

學 期 貳

*term two*

(1331) (2601) (6310)

# *Exhibition Navigation with iBeacon*

*lyu1403.*

映 像 使 用 書 體      MS P 明 朝

*Typeface used MS PMincho*

NG Ping Him

ID #1155029312

Slide number two

YEUNG Tak Wing

ID #1155009050

Slide number three

Term  
1

# Previous

▲  
2015  
IBEA CON

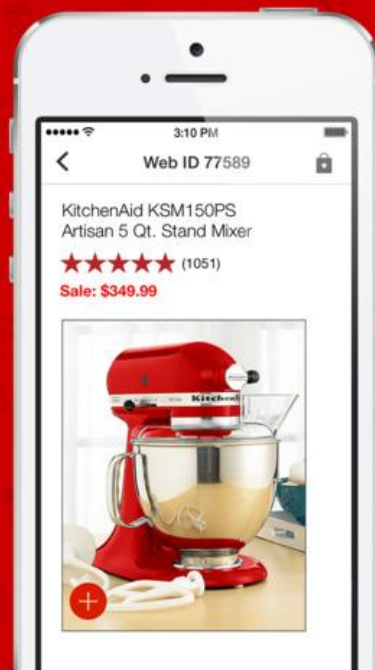
Term 1

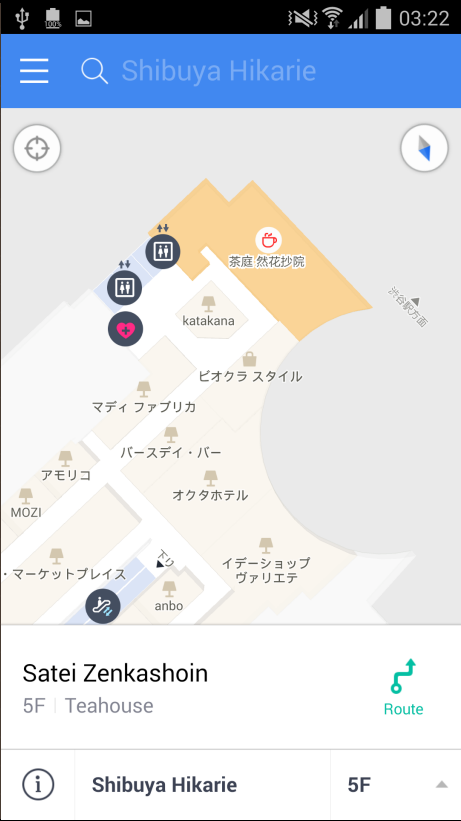
*case study*



I B E A C O N


Read reviews & see what  
other shoppers are saying.




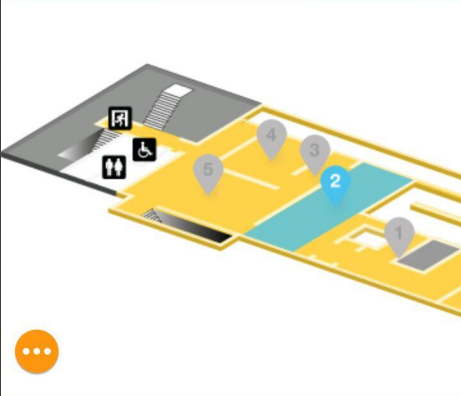


☰ 🔍 Shibuya Hikarie



Satei Zenkashoin  
5F Teahouse  Route


 Shibuya Hikarie 5F ▲



1/F, Zone 2



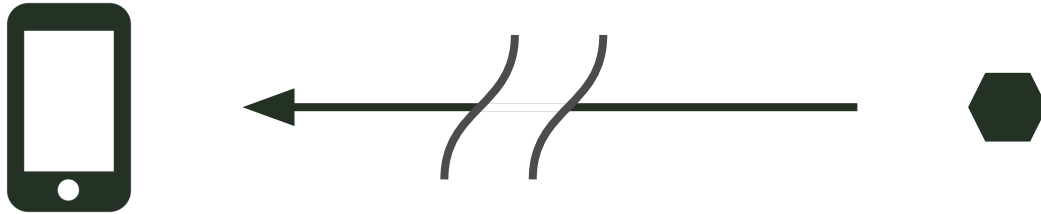
Living Environment

00:00:09  00:01:47

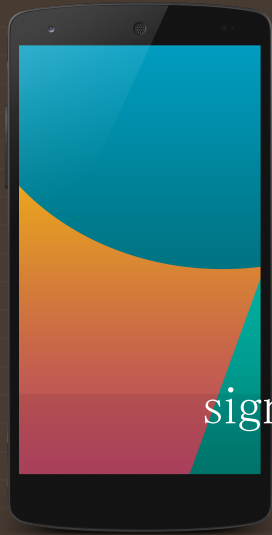


# Term 1

*experiment on signal strength*



I B E A C O N



signals

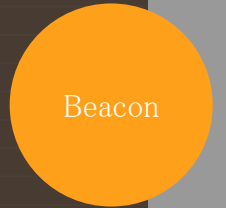
signals

1 metre



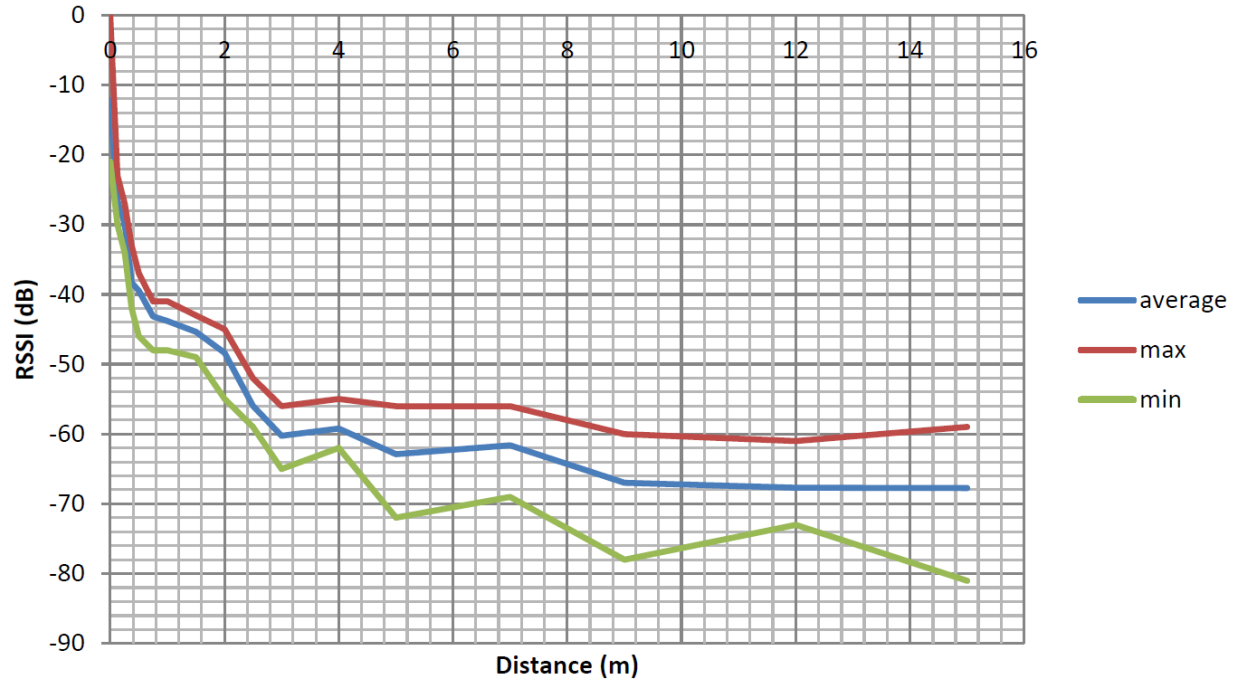
signals

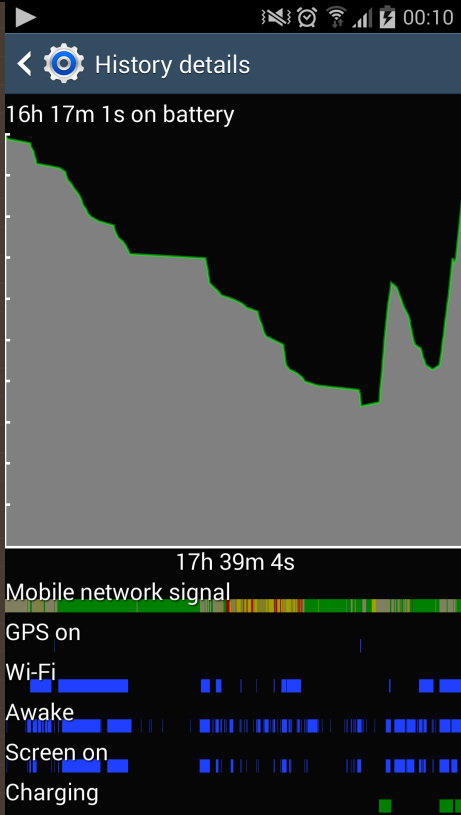
signals

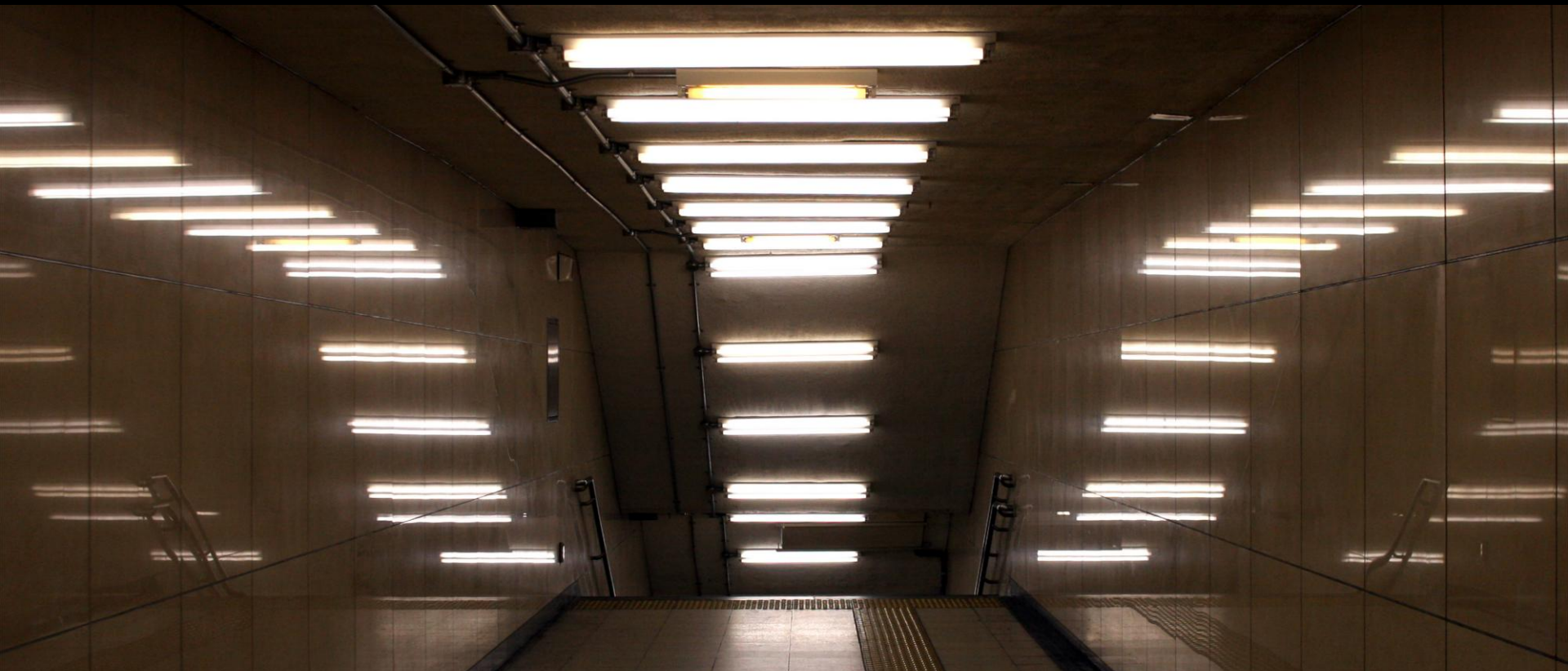


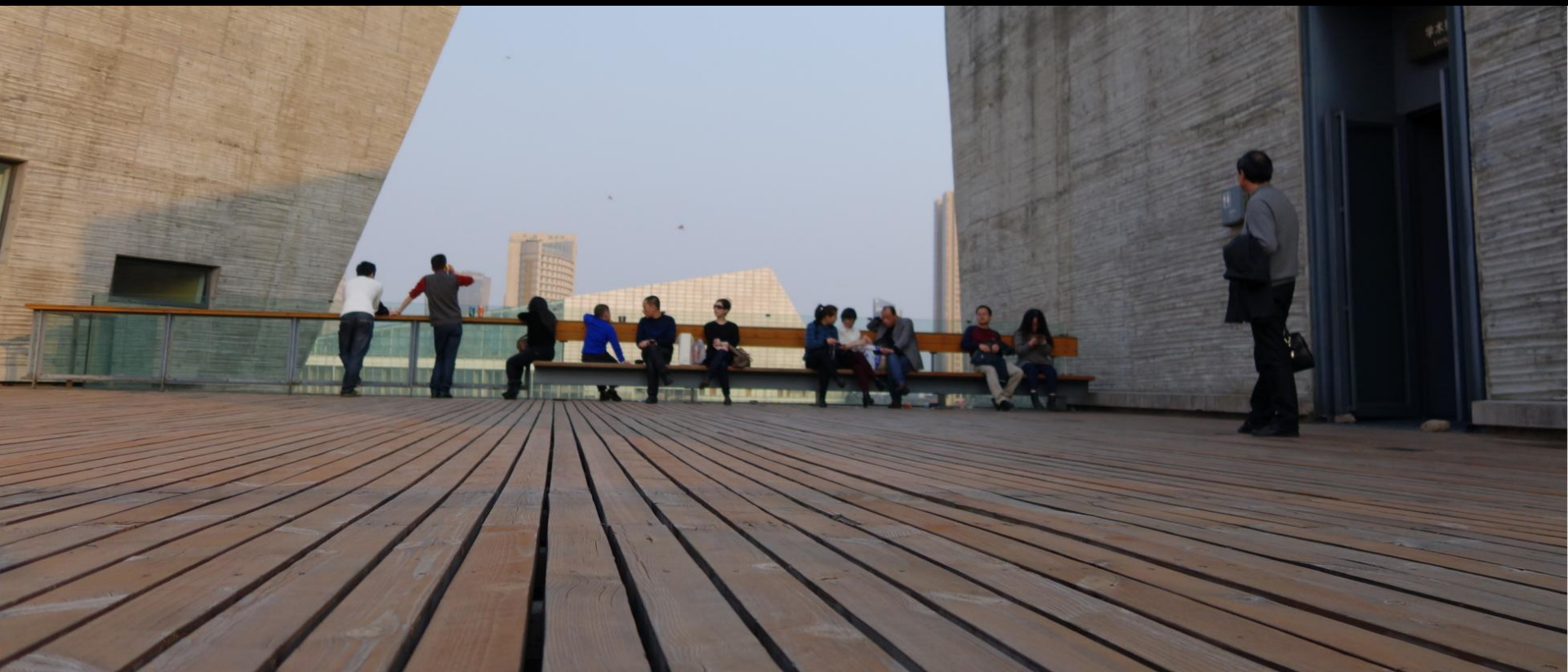
Beacon

## Range of RSSI against Distance of Beacon #1













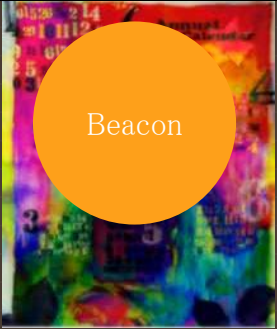
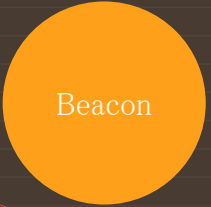


# Term 1

*beacon deployment scheme*



I B E A C O N





Beacon

Beacon

Beacon

Beacon

Beacon

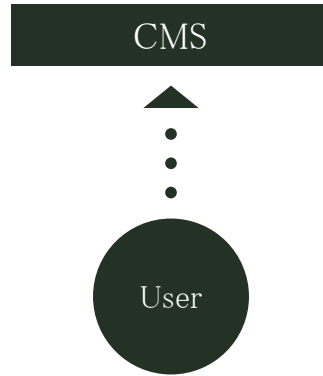
Beacon

Beacon

Beacon

# Term 1

*single user cms*



I B E A C O N

[Dashboard](#)[Add](#)[Edit](#)[Remove](#)[Preview](#)

## Beacon info

All beacons

ID	UUID	MAJOR	MINOR	LONGITUDE	LATITUDE	DESCRIPTION
1	B9407F30F5F8466EAF925556B57FE6D	3344	5566	114.2073102	22.4179243	SHB
2	B9407F30F5F8466EAF925556B57FE6D	2	102	115 9 E	23 18 3 N	
3	B9407F30F5F8466EAF925556B57FE6D	3	103	116 9 E	23 17 2 N	Hello World!
5	B9407F30F5F8466EAF925556B57FE6D	5	105	118 9 E	24 17 2 N	
8	B9407F30F5F8466EAF925556B57FE6D	8	108	121 9 E	26 18 3 N	
10		10	110	123 9 E	27 18 3 N	
11		11	111	124 9 E	27 17 2 N	
15		15	115	128 9 E	29 17 2 N	
17		17	117	130 9 E	30 17 2 N	
18		18	118	131 9 E	31 18 3 N	
19		19	119	132 9 E	31 17 2 N	
20		20	120	133 9 E	32 18 3 N	Some more
21		21	121	134 9 E	32 17 2 N	
22		22	122	135 9 E	33 18 3 N	
23		23	123	136 9 E	33 17 2 N	
24		24	124	137 9 E	34 18 3 N	
25		25	125	138 9 E	34 17 2 N	Last one!
137		1234	5678	hffjr	hfdnr	hello world
139		1020	3040	long	lat	Was ist das?
172	B9407F30F5F8466EAF925556B57FE6D	5555	6666	-74.044581	40.6895698	english 中文 中文 中文 中文 中文 中文
173	B9407F30F5F8466EAF925556B57FE6D	6666	7777	11.582154	48.152359	<script>alert('xxx');</script>
186	E2C56D85OFFB48D2B060D0F5A71096E0	1	2	2.25	3	Bag
187	E2C56D85OFFB48D2B060D0F5A71096E0	1	2	2.25	3	MATSUSHO retract
188	E2C56D85OFFB48D2B060D0F5A71096E1	4095	65535	1	1	EVEREADY
189	E2C56D85OFFB48D2B060D0F5A71096E1	1	1	3.5	1	extend
191	B9407F30F5F8466EAF925556B57FE6D	7776	8887	lonna	latna	des
194	inputUuid	1212	3434	lo	la	des
196	uuid again	1	3	l	ll	de
198	E2C56D85OFFB48D2B060D0F5A71096E0	1	3			

## Edit a beacon

**OWNER****ID****UUID****MAJOR****MINOR****LATITUDE****LONGITUDE****DESCRIPTION****PUBLIC DESCRIPTION**  
"placeholder="optional""/>**PUBLIC TITLE****PUBLIC SUBTITLE**

Term 1

*api*



I B E A C O N

*json*



```
{"status":"OK","data":{"latitude":"22.4179243","longitude":"114.2073102"}}
```

*cross-platform*

*supported by many languages*

# RADAR REST API DOCUMENTATION

## Important notes

GET notes

GET API key

## Methods

GET getDescription

GET getLocationById

GET getLocationByUuidMajorMinor

GET getQuota

GET setDescription

GET setLocation

## About

GET ourDetails

POST comments

## Important notes

GET notes

## HTTP request method

Unless specified, all API calls use **GET**.

## Redirection to HTTPS

The API automatically redirects you to the encrypted HTTPS channel if you are using the unencrypted HTTP.

## Return type

Unless specified, all API calls return **JSON** objects.

## Return format

The format of the returned data is similar to the JSON format specified by JSend.

Please read [JSend's page](#) for details.

## Format

```
{"status":status_of_call,"data":{returned_data}}
```

## Example

```
{"status":"OK","data":{"latitude":"22.4179243","longitude":"114.2073102"}}
```

GET API key

## Request an API key

**New** Use this demo key: 97d9e7b3f06ef1234e15613ebb6663eb

## Methods

GET getDescription

## Description

Returns the description of a beacon.

## Parameters

Term 1

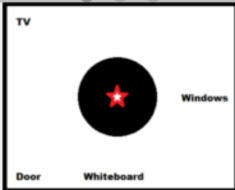
*android application for exhibition*



I B E A C O N

Beacon Details

The Chung Chi College  
Elisabeth Luce Moore  
Library



Term  
2

This term

▲  
2015  
IBEA CON

# *Android*

Slide number thirty two



*application for visitors*

Application for visitors

*Complete re-design and implementation*

# Content



### Harp Seal

Basic Information The harp seal is medium in size. It has silver fur, no visible ears and harp-shaped rings on the back. A female has no prominent markings and most have a black back and are dark brown to black for the rest of the body. Males can grow to a length of 1.9m and weigh up to 140kg. Females are slightly smaller, growing to a length of 1.8m, and weighing 130kg. Pups are born with a thick snowy white coat which turns even

# Settings

## Settings

### Auto Play Audio

Start playing audio automatically

 ON

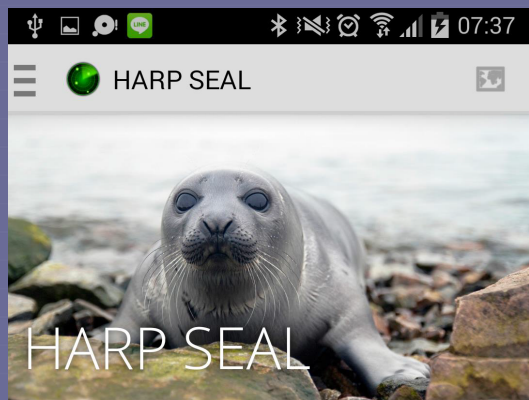
### Language

Select preferred language for item details

# Multilingual content

*English*

正體中文



### Harp Seal

Basic Information The harp seal is medium in size. It has silver fur, no visible ears and harp-shaped rings on the back. A female has no prominent markings and most have a black back and are dark brown to black for the rest of the body. Males can grow to a length of 1.9m and weigh up to 140kg. Females are slightly smaller, growing to a length of 1.8m, and weighing 130kg. Pups are born with a thick snowy white coat which turns even



### 豎琴海豹

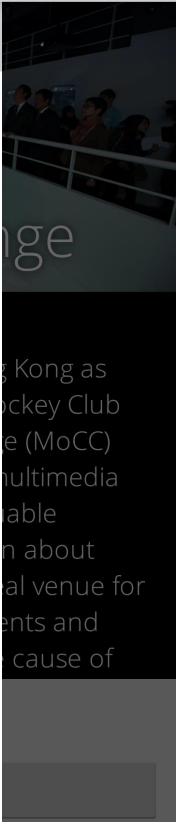
基本資料 豎琴海豹是中型的無耳海豹，銀色毛皮，背上有豎琴形環紋。雌性的環紋較不明顯，背部多為黑色，其他身體部位淺至深褐色，深至黑色。雄性身長可達1.9米，體重可達140公斤；雌性體型略小，身長可達1.8米，體重可達130公斤。豎琴海豹幼崽出生時毛皮厚實雪白，出生後兩周內會變得更白。但兩周後，這層毛皮會開始脫落，露出銀灰色和黑色的毛皮。其他特徵 豎琴海豹能在冰上快速移動，亦是游泳健將。牠們的前肢腳蹼緊貼身體，後肢腳蹼則緊縮在一起，藉以減少體表面積。



Intuitive navigation

Radar 2

- Overview
- Content
- Settings
- About



# Rating and comments

15 minutes, and always swim in cold waters. In summer, they can swim 4,000km for food. They are migratory animals, and move in a range wider and greater than other Arctic seals. Habitat Harp seals mostly live in the North Atlantic and Arctic Oceans, though some are also found in Greenland.

RATING 5 / 5



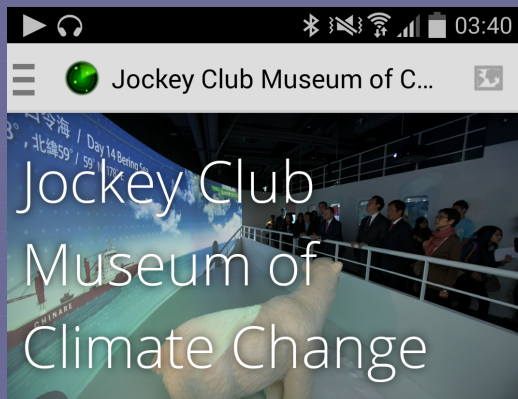
COMMENTS

good SUBMIT

good

LAST VISITED ON 19/04/2015

# Exhibition overview

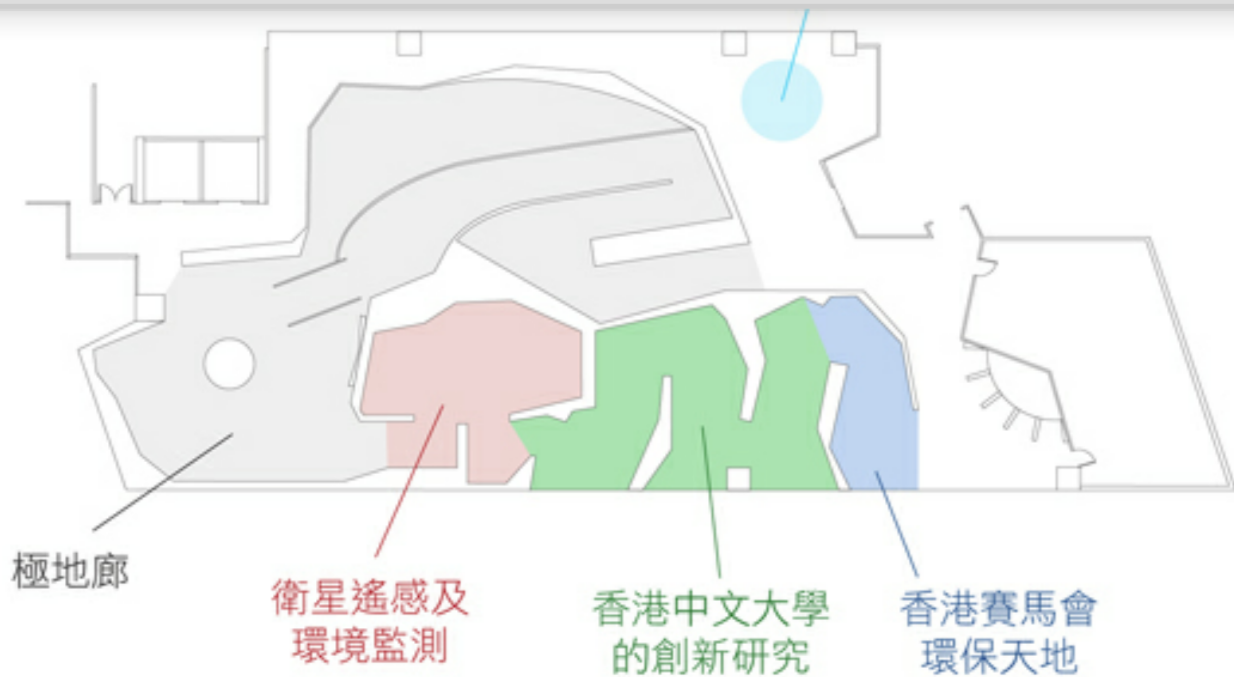


The first of its kind in Hong Kong as well as in the region, the Jockey Club Museum of Climate Change (MoCC) offers an interactive and multimedia exhibition showcasing valuable collections and information about climate change. It is an ideal venue for the public, especially students and teachers, to champion the cause of environmental stewardship and keep themselves abreast of the latest developments on environmental conservation and sustainability.

# Floor plan



## Floor Plan





# Real-time notifications

07:39 Wed, 15 April



Wi-Fi



GPS



Vibrate



Screen rotation



Bluetooth



Reading mode



Mobile data

VOLTE

VoLTE



Jockey Club Museum of Climate Change

Museum closing soon. Thank you for your visit.

07:39



Storage space running out

Some system functions may not work

06:21



19° Mostly Sunny

07:29

1 card

NWMOBILE

*application for exhibition owners  
(beacon deployment application)*

Application for exhibition owners

*New for beacon deployment*

*Changes committed to CMS immediately*

# Multi-user deployment tool



18:25

## Radar Tools

# Welcome to Radar Tools

mocc

.....|

LOGIN

ABOUT

# List of exhibits

## Exhibition Item List

SNOWY OWL

---

RINGED SEALS (Completed)

---

POLAR BEAR (Completed)

---

ARCTIC HARE (Completed)

---

HARP SEAL (Completed)

---

BELUGA WHALE (Completed)

---

ARCTIC FOX (Completed)

---

WALRUS (Completed)



# Exhibit settings

*ID*

*Bearings (Range)*

## RINGED SEALS Settings

# Beacon Settings

UUID 107F30F5F8466EAF925556B57FE6D

Major 26846

Minor 36763

Angle 9 to 155

SET BEACON ID

SET RIGHT BEARING

SET LEFT BEARING

SAVE SETTINGS

*Web*

Slide number fifty nine

*api*

API

*Added new functions*

# RADAR REST API DOCUMENTATION

## Important notes

GET notes

GET API key

## Methods

GET getDescription

GET getLocationById

GET getLocationByUuidMajorMinor

GET getQuota

GET setDescription

GET setLocation

## About

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## Important notes

GET notes

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#### Format

```
{"status":status_of_call,"data":{returned_data}}
```

#### Example

```
{"status":"OK","data":{"latitude":"22.4179243","longitude":"114.2073102"}}
```

GET API key

### Request an API key

**New** Use this demo key: 97d9e7b3f06ef1234e15613ebb6663eb

## Methods

GET getDescription

### Description

Returns the description of a beacon.

Parameters

*cms*

CMS

*Multi-user*

*One-click deployment*

*Backup*

*WYSIWYG*

*Analytics*



Login screen

# RADAR

## LOG IN

ID

PASSWORD

 LOG IN

Main screen

# RADAR

## DASHBOARD

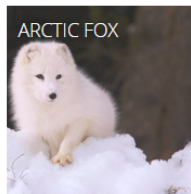
### OPERATIONS

[+ ADD](#)[↑ RESTORE ▾](#)[OVERVIEW](#)[ANALYTICS](#)[ANNOUNCEMENT](#)

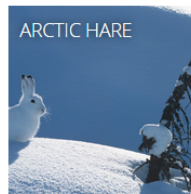
VISITORS IN LAST 10 MINUTES

[LOG OUT](#)

### ITEMS

[ALL](#)[BIRDS](#)[LAND MAMMALS](#)[SEA MAMMALS](#)[UNDER MAINTENANCE](#)[ID](#)[TITLE](#)[VISITOR COUNT](#)[AVERAGE RATING](#)[COMMENT COUNT](#)

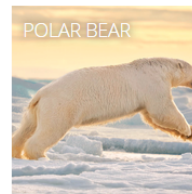
ARCTIC FOX



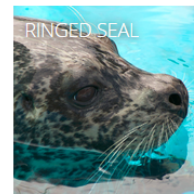
ARCTIC HARE



BELUGA WHALE



POLAR BEAR



RINGED SEAL



SNOWY OWL

### FLOOR PLAN

# RADAR

## DASHBOARD

### OPERATIONS

[+ ADD](#)[↑ RESTORE ▾](#)[🏛 OVERVIEW](#)[📊 ANALYTICS](#)[📣 ANNOUNCEMENT](#)

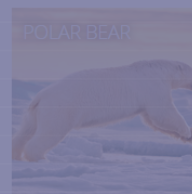
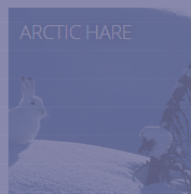
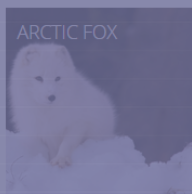
VISITORS IN LAST 10 MINUTES

[🔒 LOG OUT](#)

### ITEMS

[ALL](#) [BIRDS](#) [LAND MAMMALS](#) [SEA MAMMALS](#) [UNDER MAINTENANCE](#)

ID	TITLE	VISITOR COUNT	AVERAGE RATING	COMMENT COUNT
----	-------	---------------	----------------	---------------



### FLOOR PLAN

# RADAR

## DASHBOARD

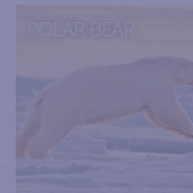
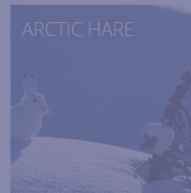
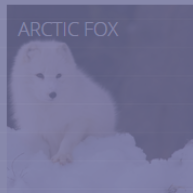
### OPERATIONS

[+ ADD](#)[↑ RESTORE ▾](#)[🏛 OVERVIEW](#)[📊 ANALYTICS](#)[📣 ANNOUNCEMENT](#)

VISITORS IN LAST 10 MINUTES

[🔒 LOG OUT](#)

### ITEMS

[ALL](#)[BIRDS](#)[LAND MAMMALS](#)[SEA MAMMALS](#)[UNDER MAINTENANCE](#)[ID](#)[TITLE](#)[VISITOR COUNT](#)[AVERAGE RATING](#)[COMMENT COUNT](#)

### FLOOR PLAN

# RADAR

## DASHBOARD

### OPERATIONS

[+ ADD](#)[↑ RESTORE](#)[🏛 OVERVIEW](#)[📊 ANALYTICS](#)[📢 ANNOUNCEMENT](#)

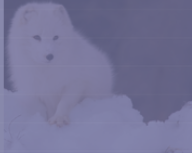
VISITORS IN LAST 10 MINUTES

[🔒 LOG OUT](#)

### ITEMS

[ALL](#)[BIRDS](#)[LAND MAMMALS](#)[SEA MAMMALS](#)[UNDER MAINTENANCE](#)[ID](#)[TITLE](#)[VISITOR COUNT](#)[AVERAGE RATING](#)[COMMENT COUNT](#)

ARCTIC FOX



ARCTIC HARE



BELUGA WHALE



POLAR BEAR



RINGED SEAL



SNOW OWL



### FLOOR PLAN

# RADAR

## DASHBOARD

### OPERATIONS

[+ ADD](#)
[RESTORE ▾](#)
[OVERVIEW](#)
[ANALYTICS](#)
[ANNOUNCEMENT](#)

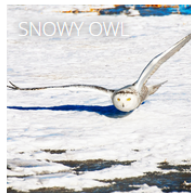
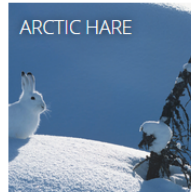
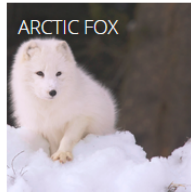
VISITORS IN LAST 10 MINUTES


[LOG OUT](#)

### ITEMS

[ALL](#)
[BIRDS](#)
[LAND MAMMALS](#)
[SEA MAMMALS](#)
[UNDER MAINTENANCE](#)

ID	TITLE	VISITOR COUNT	AVERAGE RATING	COMMENT COUNT
	ARCTIC FOX			
	ARCTIC HARE			
	BELUGA WHALE			
	POLAR BEAR			
	RINGED SEAL			
	SNOWY OWL			



### FLOOR PLAN



CURRENT EXHIBITION

OVERVIEW

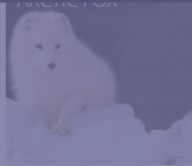
ANALYTICS

ANNOUNCEMENT

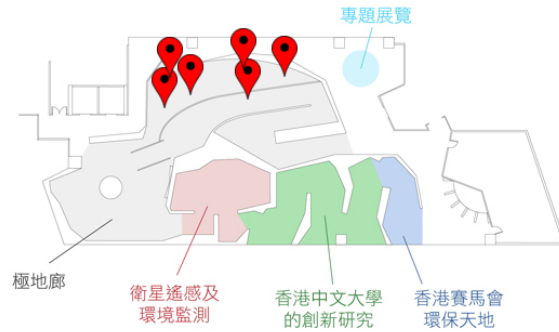
VISITORS IN LAST 10 MINUTES



LOG OUT



FLOOR PLAN



# Navigation bar

*Backup*

*Current exhibition*

*Next exhibition*

# RADAR

## DASHBOARD

### OPERATIONS

+ ADD

↑ RESTORE ▾

🏛️ OVERVIEW

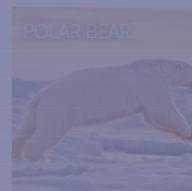
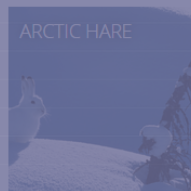
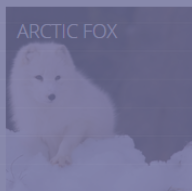
📊 ANALYTICS

📢 ANNOUNCEMENT

VISITORS IN LAST 10 MINUTES



### ITEMS

ALL BIRDS LAND MAMMALS SEA MAMMALS UNDER MAINTENANCEID TITLE VISITOR COUNT AVERAGE RATING COMMENT COUNT

Operations

*Search with Regex*

*Add*

*Restore*

*Exhibition overview*

*Analytics*

# Operations (Con't)

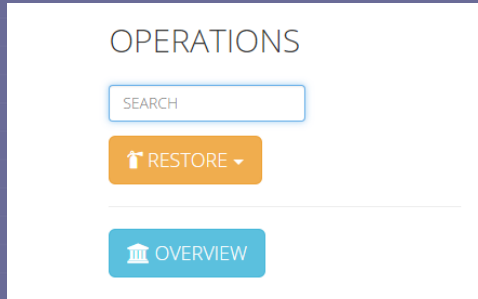
*Announcement*

*Commit*

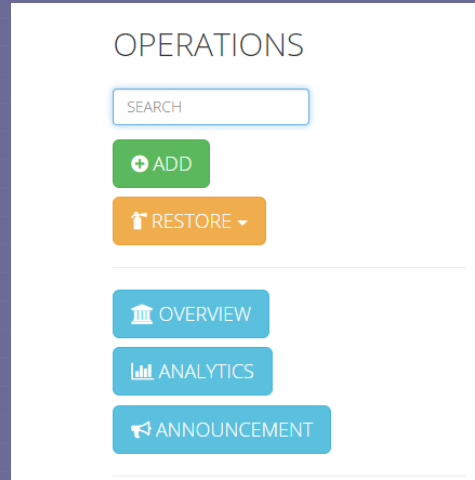
*Delete all*

*Settings*

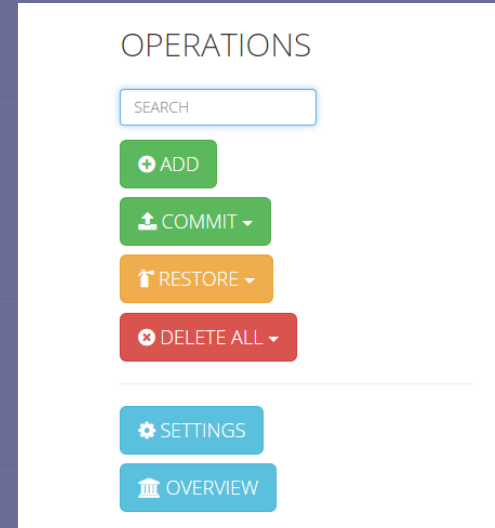
## *Backup*



## *Current exhibition*



## *Next exhibition*



# Search with Regex

*Simple string*

*Regex in JavaScript style*

*Case-insensitive*

## OPERATIONS

+ ADD

↑ RESTORE ▾

🏛️ OVERVIEW

📊 ANALYTICS

## ITEMS

ALL

BIRDS

LAND MAMMALS

SEA MAMMALS

UNDER MAINTENANCE

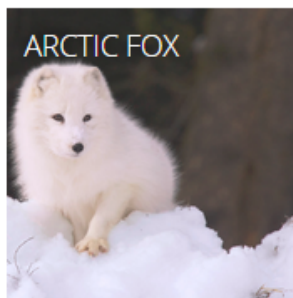
ID

TITLE

VISITOR COUNT

AVERAGE RATING

COMMENT COUNT





Add

*Adds an exhibit*

*Click on the floor plan position the exhibit*



ADD

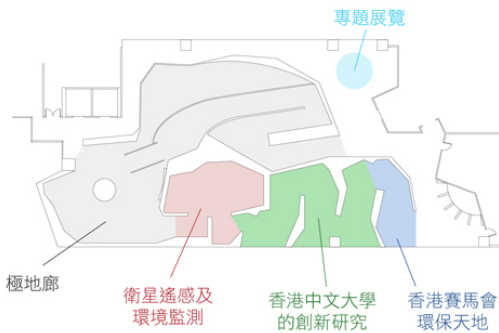
CHINESE TITLE

CHINESE TITLE

ENGLISH TITLE

ENGLISH TITLE

LOCATION



CATEGORY

Select a category

UUID

UUID

MAJOR

MAJOR

MINOR

MINOR

# Restore

*Recovers data from / to backup, current exhibition and next exhibition*

 RESTORE ▾

FROM BACKUP

CONFIRM

FROM NEXT EXHIBITION

CONFIRM

# Exhibition overview

*Quick info of the exhibition*

*Edit overview here*



OVERVIEW

OPERATIONS

CHINESE

ENGLISH



## Jockey Club Museum of Climate Change

The first of its kind in Hong Kong as well as in the region, the Jockey Club Museum of Climate Change (MoCC) offers an interactive and multimedia exhibition showcasing valuable collections and information about climate change. It is an ideal venue for the public, especially students and teachers, to champion the cause of environmental stewardship and keep themselves abreast of the latest developments on environmental conservation and sustainability. Extended activities of the MoCC exhibition include eco tour that guide visitors around the prime ecological sites and green facilities on the vast CUHK campus, and a variety of workshops and activities that promote green living.

The MoCC is within 3-minute walking distance from the University MTR Station. Green building principles are adopted as one of the important architectural concepts in aspects such as introduction of day lighting, and solar shading devices, as well as energy conservation and renewable energy usage.

# Analytics

*Quick tool to analyse exhibit popularity*

*Analyses visitor count, average rating and stay duration*

*Data displayed at a glance using graphs*



# ANALYTICS

## CHARTS

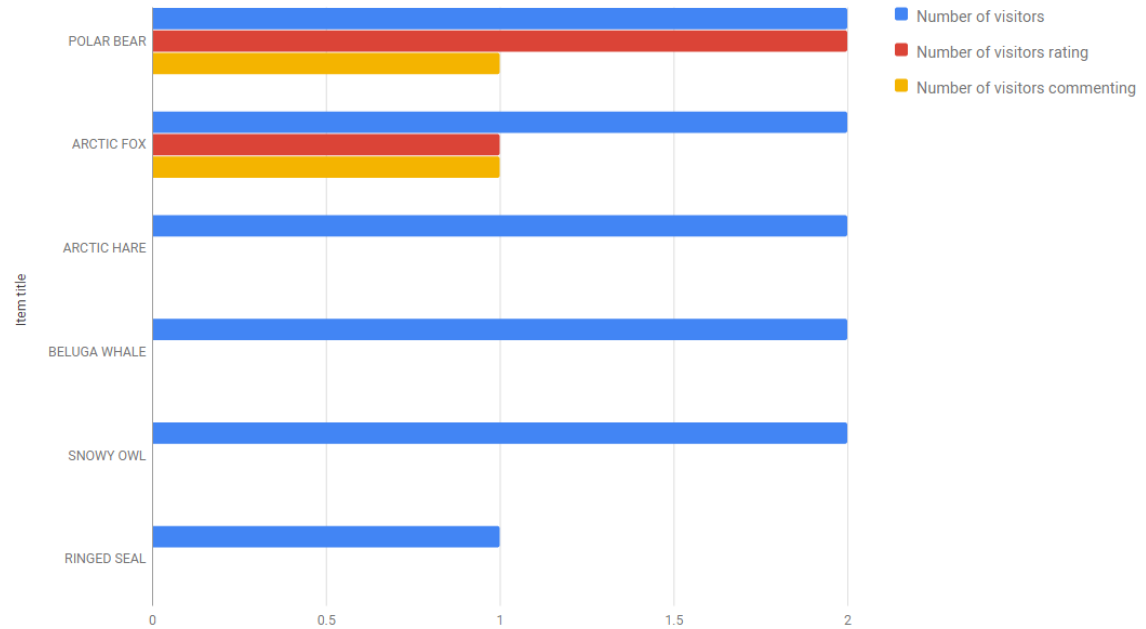
 VISITOR COUNTS

 AVERAGE RATING

 STAY DURATION

### Visitor Statistics

Visitor count, rating count and comment count







# ANALYTICS

## CHARTS

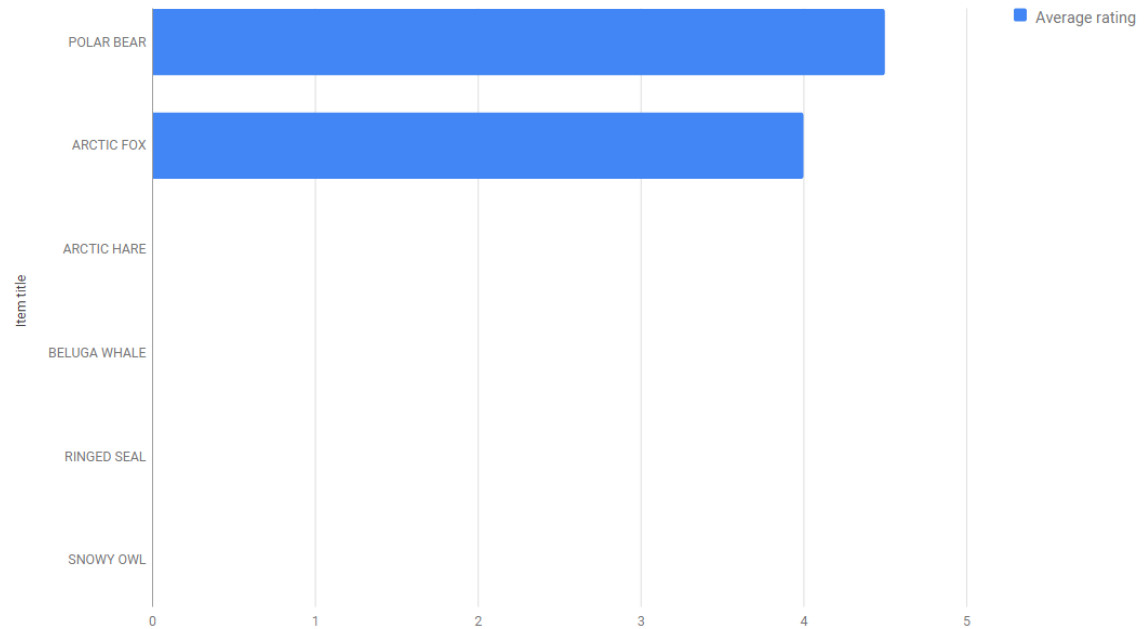
 VISITOR COUNTS

 AVERAGE RATING

 STAY DURATION

### Average Exhibit Rating

Average rating for each exhibit. Ratings range from 1 to 5





# ANALYTICS

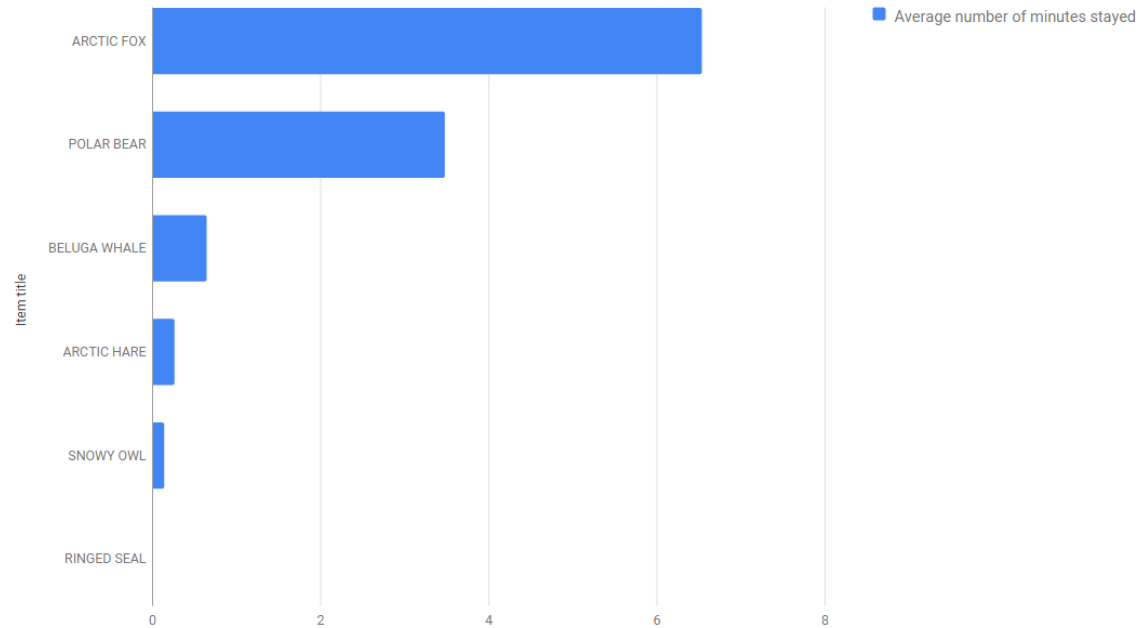
## CHARTS

 VISITOR COUNTS

 AVERAGE RATING

 STAY DURATION

Average duration of stay at each exhibit  
Average length of period tourists stay at the spot



# Announcement

*Pushes multilingual announcements to all users*

*immediately*

*e.g. Fire alert, closing reminder*



## ANNOUNCEMENT

CHINESE MESSAGE

ENGLISH MESSAGE

 MAKE AN ANNOUNCEMENT

# Commit

*Makes changes live immediately*

 COMMIT ▾

COMMIT

CONFIRM

Delete all (reversible)

*Deletes all exhibit information*

*Data can be rolled back to current or backup versions*

✕ DELETE ALL ▾

DELETE ALL BEACONS

CONFIRM

⚙️ SETTINGS



# Settings

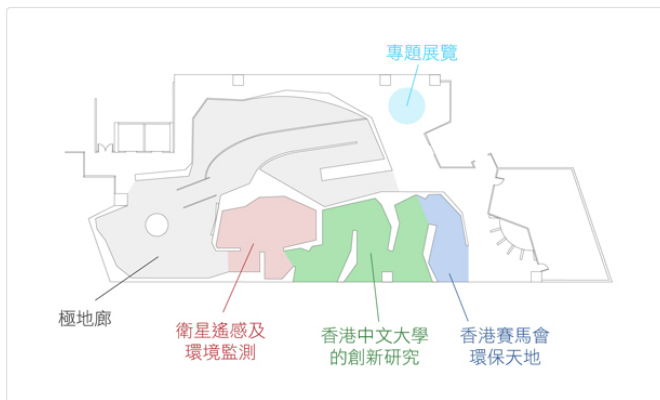
*Modifies the exhibition information*



## SETTINGS

FLOOR PLAN

[http://appsrv.cse.cuhk.edu.hk/~twyeung2/moccc/images/hk\\_mocccfloorplan.jpg](http://appsrv.cse.cuhk.edu.hk/~twyeung2/moccc/images/hk_mocccfloorplan.jpg)



CHINESE TITLE

賽馬會氣候變化博物館

CHINESE DESCRIPTION

賽馬會氣候變化博物館是香港以至東南亞第一所以氣候變化為主題的博物館，向公眾提供有關氣候變化的展品和資訊的多媒體互動展覽，讓公眾尤其學生和老師緊貼及掌握可持續發展的趨勢，凝聚環保力量。展覽的延伸活動包括由導賞員帶領遊覽中大校園生態景點和參觀綠化設施的生態行，以及推廣綠色生活的工作坊及活動。

賽馬會氣候變化博物館毗鄰港鐵大學站，步行三分鐘即可抵達。博物館的設計融會貫通綠色建築概念，包括自然採光、遮陽隔熱裝置、節約能源及使用再生能源等。

ENGLISH TITLE

Jockey Club Museum of Climate Change

ENGLISH DESCRIPTION

The first of its kind in Hong Kong as well as in the region, the Jockey Club Museum of Climate Change (MoCC) offers an interactive and multimedia exhibition showcasing valuable

# Visitor count

*Counts visitors in the last 10 minutes*

*Auto updates every 15 seconds*

VISITORS IN LAST 10 MINUTES



Items

*Displays all exhibits*

*Filter*

*Sort*

Filter

# RADAR

DASHBOARD

OPERATIONS

ADD

RESTORE

OVERVIEW

ANALYTICS

ANNOUNCEMENT

VISITORS IN LAST 10 MINUTES

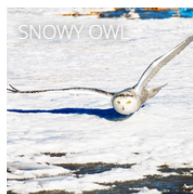
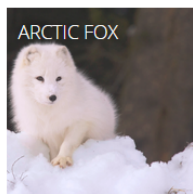
0

LOG OUT

ITEMS

ALL BIRDS LAND MAMMALS SEA MAMMALS UNDER MAINTENANCE

ID TITLE VISITOR COUNT AVERAGE RATING COMMENT COUNT



FLOOR PLAN

# RADAR

## DASHBOARD

### OPERATIONS

[+ ADD](#)[↑ RESTORE](#)[🏠 OVERVIEW](#)[📊 ANALYTICS](#)[📢 ANNOUNCEMENT](#)

VISITORS IN LAST 10 MINUTES

[🔒 LOG OUT](#)

### ITEMS

[ALL](#)[BIRDS](#)[LAND MAMMALS](#)[SEA MAMMALS](#)[UNDER MAINTENANCE](#)[ID](#)[TITLE](#)[VISITOR COUNT](#)[AVERAGE RATING](#)[COMMENT COUNT](#)

### FLOOR PLAN





Sort

# RADAR

## DASHBOARD

### OPERATIONS

[+ ADD](#)
[RESTORE](#)
[OVERVIEW](#)
[ANALYTICS](#)
[ANNOUNCEMENT](#)

VISITORS IN LAST 10 MINUTES

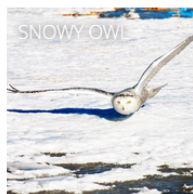
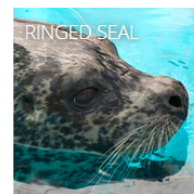
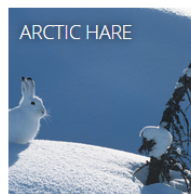
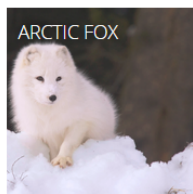
0

[LOG OUT](#)

## ITEMS

[ALL](#)
[BIRDS](#)
[LAND MAMMALS](#)
[SEA MAMMALS](#)
[UNDER MAINTENANCE](#)

ID	TITLE	VISITOR COUNT	AVERAGE RATING	COMMENT COUNT
	ARCTIC FOX			
	ARCTIC HARE			
	BELUGA WHALE			
	POLAR BEAR			
	RINGED SEAL			
	SNOWY OWL			



## FLOOR PLAN

# RADAR

## DASHBOARD

## OPERATIONS







VISITORS IN LAST 10 MINUTES



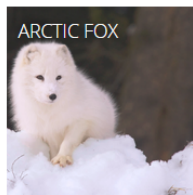
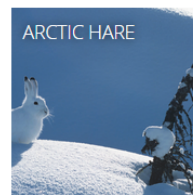
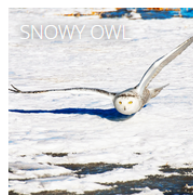

## ITEMS









## FLOOR PLAN

# Preview

*Shows details of a particular exhibit*



## PREVIEW

### DETAILS

UUID: B9407F30F5F8466EAF925556B57FE6D

MAJOR: 26846

MINOR: 36763

COMPASS ANGLE: 105 to 178

### MAINTENANCE



### LANGUAGE

CHINESE

ENGLISH

### STATISTICS

VISITOR COUNT



AVERAGE RATING



RATED BY



The polar bear is the largest member of the bear family. It is also the largest carnivorous animal on land. The polar bear is distinguished from other members of its species by its long body and the characteristic shape of its neck and skull. Male and female bears differ greatly in body weight. Males (350-800kg) weigh more than twice as much as females (150-300kg). Weights vary with the seasons. In particular, pregnant females may be twice as heavy in late summer as in early spring.

#### Fur

The fur of a polar bear consists of a layer of dense underfur and an outer layer of guard hair which looks white but is actually transparent. This bright white coat provides good camouflage in the snow, protecting bears from the threat of human hunters and helping them to track and hunt down seals. The thick, glossy coat of fur also covers a fat layer under the skin and keeps the bear warm.



## PREVIEW

### DETAILS

UUID: B9407F30F5F8466EAF925556B57FE6D

MAJOR: 26846

MINOR: 36763

COMPASS ANGLE: 105 to 178

### MAINTENANCE



### LANGUAGE

CHINESE

ENGLISH

### STATISTICS

VISITOR COUNT



AVERAGE RATING



RATED BY



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## PREVIEW

### DETAILS

UUID: B9407F30F5F8466EAF925556B57FE6D

MAJOR: 26846

MINOR: 36763

COMPASS ANGLE: 105 to 178

### MAINTENANCE

OFF

### LANGUAGE

CHINESE

ENGLISH

### STATISTICS

VISITOR COUNT



AVERAGE RATING



RATED BY



## POLAR BEAR

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Details

*UUID*

*Major*

*Minor*

*Compass angles*



## DETAILS

UUID: B9407F30F5F8466EAF925556B57FE6D

MAJOR: 26846

MINOR: 36763

COMPASS ANGLE: 105 to 178

Maintenance

*Toggle on and off*

## MAINTENANCE



Language

*English*

正體中文

## LANGUAGE

CHINESE

ENGLISH

# Statistics

*Visitor count*

*Average rating*

*Rated by*

*Comment count*

*Average stay duration*

## STATISTICS

VISITOR COUNT



AVERAGE RATING



RATED BY



COMMENT COUNT



AVERAGE STAY DURATION



Cover photos slideshow

*Displays all photos of the exhibit*





POLAR BEAR

# Description

*Describes the exhibits*

The polar bear is the largest member of the bear family. It is also the largest carnivorous animal on land. The polar bear is distinguished from other members of its species by its long body and the characteristic shape of its neck and skull. Male and female bears differ greatly in body weight. Males (350-800kg) weigh more than twice as much as females (150-300kg). Weights vary with the seasons. In particular, pregnant females may be twice as heavy in late summer as in early spring.

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#### Other Characteristics

The polar bear has a long and narrow head, which is smaller than that of other bears. It also has smaller ears, which are covered by a thin layer of fur. Its long incisors are needed for hunting, and its sharp molars are essential for its mainly carnivorous diet. Its large, strong palms enables it to smash holes in the ice and hunt seals. It also has non-retractable straight, sharp brown claws.

**Food** Polar bears mainly feed on ringed seals, but their diet also occasionally includes bearded seals. Other known food sources include young walruses, carcasses of beluga whales and right whales, birds, vegetation and seaweed. Polar bears commonly travel long distances to hunt for food.

**Behaviour** Polar bears lead solitary lives except when pregnant or rearing their young.

**Habitat** Polar bears are found throughout the Arctic Circle, along the shoreline, on islands and most commonly on floating ice. They hunt, live, reproduce and build lairs on large masses of stable floating ice in the Arctic region all year round.

# Comments

*Displays all comments below the description*

COMMENTS is it found in south pole?

*SHB Reading Room on 6/F*

Slide number one hundred twenty six







# *HKIDC International ICT Expo 2015*

Slide number one hundred twenty nine





Prof. KING Kuo Chin Irwin  
金國慶教授

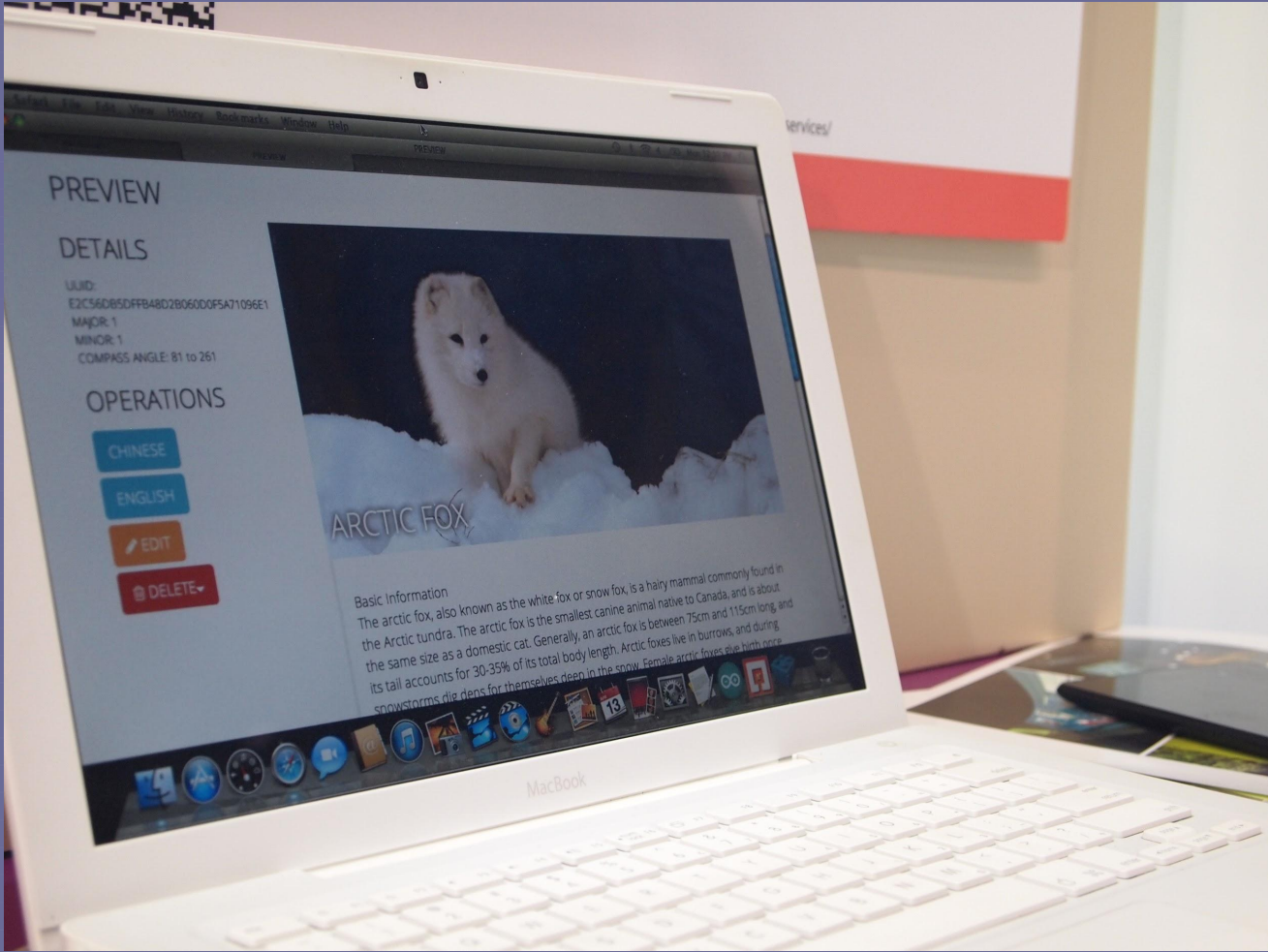
Department of Computer Science and Engineering  
計算機科學與工程學系

## Open-source Cloud-based SDK Framework for Location-based Services

基於位置服務的開源雲計算軟件開發工具包框架

With the advancement of Internet and positioning systems such as GPS, Wi-Fi, and iBeacon, etc., accurately pinpointing users' locations, especially the indoor locations, becomes possible. This brings many business opportunities via providing location-based services – to support fast development of mobile applications such as recommender systems, proximity information pushing, parking guidance, tourism/travel suggestion, and emergent evacuation.

In view of this, CUHK developed a set of Software Development Kits (SDKs) and Application Programming Interfaces (APIs) for developers to create new location-based services. Our development follows the following unique features: (1) Novel algorithms for users' accurate location estimation. (2) Cloud-based big data analytics techniques for users' accurate location estimation. Our development is open source and available on GitHub.



# PREVIEW

## DETAILS

UUID:  
E2C56DB5DFFB48D280600F5A71096E1  
MAJOR: 1  
MINOR: 1  
COMPASS ANGLE: 81 to 261

## OPERATIONS

CHINESE

ENGLISH

EDIT

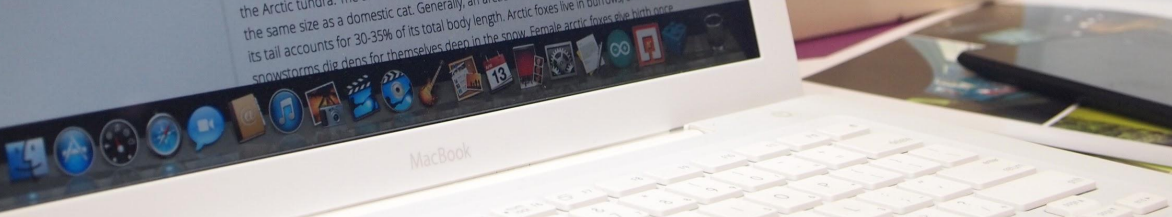
DELETE



ARCTIC FOX

### Basic Information

The arctic fox, also known as the white fox or snow fox, is a hairy mammal commonly found in the Arctic tundra. The arctic fox is the smallest canine animal native to Canada, and is about the same size as a domestic cat. Generally, an arctic fox is between 75cm and 115cm long, and its tail accounts for 30-35% of its total body length. Arctic foxes live in burrows, and during snowstorms dig dens for themselves deep in the snow. Female arctic foxes dig high nose



MacBook



Future

Next



\*

IBEA CON

Future

*iOS application*



I B E A C O N

Future

*merchant-specific system*



I B E A C O N



Future

*automatic commits*



I B E A C O N

Future

*analytics with inferences*



I B E A C O N

?

Slide number one hundred thirty nine

*suggestions on deployment*

Slide number one hundred forty

*ID is public*

*Never use in transactions*

*Signal strength matters*

*NG Ping Him  
Yeung Tak Wing  
2015*



*Thank you*

*lyu1403.*