



Integrated Global Solutions Limited

Development of AI-Powered Search and Compare System for

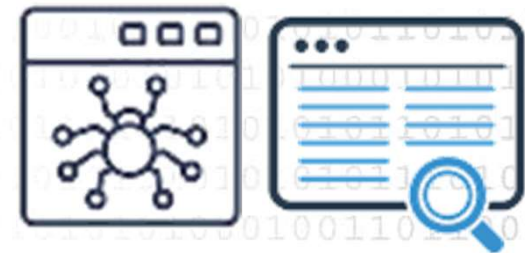
機電工程署
EMSD



Prepared by IGS

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1. Project Requirements

Project Challenges

- EMSD provides engineering services for a number of E&M equipment. Engineers need to search thousands of web-sites for suitable model of equipment. The customized AI search system will analyze the input requirements from engineers to suggest applicable models by collecting and comparing information from related websites. The system aims to reduce time consumption of repetitive action such as searching and comparing information, eventually enhance efficiency.

Expected Outcome

- To design and develop an AI E&M Search and Compare System with Admin Console on cloud service. The system will include an AI search engine with web crawling feature. User Interface with search results comparing different model should be provided.

2. Proposed AI-Powered Search and Compare System

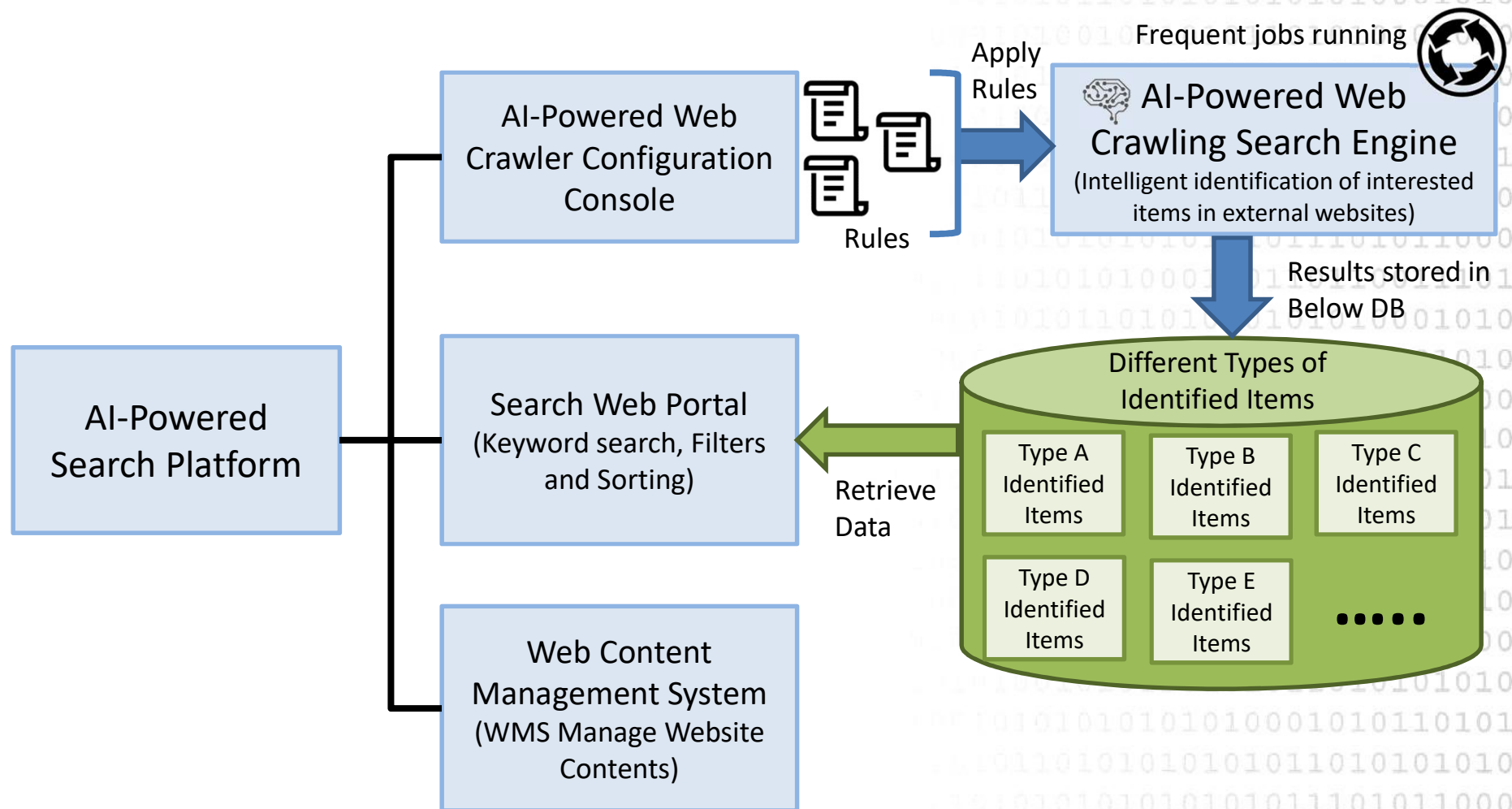
Description



Has below components

- **AI-Powered Web Crawling Search Engine** to run frequent AI jobs to automatically identify and gather interested items information in external websites
- **Web Crawler Configuration Interface** for administrators to apply rules to AI-Powered Web Crawling Search Engine to crawl external websites
- **Database** to store the identified and gathered items information from the AI-Powered Web Crawling Search Engine
- **Web Portal Interface** for users to search and compare identified items stored in the above Database with keyword search, filters and sorting capabilities
- **Web Content Management System (WCMS)** to manage search portal website contents

A. Initial Schematic Design of Proposed AI-Powered Search and Compare System



B. AI-Powered Crawler Configuration Console



Create Tasks to crawl websites

The screenshot displays the AI-Powered Crawler Configuration Console interface. On the left, a sidebar lists tasks under 'All Tasks', including 'Test1', 'hikvision', 'Sony Camera Fixed', 'CCTV_Crawling' (selected), and 'Higher Speed Scraping'. The main area shows the 'Products' section for 'CCTV > D.S.P. CCD Cameras'. It includes a 'More Info' button and a list of camera models with their specifications. Below this, a table shows the crawling configuration for the selected task, including columns for product type, link, and details. The table is currently empty, and the 'Start' button is visible at the bottom right.

Products

>>>Select Product Type<<<< More Info

CCTV > D.S.P. CCD Cameras

The following only displays two D.S.P. Vari-Focal cameras offered by B & T. For further information on the products listed below or other D.S.P. Vari-Focal cameras, please click the "More Info" button above to fill in an Information Request Form.

500TVL H.R. Body Camera 1/3" Color CCD

420TVL Body Camera 1/3" Color CCD

480TVL H.R. Body Camera 1/3" Color CCD

480TVL H.R. Body Camera 1/3" Color CCD

350TVL Body Camera 1/3" Color CCD

480TVL H.R. Body Camera 1/3" SONY Color CCD

480TVL H.R. Body Camera 1/3" Color CCD

540TVL H.R. Body Camera 1/3" Color CCD

[Customer Login]

live demo

User Name: guest:::

Password: not required

Page Type Select in Page

Paging Auto Detect(fail) Set scraping range

Filters Clear Scrape In Add Field

col1	col1_link	500TVL H.R. Body Camera	col3	col4	420TVL Body Camera 1/3" Co..
1	Click to scrape into detail page	480TVL H.R. Body Camera 1/3"...			480TVL H.R. Body Camera 1/3"...
2	Click to scrape into detail page	350TVL Body Camera 1/3" Colo...			480TVL H.R. Body Camera 1/3"...
3		480TVL H.R. Body Camera 1/3"...			540TVL H.R. Body Camera 1/3"...
4	Click to scrape into detail page	570TVL H.R. Body Camera 1/3"...			540TVL H.R. Body Camera 1/3"...
5		500TVL H.R. Body Camera 1/3"...			520TVL H.R. Body Camera 1/3"...

1. B&T :: Product ::

Start Save

B. AI-Powered Crawler Configuration Console

Select fields of the item for crawling



All Tasks

Test1

hikvision

Count : 0

2019-07-08 23:12:22

×

Sony Camera Fixed

Count : 17

2019-07-08 22:57:22

×

CCTV_Crawling

Count : 21

2019-07-08 21:10:56

×

Higher Speed Scraping

> Samples


> Default

http://www.btel.com.hk/b&tenglish/dapccd6.htm

Pre Login

480TVL H.R. Body Camera
1/3" Color CCD

PICTURE



1/3" Color CCD image sensor

This HIGH RESOLUTION surveillance camera series is designed to suit versatile security demand. With the HIGH QUALITY PERFORMANCE and COMPETITIVE PRICE, it makes your security demand affordable.

FEATURES

- 1/3" HR Color CCD
- Low light sensitivity of 0.6 Lux at F2.0
- Built-in microphone

⌵ Collapse

Page Type: Detail Page

Paging: None

Set scraping range

Filters

Clear

Scrape In

⊕ Add Field

	Headline	Product name	description	Resolution	Video Output	Weight	Field1
1	B&T :: 產品介紹	480TVL H.R. Body Camera 1/3" Col...	This HIGH RESOLUTION surveillan...	480 TV lines	1.0 Vp-p composite, 75Ω	250g	

1. B&T :: Product ::

2. B&T :: 產品介紹 ×

▶ Start

Save

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C. Search Web Portal

AI Search and Compare User Interface – search list with filters



CCTV Camera

IOT Devices

Model Type C

Model Type D

Model Type E

Model Specification Search Filters

Input Keywords



SEARCH

Resolution

FullHD

Sensor Type

Cmos Sensor

Indoor / Outdoor

Outdoor

IR

Support

Field of View

80 degree

Operation Temperature

-20 to 50 degree

205 Records Found



Export results to CSV

Model	SNC-VB642D	SNC-EB642R	DS-2CD2646G1-IZ(S)	DS-2CD2T46G1-4L/SL	AF465	HAC-HFW1200D
Product Image						
Brand	Sony	Sony	HIKVISION	HIKVISION	TeleEye	Dahua
Specification						
Image Sensor	1/2.8" Cmos Sensor	1/2.8" Cmos Sensor	1/2.7" Cmos Sensor	1/2.7" Cmos Sensor	1/3" Cmos Sensor	1/2.7" Cmos Sensor
Resolution	1920*1080	1920*1080	2688*1520	2688*1520	2560*1440	1920*1080
Frame Rate	60fps	60fps	30fps	30fps	30fps(60Hz), 25fps(50HZ)	30fps@1080p, 60fps@720p
Shutter Speed	1s~1/10,000s	1s~1/10,000s	1/3s~1/100,000s	1/3s~1/100,000s	1/25s~1/50,000s	1/25s~1/100,000s
IR Distance	100m	60m	50m	80m	30m	60m
IR ON/OFF control	Auto	Auto	Auto	Auto	Auto	Auto
Lens	f=3.0mm~9.0mm	f=3.0mm~9.0mm	f=2.8mm~12mm	f=2.8mm~8mm	f=3.3mm~12mm	f=3.6mm~8mm
Field of View	104°	105.3°	101°	104°	85.7°	89.9°
Audio	Support	Support	Support	Support	N/A	N/A
Video Interface	BNC/Network	BNC/Network	Network	Network	AHD	BNC
On-Board Storage	SD card slot	SD card slot	MicroSD card slot	MicroSD card slot	N/A	N/A
Operating Temperature	-40°C~60°C	-30°C~50°C	-30°C~60°C	-30°C~60°C	-20°C~50°C	-40°C~60°C
Power Supply	12VDC	12VDC	12VDC	12VDC	12VDC	12VDC
Power Consumption	21W	12.5W	19W	15W	4W	6.8W
PoE	Support	Support	Support	Support	N/A	N/A
Weather Proof	IP66	IP66	IP67	IP66	IP66	IP67
Dimensions	93*93*180.9mm	93*93*180.9mm	105*60*297.5mm	105*65*297.5mm	87*87*220mm	90.4*90.4*241.8mm
Weight	1,620g	1,610g	1,400g	1,320g	570g	640g

« < 1 2 3 4 5 6 > »

D. Admin Console

With Web Content Management System Function

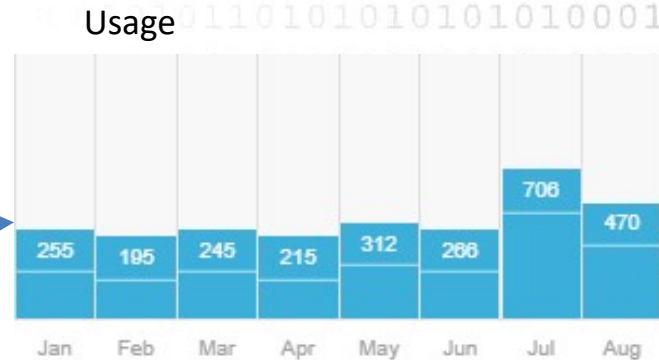
Admin

*** Login name:

*** Password:

LOGIN

OPTIONS	
	Dashboard
	Audit Logs
	File Browser
	Pages
	Widgets
	Users
	Settings
	Password
	Sign out



Edit page

*** Name:

*** URL address:

Page templates:	
Default	default
Home	home
A template name	Type a view name

Schedule Report generation

E. Benefits

Potentials for proposed system and deliverables



Conversion of data
formats



Take over repetitive
tasks that employees
carry out 50-60 times a
day



Periodic reporting, data
entry and data analysis

- Through AI-Powered Web Crawling engine to reduce tedious manual activities to search interested engineering items for purchasing from the Internet
- As part of robotic process automation initiative to assist and speed up the turn around time for EMSD Procurement staffs to identify interested items from the Internet
- Can gather more information from the internet than manual Google search approach.

END