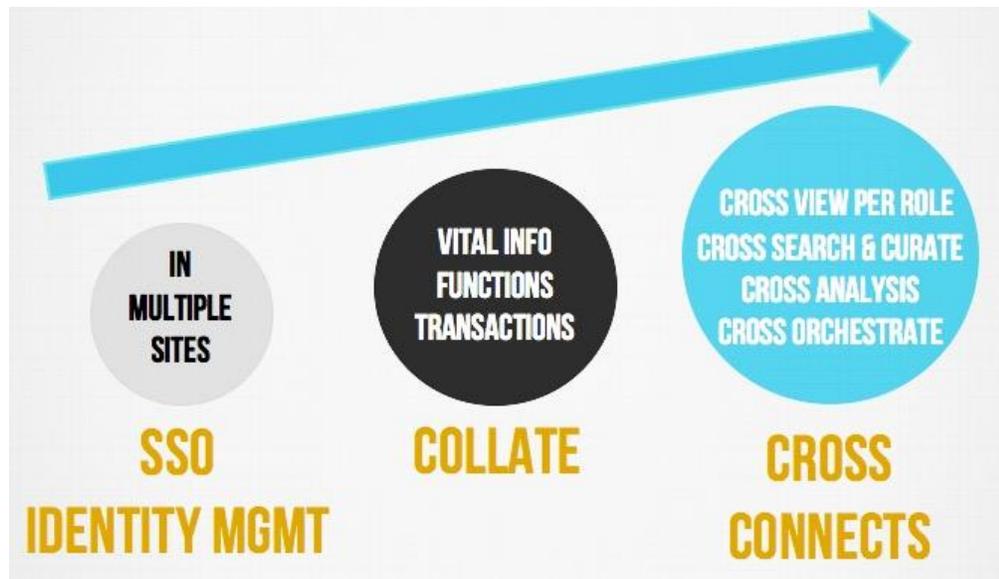
Zygy Gatekeeper is a platform that cross-connects a person's digital life and work in multiple sites to be actioned. The platform performs Single Sign On (SSO) into multiple sites, collates vital information, available functions and transactions, and cross-connects them in one place to be actioned by users.

Unlike other indirect competitors such as OneLogin, Okta and Ping Identity that focuses on Single Sign On (SSO) and Identity Management, Zygy Gatekeeper have even more powerful capabilities of cross-connecting personal information from multiple applications that overcomes human's limitations on processing information on the web. These limitations are the results of lousy memory, slow at processing large information, good at one thing at a time, bad on self-discovery, information overload, and bad at keeping track and stuck at a same speed of learning.

For enterprises where identities or IDs (usernames, passwords and related attributes) are in different places, Zygy Gatekeeper helps enterprises to manage IDs from a single place. To do that, it allows admin to outline communication flows between various identity places during login, user registration, user changes and user archiving. In addition, Zygy helps admin to perform central enforcement of password policies and access rules.

### **Zygy Gatekeeper: Method of Cross-Connects**

The method for Zygy cross-connects is shown in the next diagram.



**Figure 1: Method in Zygy Cross-Connect**

As can be seen from above, the cross-connect capability is performed by an Intelligent Agent.

From a start, the Intelligent Agent performs Identity Management on each users' application by keeping username and password of each app. Later, the Intelligent Agent performs Single Sign On (SSO) for that user into multiple applications.

Once login into multiple applications, the Intelligent Agent collate vital information across multiple applications for that users. It will also collate available functions across multiple applications such as search functions. It also collate available transactions such as doing a product update from an application.

The final step is for the Intelligent Agent to cross-connect what is has collated in a Zygy dashboard. The cross-connect output will be in the form of

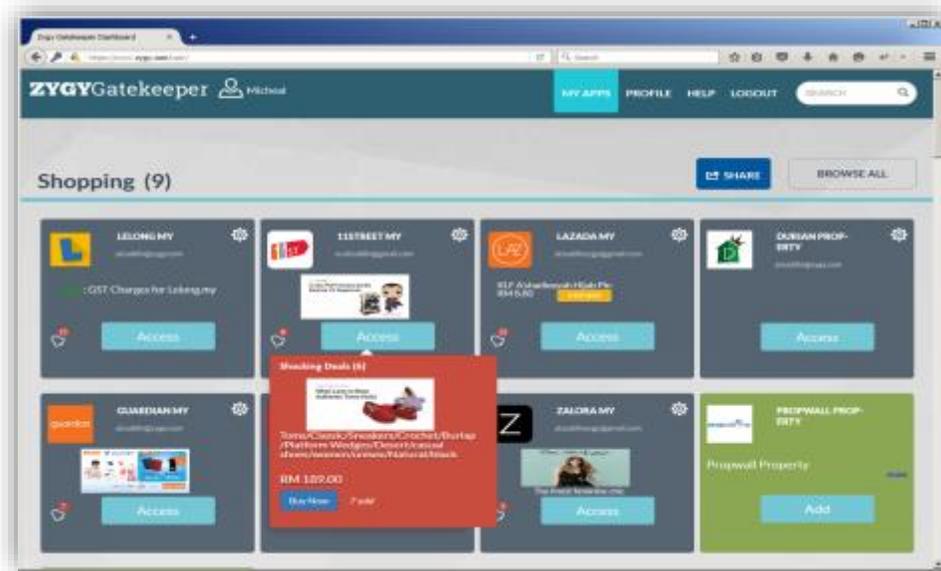
- a. Cross-Views based on roles
- b. Cross Analysis
- c. Cross Search & Curate
- d. Cross Orchestrate

### **Cross-Views based on roles**

The Intelligent Agent first performs cross view of vital information from each application according to one's role. So a user can cross view reviews, promotions, announcement, events, vouchers from across many applications that are personalized. The cross-views are displayed in a box-like container called a mashlet.

The applications are grouped in categories such as Marketplace, Social Media, Travel & Lifestyle, Delivery Service, Municipal Council, Business

Suites and more.



**Figure 2: Sample of Cross View for Public**

In a workplace, a C level role will cross-view of vital information across many applications to make decisions. For that reason, we prepare a Zygy Cross-View matrix for an organization such as below.

	C Level & Heads	Managers	Executives	Non-Exec
HR System	Category of Issues Managers KPI	Rate of Issues Execs KPI	New Issues Interactions Instructions Non-Exec KPI	New Issues Interactions Instructions
Sales & CRM	Category of Issues Managers KPI	Rate of Issues Execs KPI	New Issues Interactions Instructions Non-Exec KPI	New Issues Interactions Instructions
Operation Systems	Category of Issues Managers KPI	Rate of Issues Execs KPI	New Issues Interactions Instructions Non-Exec KPI	New Issues Interactions Instructions
Social Media	Category of Issues	Rate of Issues	New Issues Interactions	New Issues Interactions

**Figure 3: Zygy Cross-View Matrix**

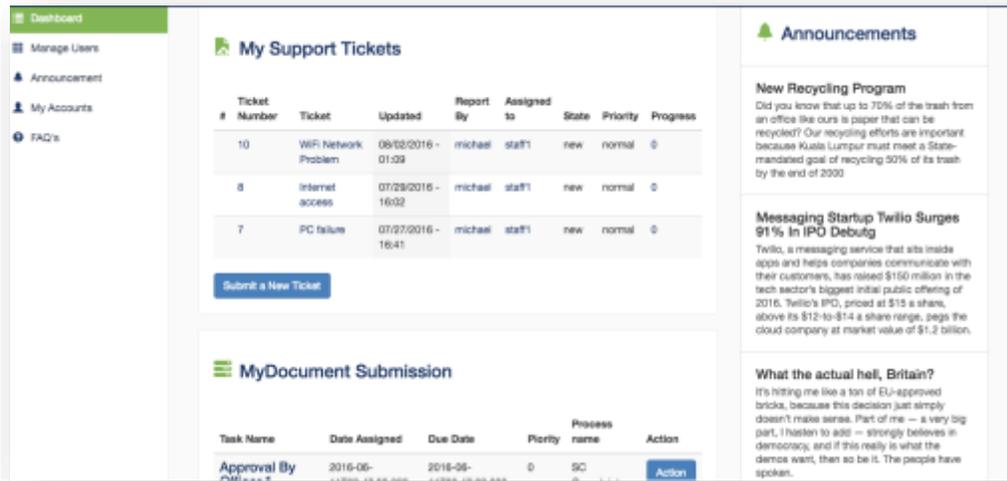
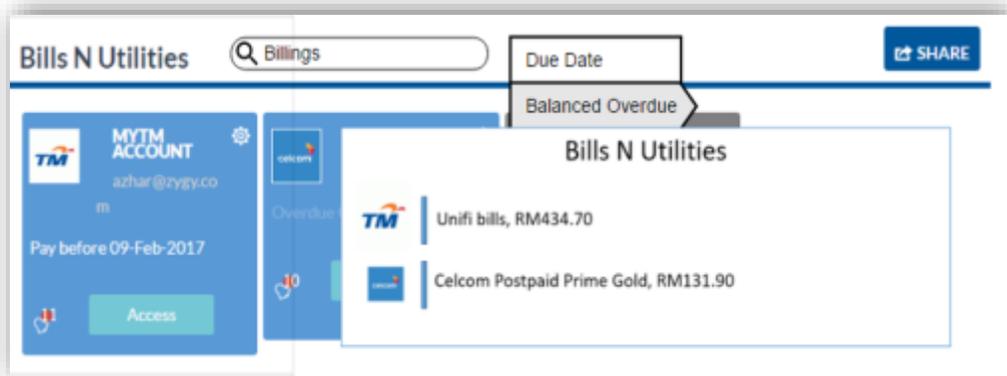


Figure 4: Sample of Cross-View at Workplace for a Role

### Cross-Analysis

Cross Analysis can be performed on a group of applications such as Bills and Utilities.

The figure next shown an analysis of balance overdue of all bills of a person in Zygy.



### Cross Search and Curate

Instead of search in application one by one, Zygy enables a user to search from Zygy, and respective keyword search will be passed to each application, and the result from each application will be aggregated and reprocessed before displaying back to the user.

For example, instead of searching in Lazada, 11Street, Lelong.com and other shopping sites, a user can search from Zygy, and the keyword will be passed to each shopping application to be searched, and the results will be aggregated and reprocessed before displaying back to user.



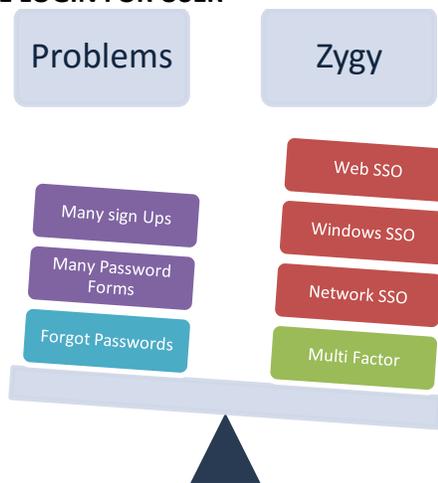
### Cross Orchestrate

Zygy enables an enterprise user or an SME user to orchestrate transactions across multiple applications. For example, a customer sending an image of a bank payment through Telegram can be orchestrated to be fetched into a company Sales System.

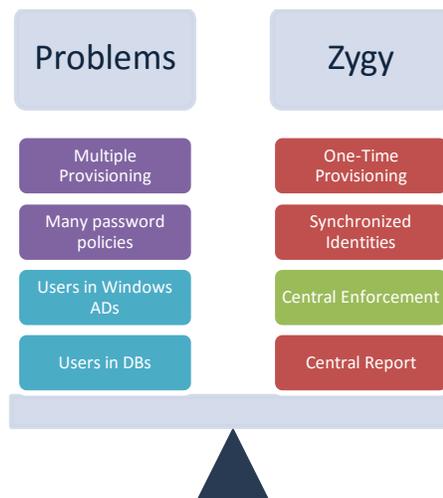
As a result a result, cross orchestrate can be used as

- a. Case Folder for Customer Account Management for all transactions across multiple company applications including Customer Support, Fulfilment etc
- b. Product update on multiple marketplace. For example, update a product in Zygy will result also product update in Lazada, Lelong, 11Street and other marketplaces.

#### SSO GOAL: ONE LOGIN FOR USER



#### IDENTITY MANAGEMENT GOAL: MANAGE IDENTITIES FROM ONE PLACE



## MIDAS: PAGE-NOT-FOUND ADVERTISING

The MIDAS logo consists of the word "midas" in a white, lowercase, sans-serif font. The letter "i" has a small horizontal line above it. The text is centered within a solid orange rectangular background.

MIDAS is a Page-Not-Found advertising platform. When a user mistypes a non-existent domain in browser, for example, [www.airasib.com](http://www.airasib.com), the user will see a full page advertisement (ads), instead of a bland Page-Not-Found page. MIDAS will push ads based on the user's intent. In case of [www.airasib.com](http://www.airasib.com), MIDAS will push travel ads since the user's intent is travel.

Non-Existent Domain not only happens from a user typo, it also happens from a dead link in any sites, email and browsers' bookmarks and search engine results.

An advertisement for MIDAS. It features two computer monitors. The monitor on the left displays a "Page Not Found" error message. The monitor on the right displays the Lazada website, which is advertising a "3RD BIRTH-DAY! COMING SOON! MAR 24-26". A speech bubble above the right monitor contains the URL "www.lazadah.com.my/". Text on the left says "turns URL typo from 'page not found' ....". Text on the right says "...into relevant advertising page". At the bottom, it says "Turn URL typos into your goldmines" with "goldmines" in a large, bold, yellow font.

turns URL typo from "page not found" ....

www.lazadah.com.my/

...into relevant advertising page

Turn URL typos into your **goldmines**

## CLIENTS

### TELEKOM MALAYSIA

- Zygy Smart Active Profiling for Telekom Main site ([www.tm.com.my](http://www.tm.com.my))
- My1Content Development (<http://my1content.my>)
- ZYGY Streaming

### Malaysian Timber Industrial Board (MTIB)

Supply, Delivery, Installation, Implementation, Testing and Commissioning of SSO and Identity Management

### UNIVERSITI TEKNOLOGI MALAYSIA

Supply, Delivery, Installation, Implementation, Testing and Commissioning of LDAP Server

### JABATAN AGAMA ISLAM WILAYAH PERSEKUTUAN

E-Pusara System Development

### IDENTITY MANAGEMENT FOR MINISTRY OF FINANCE (MOF), MALAYSIA

Gatekeeper is the Identity Management System for MOF, Malaysia that also provides Single Sign On (SSO) for several MOF systems including email system, tax management system and various internal systems.

### OPENLDAP IN UTM: FAULT-TOLERANT, REAL-TIME REPLICATION & HIGH AVAILABILITY

Nervesis deploys OpenLDAP in UTM (University Technology of Malaysia) with fault-tolerant, real-time replication and high

availability features. The OpenLDAP is the central Directory for almost all application in UTM. The OpenLDAP houses about 35,000 UTM users' information.

### **CENTRAL AUTHENTICATION MANAGEMENT SYSTEM (CAMS) FORUM**

CAMS is an Identity & Access Management solution meant to consolidate all applications in University Malaya. 35,000 users authenticate and authorize through CAMS. CAMS strengthens overall security, minimize overall applications administrations and reduce administrations regarding staff and students which include registrations, completions and profiles. CAMS won "Anugerah Inovasi Perkhidmatan Awam 2006"

### **REPORTING & DASHBOARDS FOR INTEGRATED ACCOUNT MANAGEMENT SYSTEM (IAMS)**

IAMS consolidates budgeting and procurement processes in all UM faculties. Vanilla is used to produce various reports and dashboard charts & graphs for management and working level of more than 100 departments.

### **TECHNICAL AUDIT FOR SKALI PORTAL TECHNOLOGY**

Skali is one of the main portal players in Malaysia. The skali portal platform is called Neofission. Nervesis audited the portal technology including the source codes, high level architecture, low level architecture, the processes, the security and the usability.

### **CONTENT COLLABORATION MANAGEMENT (CCM) FOR**

**WHOLE UMWEBSITE**

CCM is used to manage content for the whole UM website across different departments. Nervesis redesigns content processes for about 700 content users of CCM. Nervesis also redesigns server and network architecture to achieve high performance and high availability for the main UM website.

**INTEGRATED ACCOUNT MANAGEMENT SYSTEM (IAMS),  
UNIVERSITY OFMALAYA**

Integrated Account Management System (IAMS) is a Joint Venture Development project between Nervesis Sdn Bhd and University Malaya. IAMS consolidates budgeting and procurement processes in all UM faculties. Nervesis involves heavily in business processes design, system architecting and enterprise coding architecture framework.

**MAYBANK2U ACCOUNT INTEGRATION  
WITHWEBSERVICES**

Nervesis integrates merchant accounts and user accounts of Maybank2u e-channels to transact through a distribution management system, an external system, via Webservices protocols.

**CARDEX CARD DISTRIBUTION SYSTEM**

Cardex is a distributor for Celcom prepaid card. Nervesis designs business requirements, technical requirement, and the coding architecture for the whole system. The system manages in average of RM 15 Million of prepaid card transactions every month.

## MANAGEMENT

### CEO / CTO

#### AZHAR KASSIM B MUSTAPHA

##### Education

Bachelor of Science in Computer Science and

Electronics Massachusetts Institute of

Technology, Boston, USA

Master of Engineering in Computer Science and

Electronics Massachusetts Institute of

Technology, Boston, USA



##### Overview

Azhar Kassim Mustapha is the Chief Executive Officer of Nervesis, Malaysia (<http://www.nervesis.com>). Azhar has outstanding tracks of designing, developing and implementing advanced technologies. Azhar builds Zygy, Nervesis' Artificial Intelligence (AI), to grow two products: Zygy Gatekeeper (<http://www.zygy.com>), a platform that cross-connects a person's digital life and work in multiple sites to be actioned. The platform performs Single Sign On (SSO) into multiple sites, collates vital information, available functions and transactions, and cross-connects them in one place to be actioned by users and Midas Non-Existent Domain (NXD) Advertising (<http://midas.nervesis.com>). He lands a smart partnership with a major Telco, Telekom Malaysia. He passes Google Challenge Level 5 as a Hiring candidate. He was a speaker for World Islamic Economic Forum on Artificial Intelligence. He managed to secure a CNN Broadcast on Nervesis as a promising Asia technology company in the year of 2017.

Azhar is a grad of the highly renowned Massachusetts Institute of Technology (MIT) in Boston, USA. He receives his Bachelor of Science and Master in Engineering in Electrical

Engineering & Computer Science. Azhar has a total of three Patents to his name - one in the US with COMSAT Laboratories (now part of Lockheed Martin) and two in Malaysia – in the areas of underwater and space communication and compression, speech recognition and hardware interpreter/translator. The patent in US is at <http://www.google.com/patents/US6233552>. Although more than 15 years, people still refer to the work. NATO used the work for its submarine communication during the time when Azhar was with Comsat Lab. Azhar also is an expert in Natural Language Processing, a branch of AI to grasp human language.

In addition to his role as the CEO of Nervesis, Azhar was also a Research Specialist at Multimedia University of Malaysia (MMU), where he led a team conducting research and development (R&D) work funded by the Matsushita Corporation of Japan. Azhar has written and published numerous scientific papers at the International level.

## AWARDS

### 2014: 1- Innocert Award

Nervesis received an 1 innocert award which Innovation Certification for Enterprise Rating and Transformation (1-InnoCERT) is a certification programme used to recognise and certify innovative enterprises & SMEs and to encourage entrepreneurs to venture into high technology and innovation-driven industries by SME Corporation Malaysia. Our company achieved AA Rating Grade.

### 2006: NERVESIS RECEIVES AN INNOVATION AWARD TOGETHER WITH UNIVERSITY MALAYA

Nervesis received an innovation award together with University Malaya for its Central Authentication Management System (CAMS) deployed successfully in the university. The award is called Anugerah Inovasi Penyelidikan Bersama Antara Sektor Awam Dengan Sektor Swasta Tahun 2006 (AIPB 2006). CAMS is based on Nervesis' product, GateKeeper. GateKeeper is an Enterprise Identity Management System (EIMS). The award includes an exhibition of CAMS held in Dewan Besar, Wisma Darul Iman, Kuala Terengganu.

## COMPANY DETAILS

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