

Outline

- ▣ 1. Outline
- ▣ 2. Items to Prepare
- ▣ 3. Login
- ▣ 4. Select Camera
- ▣ 5. Customer Analysis
 - ▣ 5.1 Customer Analysis Main Screen
 - ▣ 5.2 Start Customer Analysis
 - ▣ 5.3 Display Customer Analysis Live Results
 - ▣ 5.4 Change Customer Analysis Settings
 - ▣ 5.5 Display Customer Analysis Results
 - ▣ 5.6 Delete Customer Analysis Results
 - ▣ 5.7 Live View
- ▣ 6. People Counter
 - ▣ 6.1 People Counter Main Screen
 - ▣ 6.2 Start People Counter
 - ▣ 6.3 Display People Counter Live Results
 - ▣ 6.4 Change People Counter Settings
 - ▣ 6.5 Display People Counter Results
 - ▣ 6.6 Delete People Counter Results
- ▣ 7. Face Counter
 - ▣ 7.1 Face Counter Main Screen
 - ▣ 7.2 Start Face Counter
 - ▣ 7.3 Display Face Counter Live Results
 - ▣ 7.4 Change Face Counter Settings
 - ▣ 7.5 Display Face Counter Results
 - ▣ 7.6 Delete Face Counter Results
- ▣ 8. Individual Recognition
 - ▣ 8.1 Individual Recognition Main Screen
 - ▣ 8.2 Register Face
 - ▣ 8.3 Delete Registered Image
 - ▣ 8.4 Delete User
 - ▣ 8.5 Start Individual Recognition
 - ▣ 8.6 Change Individual Recognition Settings
- ▣ 9. Access Monitoring
 - ▣ 9.1 Access Monitoring Main Screen
 - ▣ 9.2 Start Access Monitoring
 - ▣ 9.3 Change Access Monitoring Settings



- ❑ The Basic Operations App Guide for Windows provides information on how to use the Basic Operations App on a Windows computer.
- ❑ The features included in the Basic Operations App are **Customer Analysis, Face Counter, People Counter, Individual Recognition** and **Access Monitoring**.
- ❑ There are no account registration or pairing features on the Windows version of the Basic Operations App. As such, registration and pairing must be completed on the iOS / Android app before using the Basic Operations App on a Windows computer (Windows phones or tablets are not supported).



2. Items to Prepare

- ☐ HVC-C2W (B5T-003001)
- ☐ Windows computer



3. Login

- ☐ Login to use the app.
Type your registered email address and password and select “Login” (pre-registration is required and must be done with the Android or iOS version of the app).

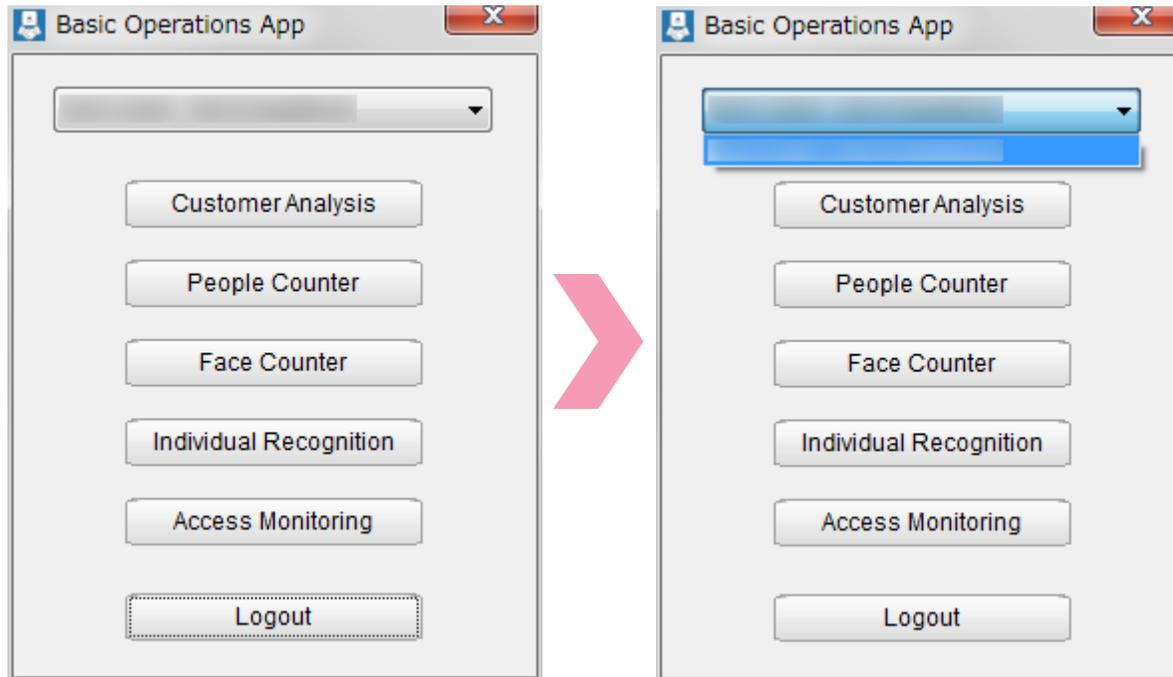
A screenshot of the "Basic Operations App" login screen. The window title is "Basic Operations App". The form contains two text input fields: "Email Address" and "Password". Below each field is a checkbox: "Save email address" and "Save password". A "Login" button is located at the bottom of the form. A dashed pink box highlights the input fields and checkboxes.

- ☐ Change to in order to save the email address and password info.

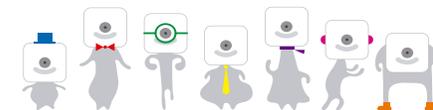


4. Select Camera

- Select a camera already paired with the registered email used for login.



- Make sure to complete the camera pairing with through the iOS / Android app in order to display the selectable camera.



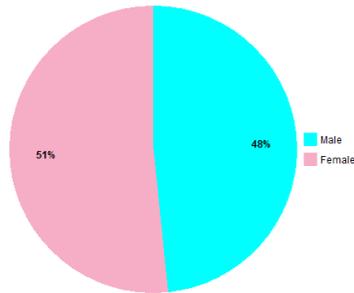
5. Customer Analysis

 **Customer Analysis** will estimate the gender and age of customers and display properties estimation results.

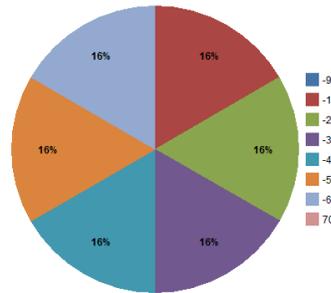
※The numbers indicate the number of people for a category.

Graph Image

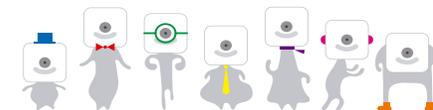
Gender



Age

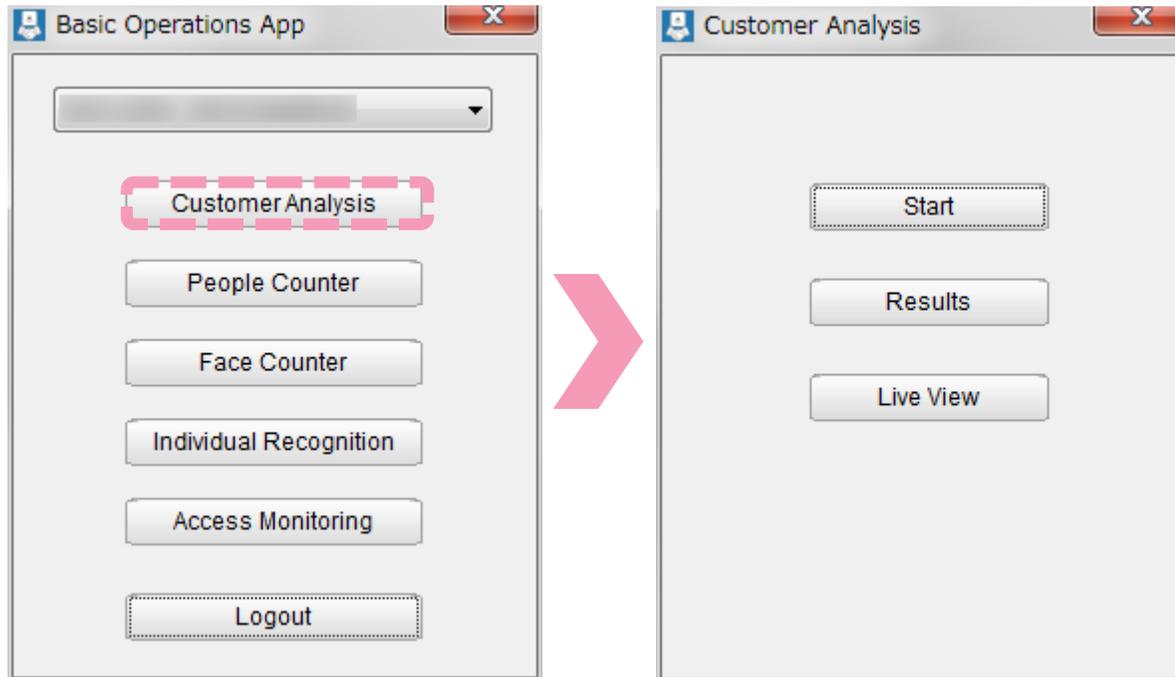


	-9	-19	-29	-39	-49	-59	-69	70-
Male	0	3	4	2	1	1	4	1
Female	0	0	5	1	4	3	3	0



5.1 Customer Analysis Main Screen

- Select "Customer Analysis".

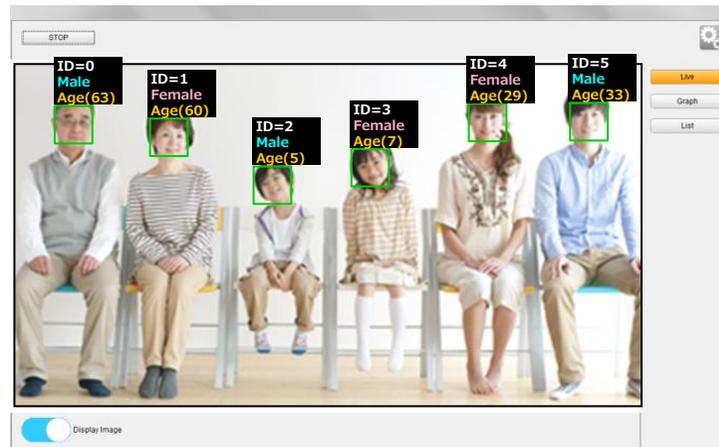
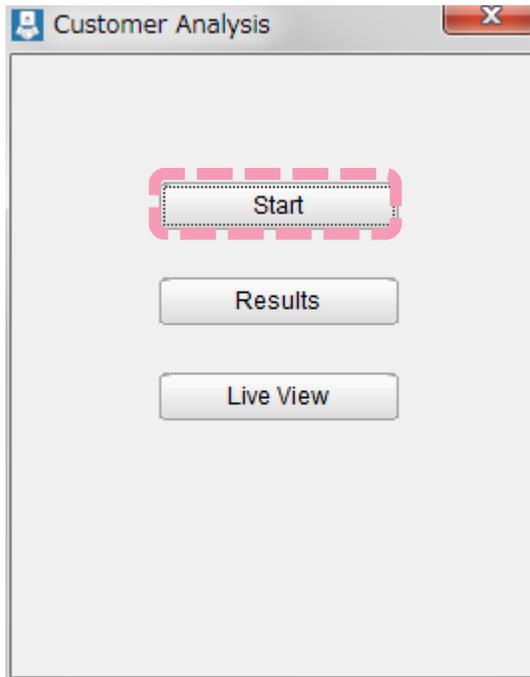


- Select "Start" to start **Customer Analysis**.
- Select "Results" in order to look at past results or to send them to a different device.
- Select "Live View" to display the live camera feed.

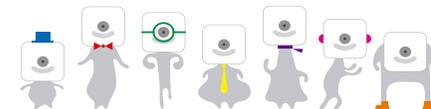


5.2 Start Customer Analysis

- Start **Customer Analysis** by pressing “Start”.

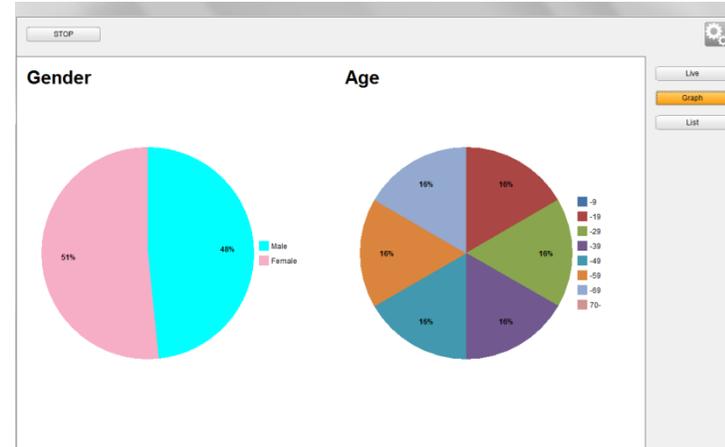
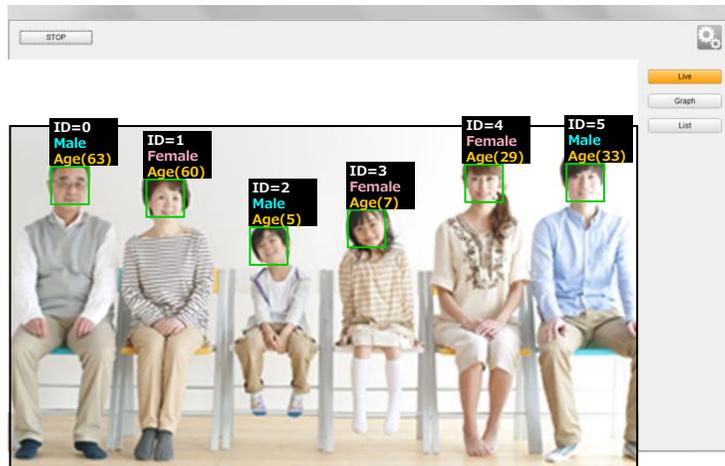


- The live camera feed and the results can be seen in the “Live” tab.
- A “?” will be displayed during the process and the age and gender will be displayed when done.

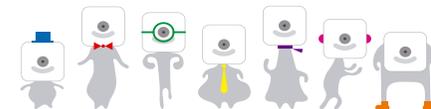


5.3 Display Customer Analysis Live Results

- Display the **Customer Analysis** live results. Switch to the “Graph” or “List” tab to see the live results.



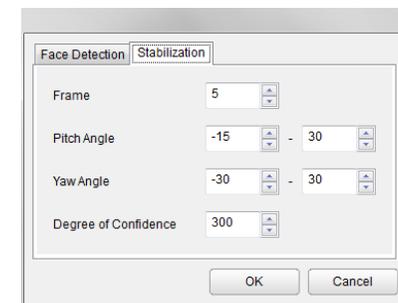
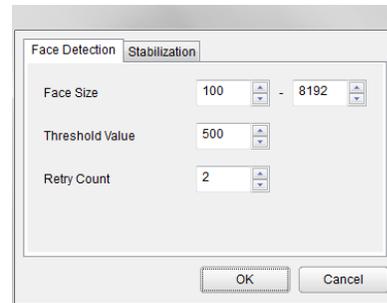
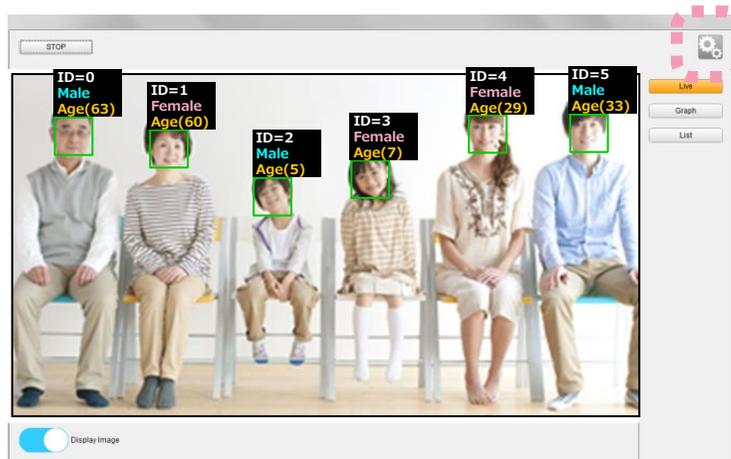
	-9	-19	-29	-39	-49	-59	-69	70-
Male	0	3	4	2	1	1	4	1
Female	0	0	5	1	4	3	3	0



5.4 Change Customer Analysis Settings

Change the **Customer Analysis** settings.

Press to change the face detection and stabilization parameters.



Face Detection Parameters

- Face size: Set the minimum and maximum size for faces. Setting a lower minimum size will detect more faces but also make the process take longer.
- Threshold value: Set the threshold value. A higher threshold value will reduce the number of false detections but also reduce the detection rate.
- Retry count: Set the retry count. If a person is no longer displayed) but one reappears (regardless if same person or not) within the number of frames set with the retry count, it will be considered the same person. Note that a high retry count will increase the possibility of swapping individuals being considered the same person.

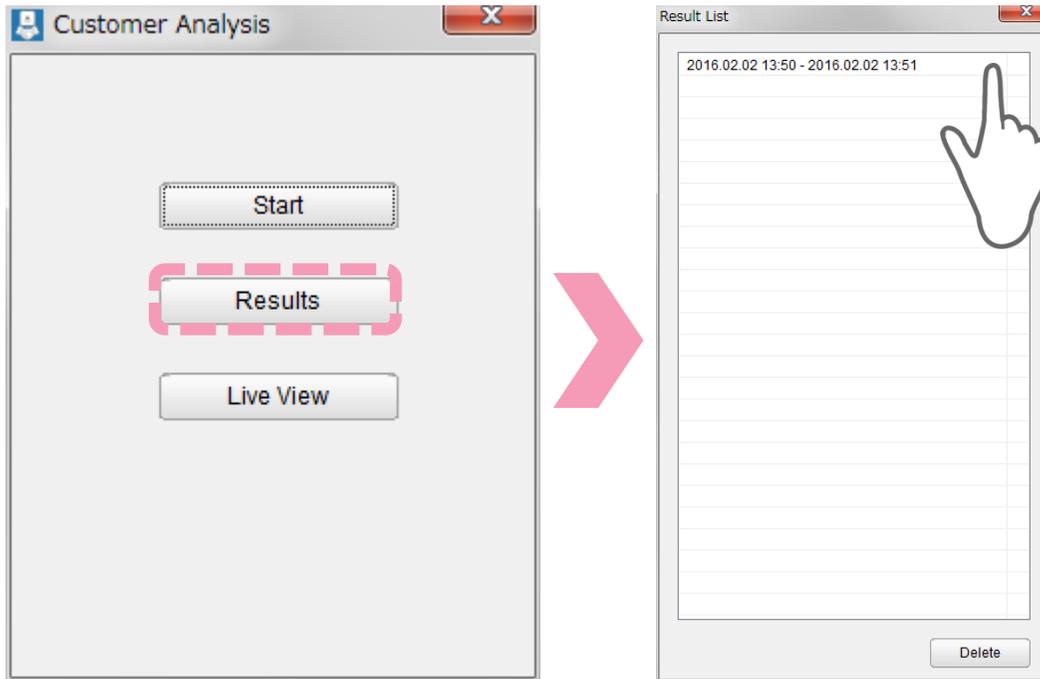
Stabilization Parameters

- Frame: Number of frames used to stabilize properties through an averaging process of past frames.
- Pitch / Yaw angles: Angles outside of the set value will be discarded in order to improve quality of the stabilization of estimation results.
- Degree of confidence: Results with a degree of confidence lower than the set value will be discarded in order to improve the quality of the stabilization of estimation results.



5.5 Display Customer Analysis Results

- Display the past **Customer Analysis** results.
Select “Results” and the results to be displayed.

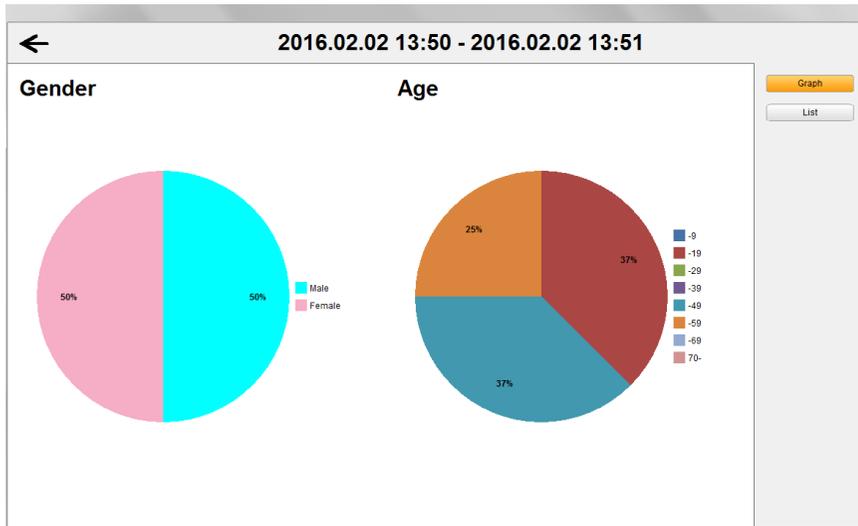


- Past results will be listed with their start and end time.



5.5 Display Customer Analysis Results

- Display the past **Customer Analysis** results.
Past results can be displayed as a graph or as a list.



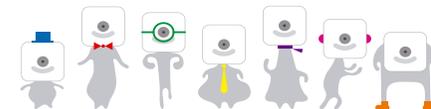
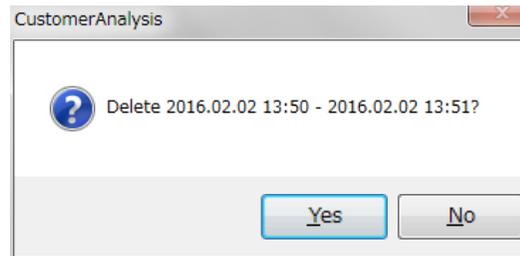
2016.02.02 13:50 - 2016.02.02 13:51

	-9	-19	-29	-39	-49	-59	-69	70-
Male	0	3	4	2	1	1	4	1
Female	0	0	5	1	4	3	3	0



5.6 Delete Customer Analysis Results

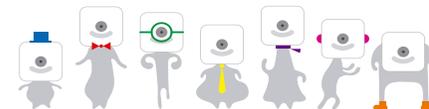
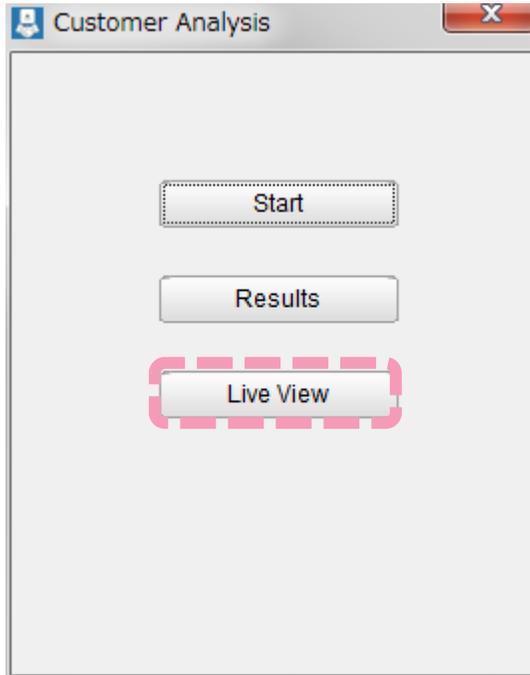
- ☑ Delete past **Customer Analysis** results by selecting them and pressing "Delete".



5.7 Live View

- ☑ Turn to Live View to display the live camera feed.
Select “Live View”.

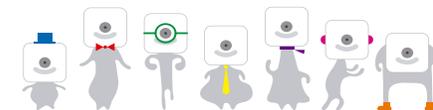
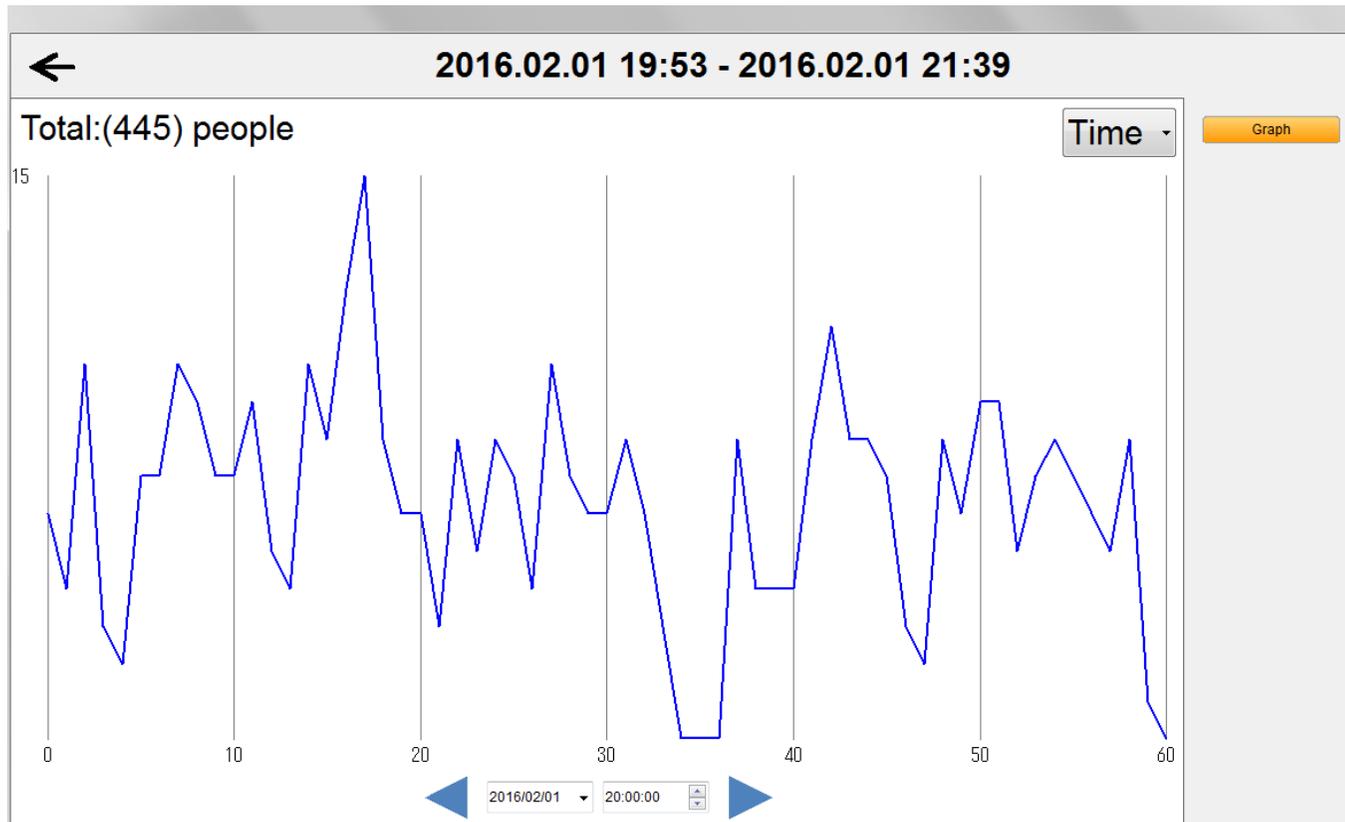
※ Specific details about Live View are not included here.



6. People Counter

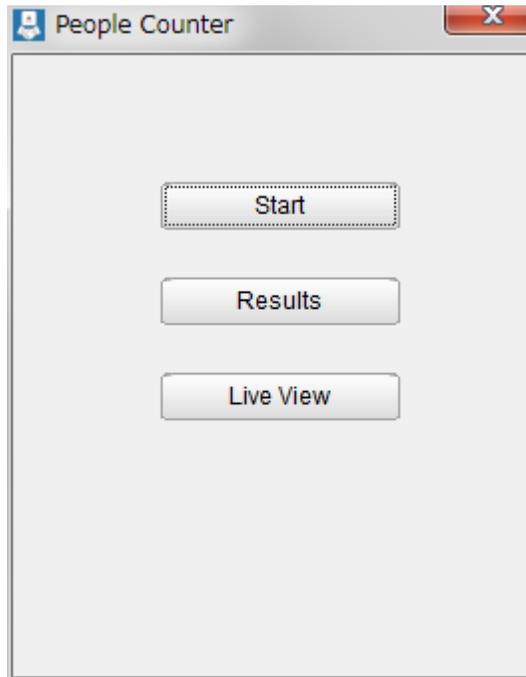
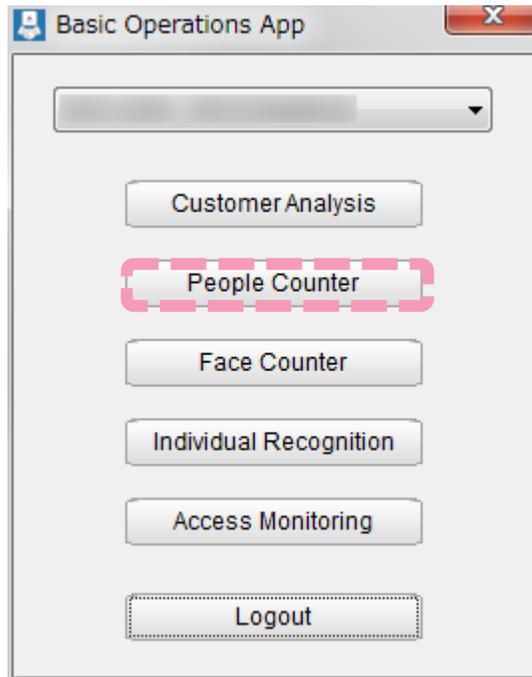
People Counter will detect human bodies and display the frequency of detection on a timeline.

※The numbers indicate the total number of people counted.



6.1 People Counter Main Screen

- Select "People Counter".

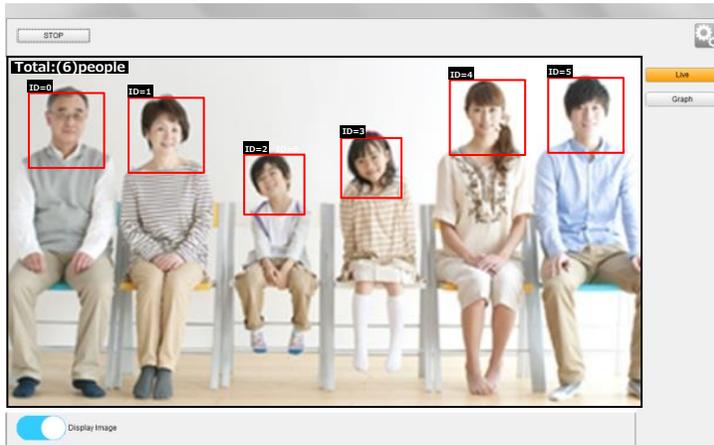
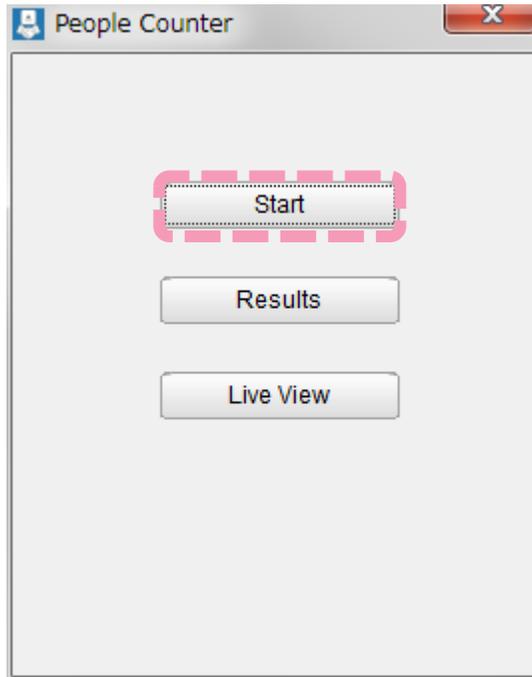


- Select "Start" to start **People Counter**.
- Select "Results" in order to look at past results.
- Select "Live View" to display the live camera feed.



6.2 Start People Counter

Start **People Counter** by pressing “Start”.

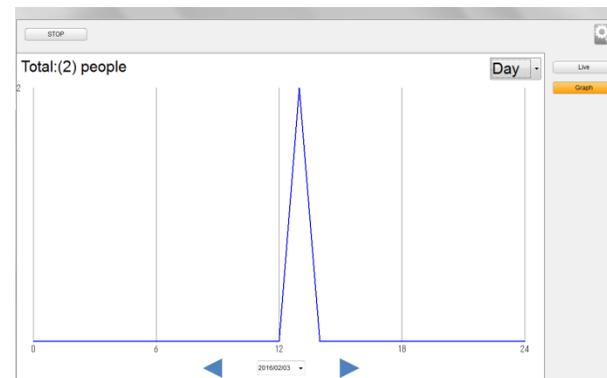
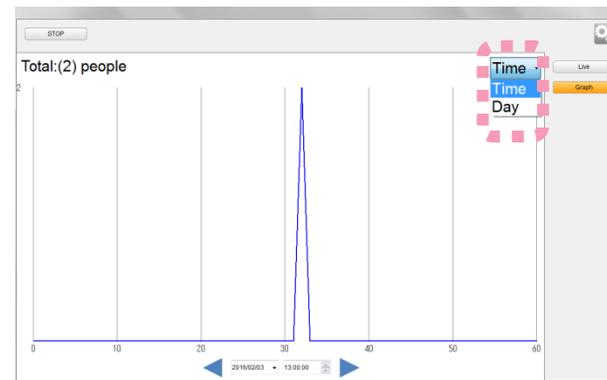
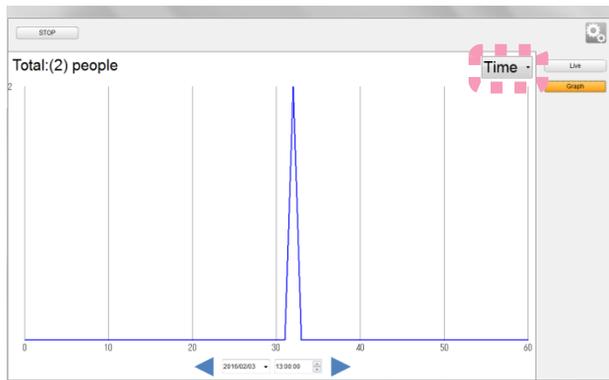


- The live camera feed and the results can be seen in the “Live” tab.
- The total indicates the total number of people counted.



6.3 Display People Counter Live Results

- Display the **People Counter** live results. Switch to the “Graph” tab to see the live results. Results can be displayed by day or time.



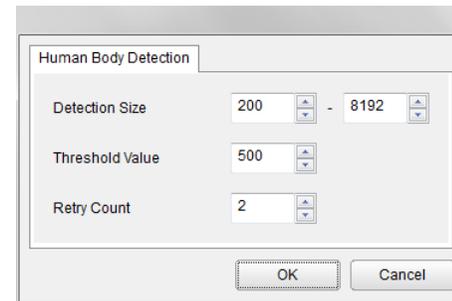
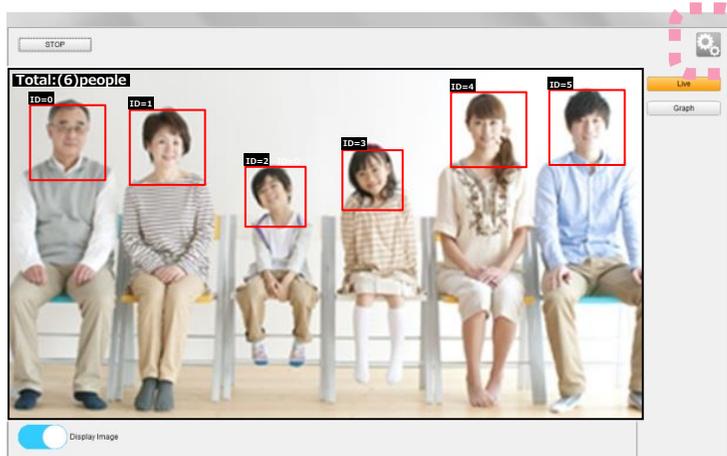
6.4 Change People Counter Settings



Change the **People Counter** settings.



Press  to change the Human Body Detection parameters.



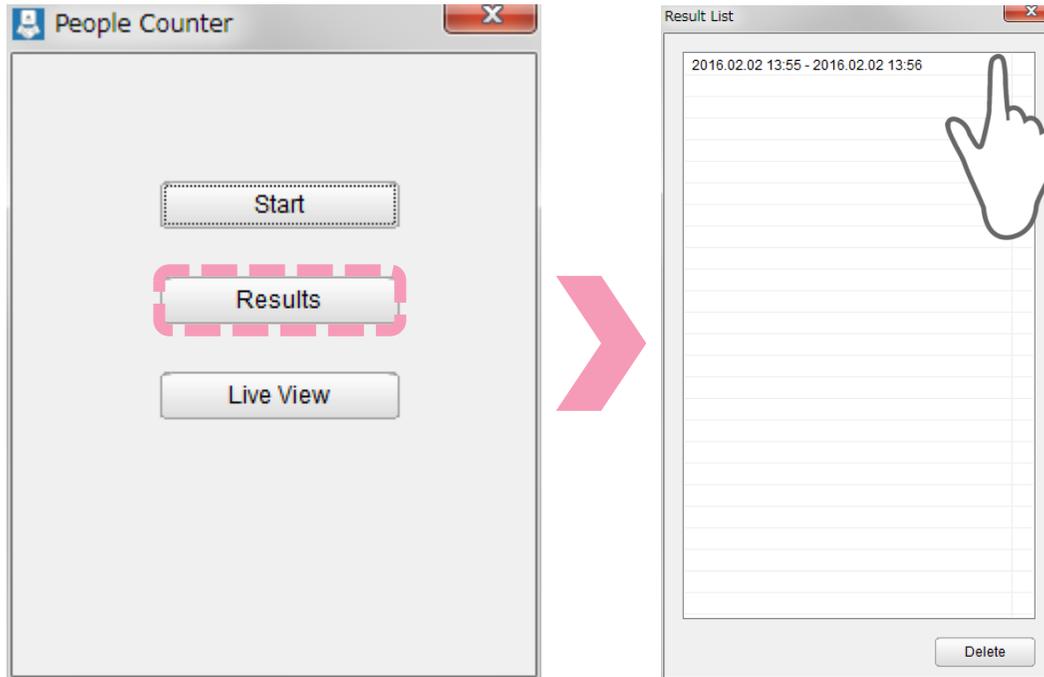
Human Body Detection Parameters

- Detection size: Set the minimum and maximum size for faces. Setting a lower minimum size will detect more faces but also make the process take longer.
- Threshold value: Set the threshold value. A higher threshold value will reduce the number of false detections but also reduce the detection rate.
- Retry count: Set the retry count. If a person is no longer displayed) but one reappears (regardless if same person or not) within the number of frames set with the retry count, it will be considered the same person. Note that a high retry count will increase the possibility of swapping individuals being considered the same person.

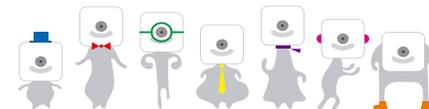


6.5 Display People Counter Results

- Display the past **People Counter** results.
Select “Results” and the past results to be displayed.

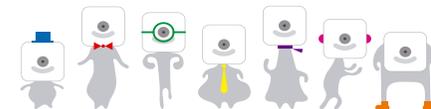
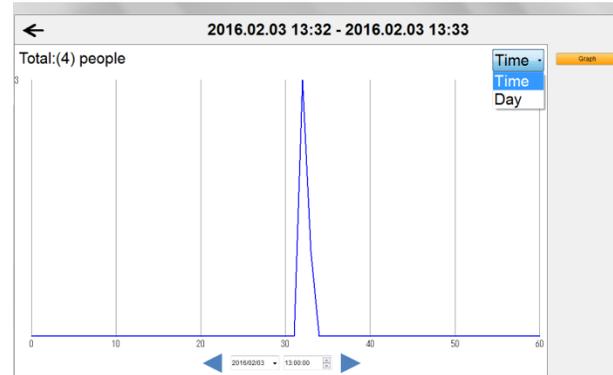
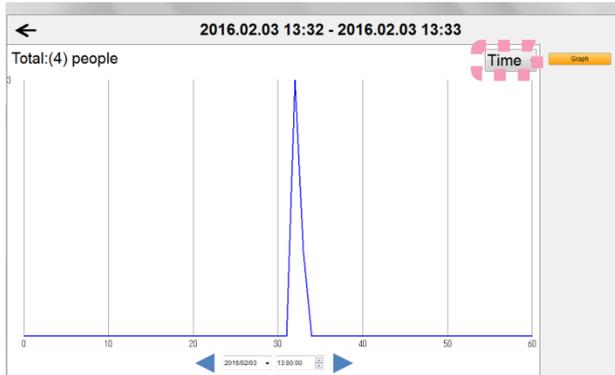


- Past results will be listed with their start and end time.



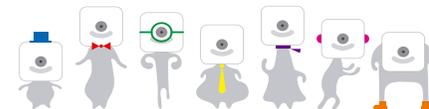
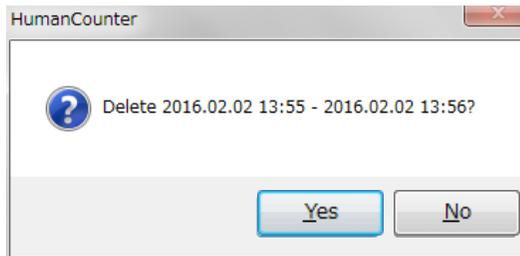
6.5 Display People Counter Results

- Display the past **People Counter** results (no more tab). Results can be displayed by day or time.



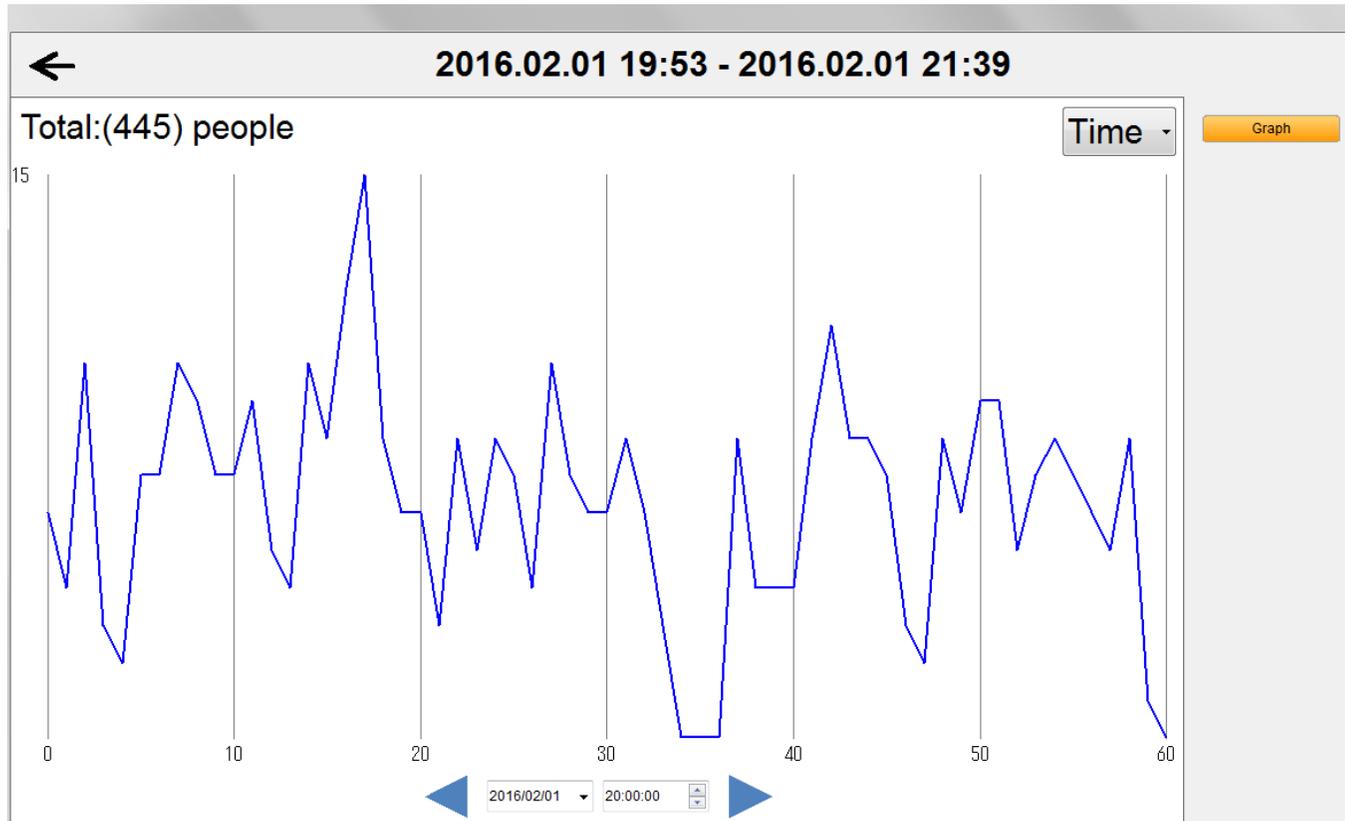
6.6 Delete People Counter Results

- ☐ Delete past **People Counter** results by selecting them and pressing “Delete”.



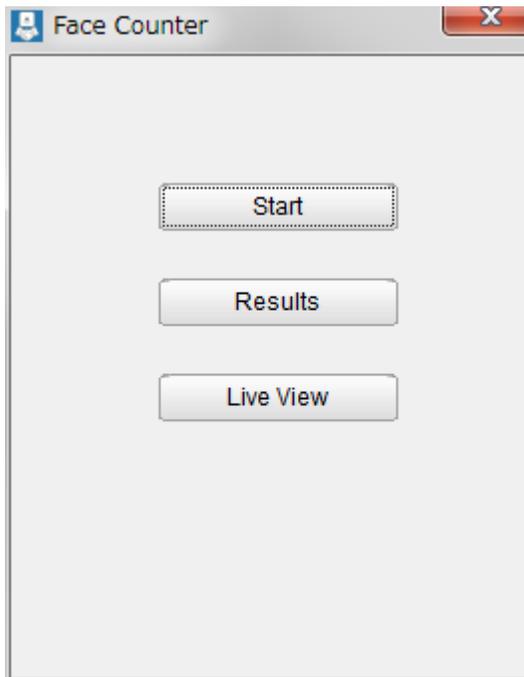
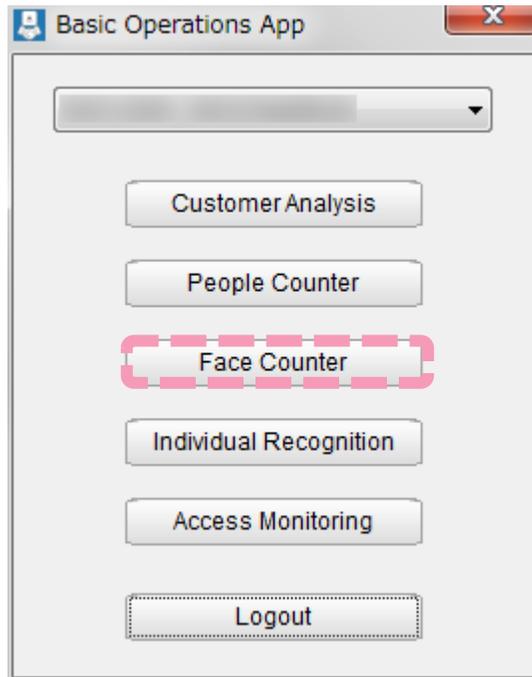
7. Face Counter

- Face Counter will detect faces and display the frequency of detection on a timeline.



7.1 Face Counter Main Screen

- Select "Face Counter".

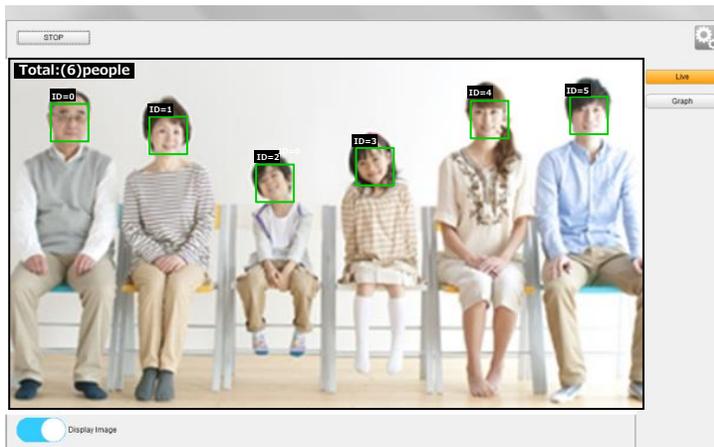
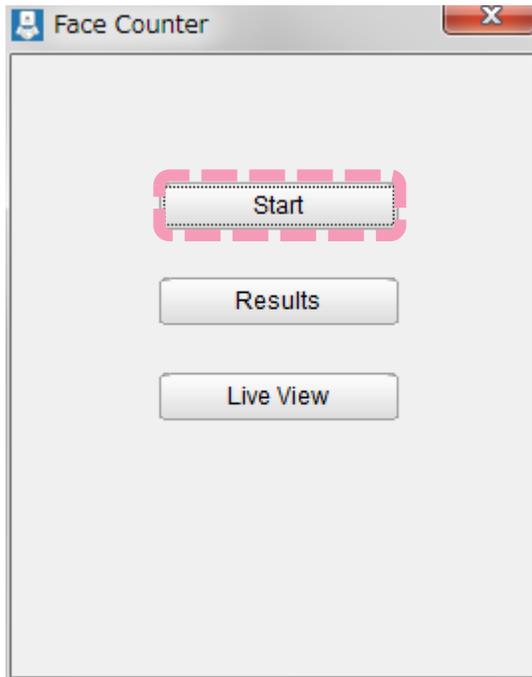


- Select "Start" to start **Face Counter**.
- Select "Results" in order to look at past.
- Select "Live View" to view the live camera feed.



7.2 Start Face Counter

Start Face Counter by pressing “Start”.

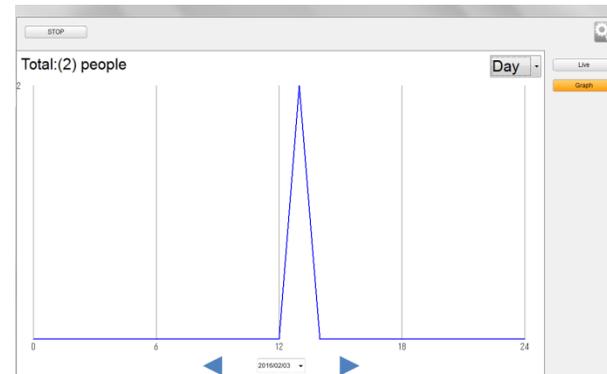
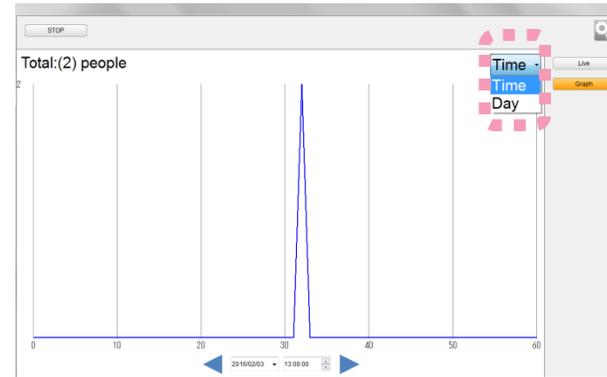
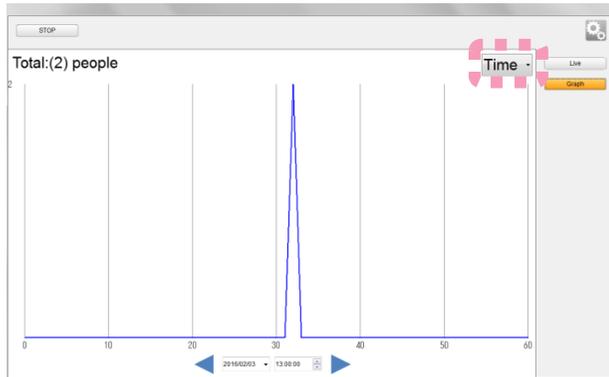


- ☐ The live camera feed and the results can be seen in the “Live” tab.
- ☐ The total indicates the total number of faces (people) counted.



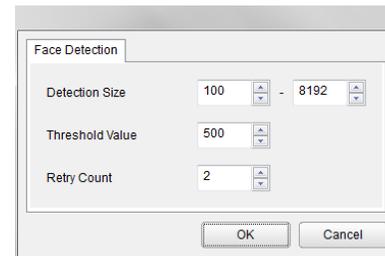
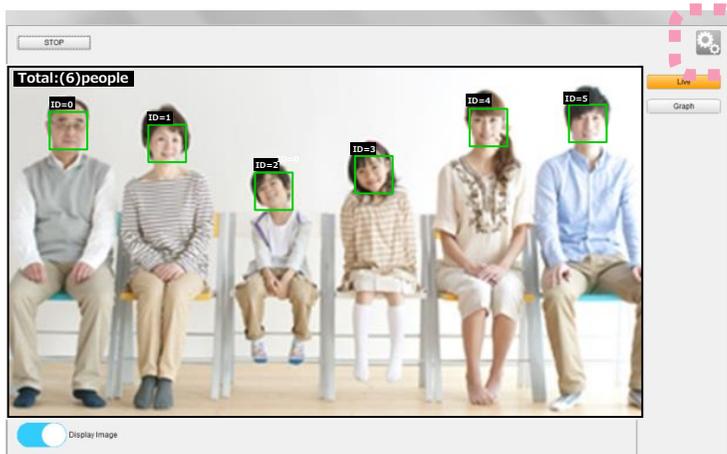
7.3 Display Face Counter Live Results

- Display the **Face Counter** live results.
Switch to the “Graph” tab to see the live results.
Results can be displayed by day or time.



7.4 Change Face Counter Settings

- Change the **Face Counter** settings.
- Press  to change the face detection parameters.



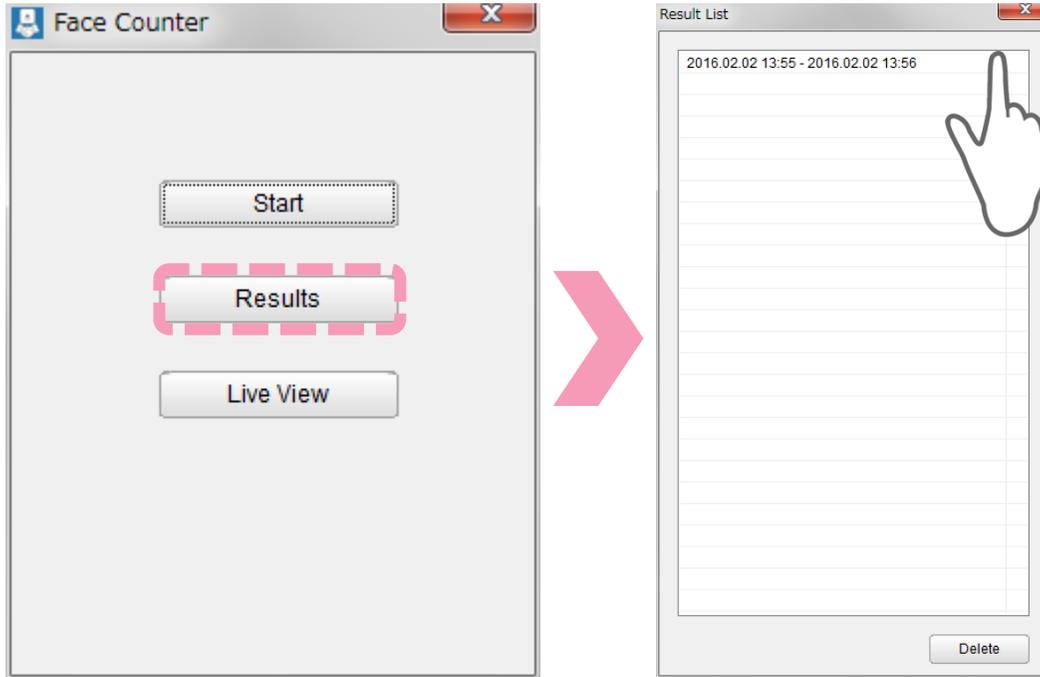
Face Detection Parameters

- Detection size: Set the minimum and maximum size for faces. Setting a lower minimum size will detect more faces but also make the process take longer.
- Threshold value: Set the threshold value. A higher threshold value will reduce the number of false detections but also reduce the detection rate.
- Retry count: Set the retry count. If a person is no longer displayed) but one reappears (regardless if same person or not) within the number of frames set with the retry count, it will be considered the same person. Note that a high retry count will increase the possibility of swapping individuals being considered the same person.



7.5 Display Face Counter Results

- Display the past **Face Counter** results.
Select “Results” and the results to display.

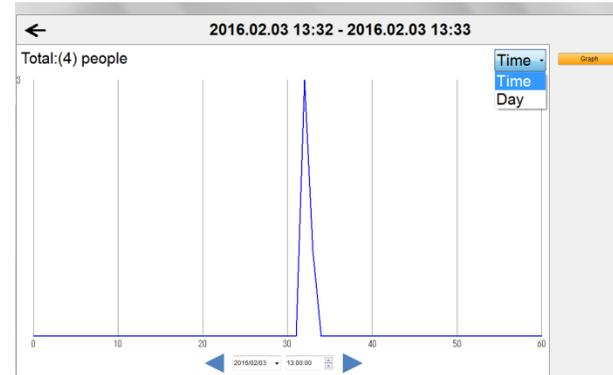
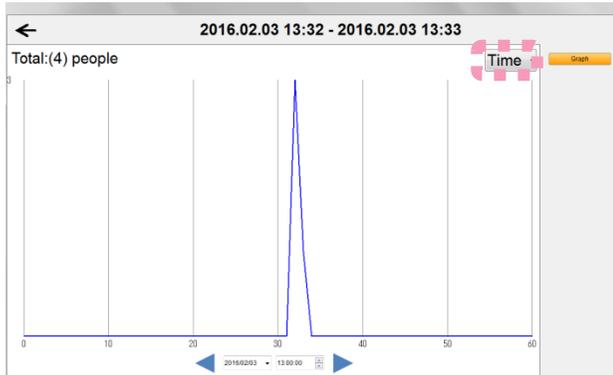


- Past results will be listed with their start and end time.



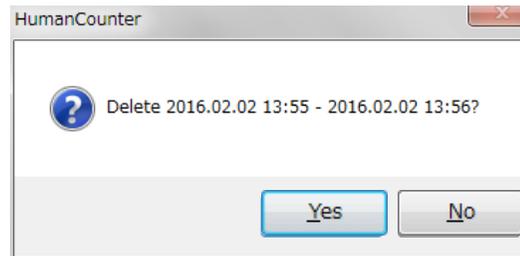
7.5 Display Face Counter Results

- Display the past **Face Counter** results (no more tab). Results can be displayed by day or time.



7.6 Delete Face Counter Results

- ☑ Delete past **Face Counter** results by selecting them and pressing “Delete”.



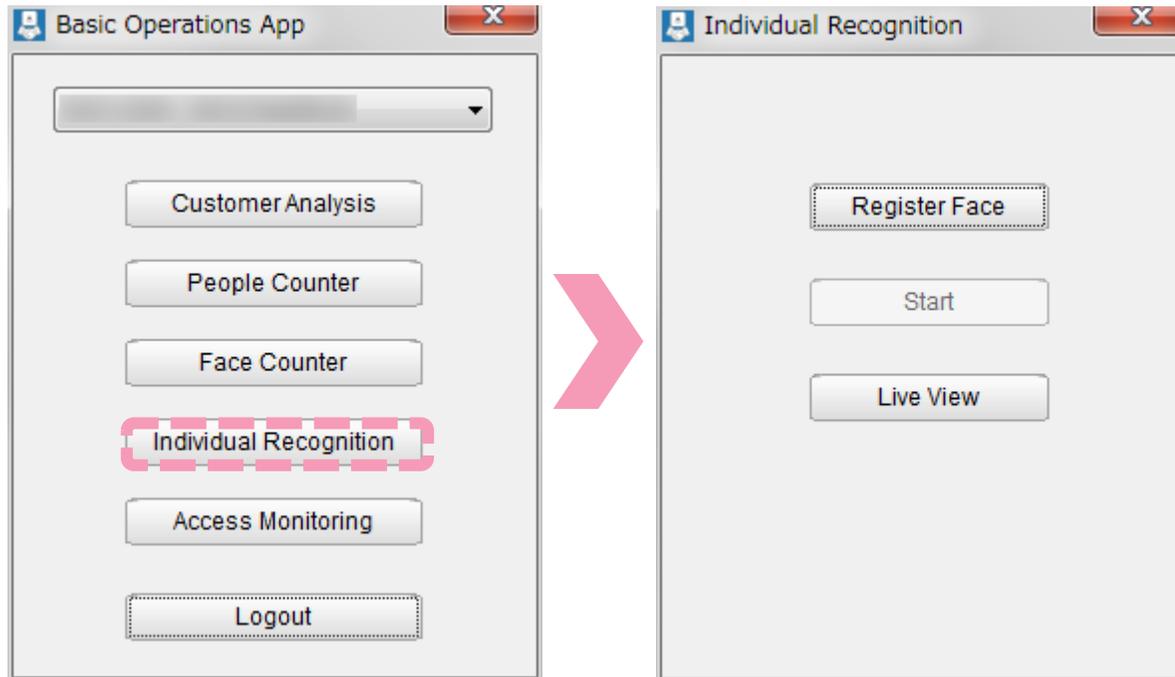
8. Individual Recognition

- Individual Recognition will recognize registered individuals, displaying **OK** for registered people and **NG** for non-registered ones.

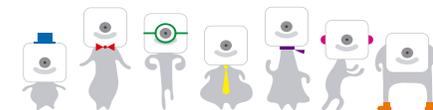


8.1 Individual Recognition Main Screen

Select "Individual Recognition".



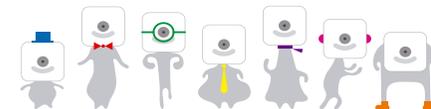
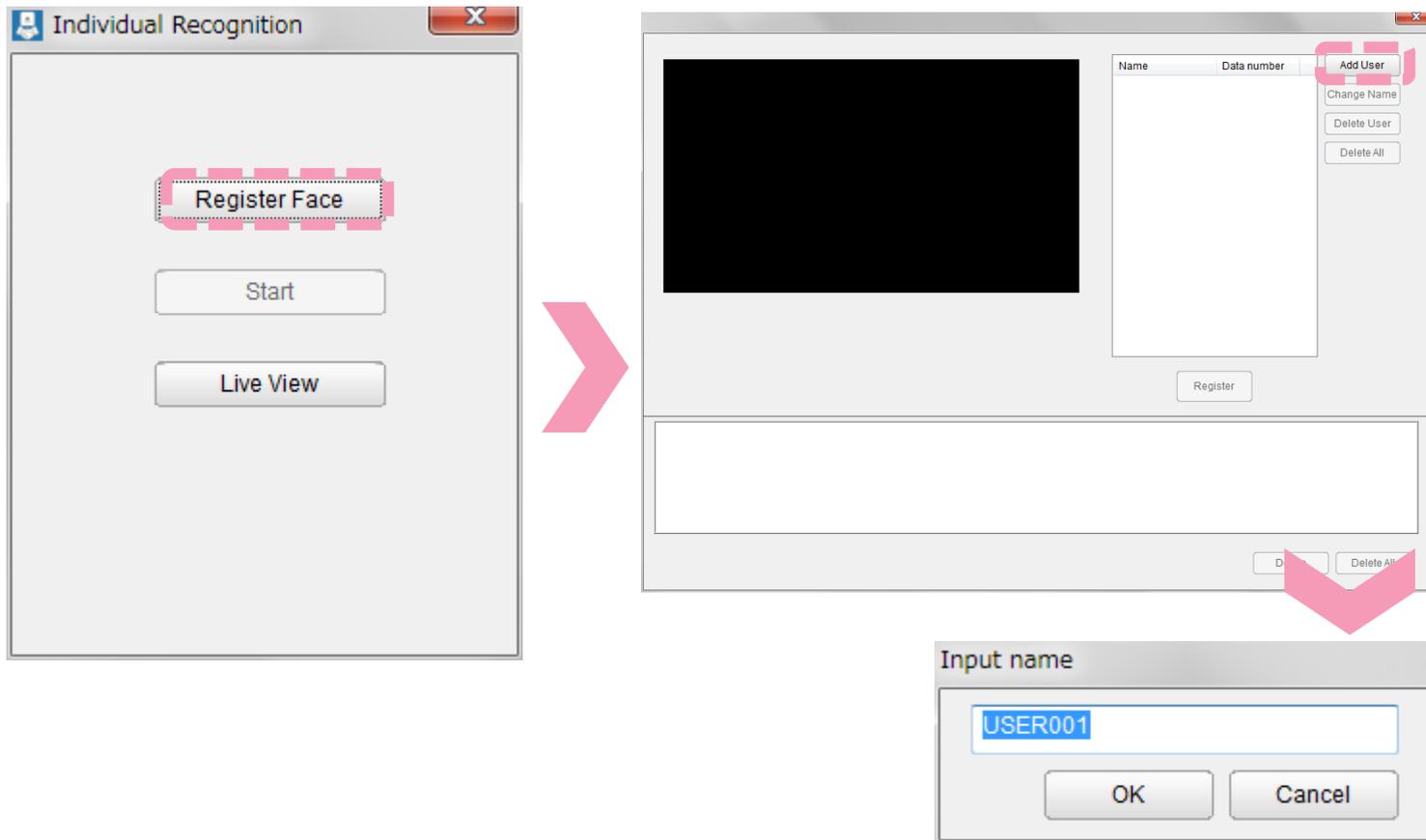
- Faces need to be registered in order to use **Individual Recognition**. The "Start" button will not be available with no face registered.
- Select "Register Face" to register a face.
- Select "Start" to start **Individual Recognition**.
- Select "Live View" to view the live camera feed.



8.2 Register Face

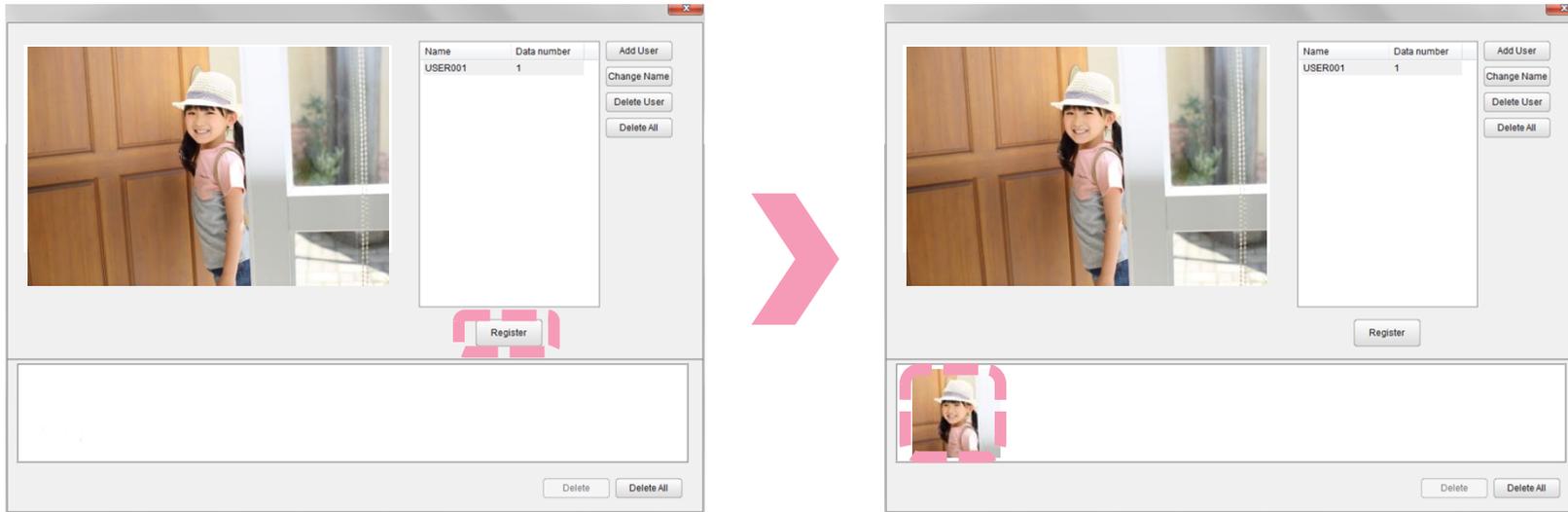
- Select "Register Face" then "Add User" to register a face
The user name will be "USERXXX" by default.

※XXX will be an increasing number starting from 01.

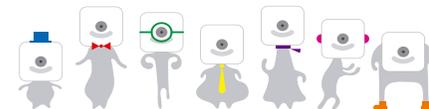


8.2 Register Face

- Select register.
Successfully registered images will be displayed.
※Registration is not possible if there are multiple faces in the image.

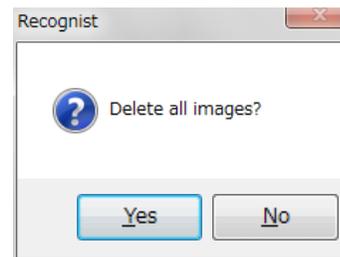
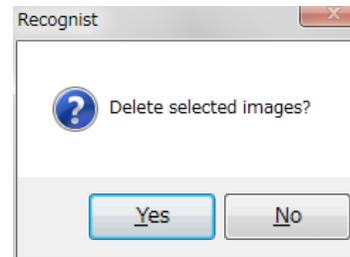
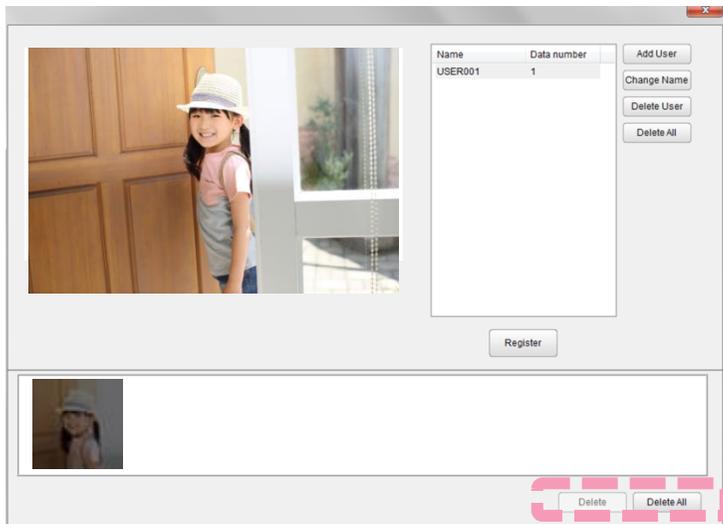


- Select register again to register additional images.



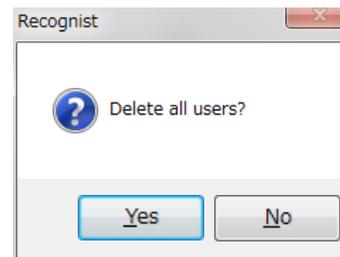
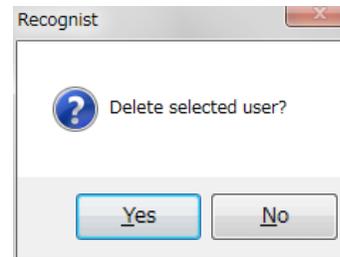
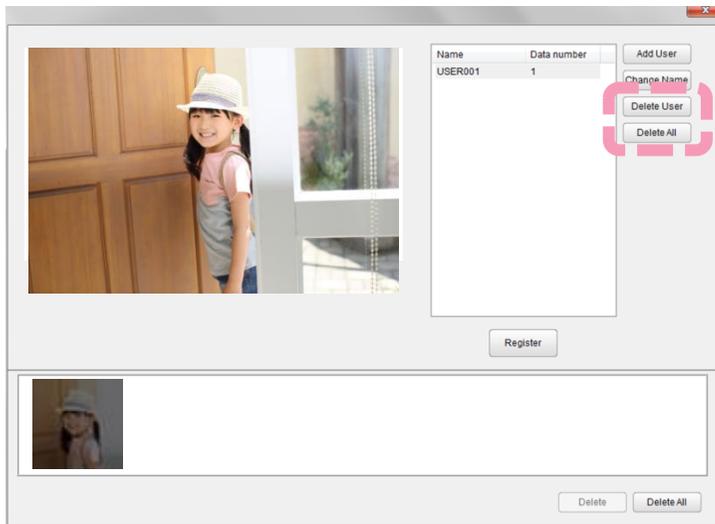
8.3 Delete Registered Image

- ☑ Delete a registered image.
Select "Delete" and confirm to delete a registered image.
Select "Delete All" and confirm to delete all images.



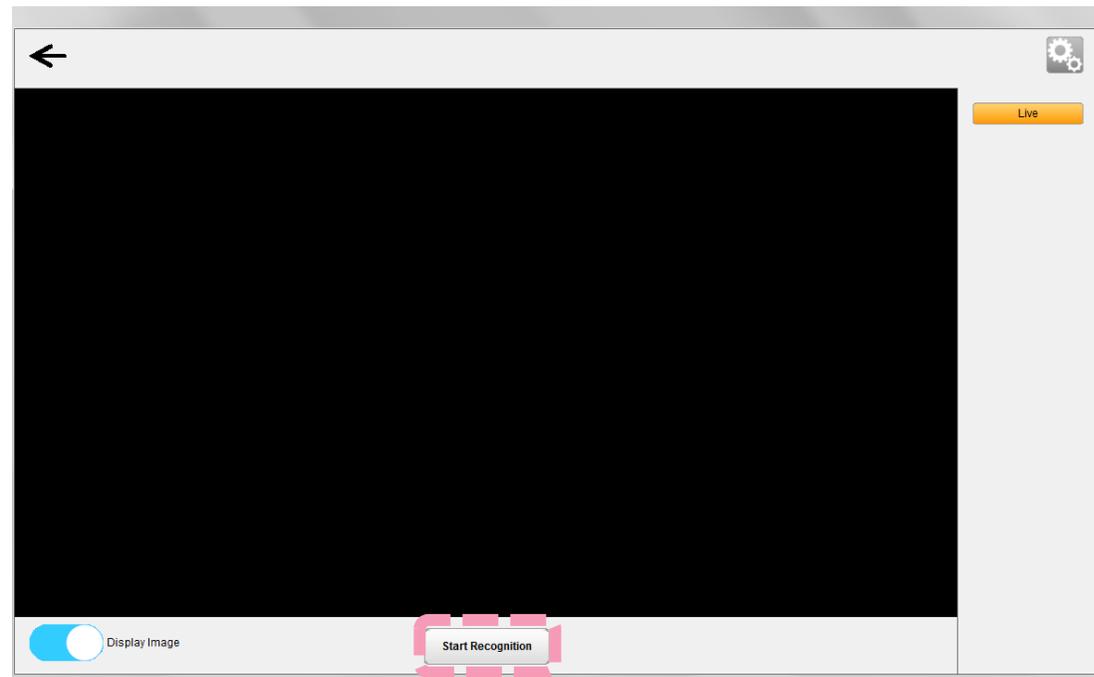
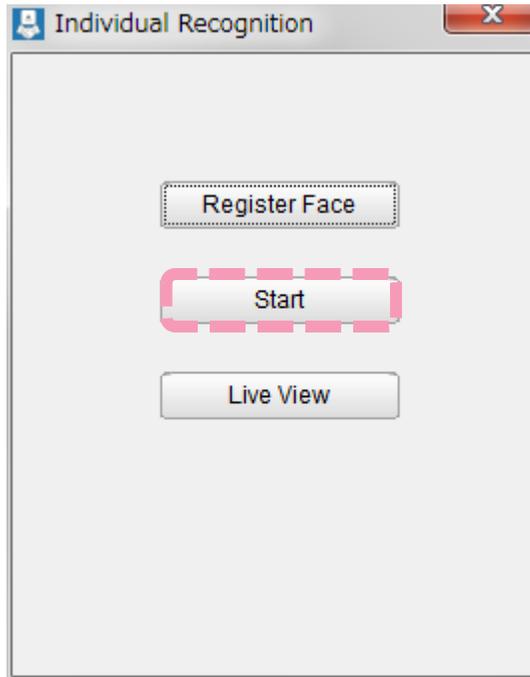
8.4 Delete User

- ☑ Delete a registered user.
Select "Delete" and confirm to delete a registered user.
Select "Delete All" and confirm to delete all users.



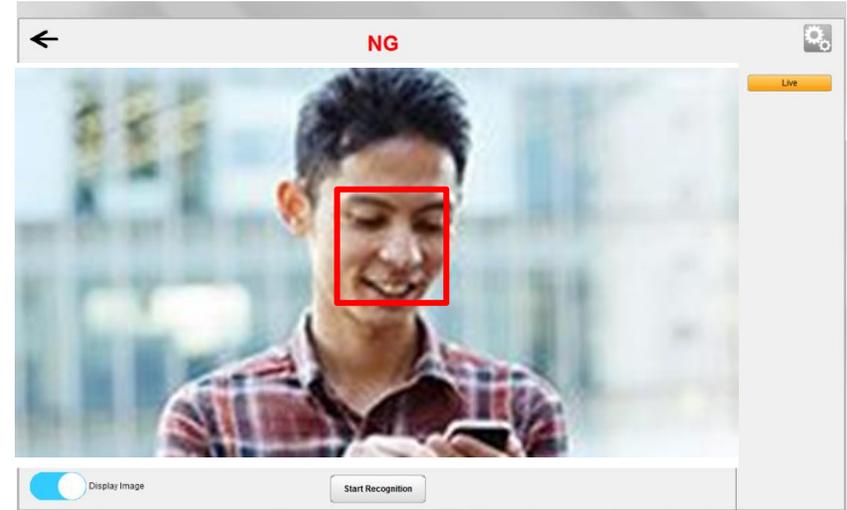
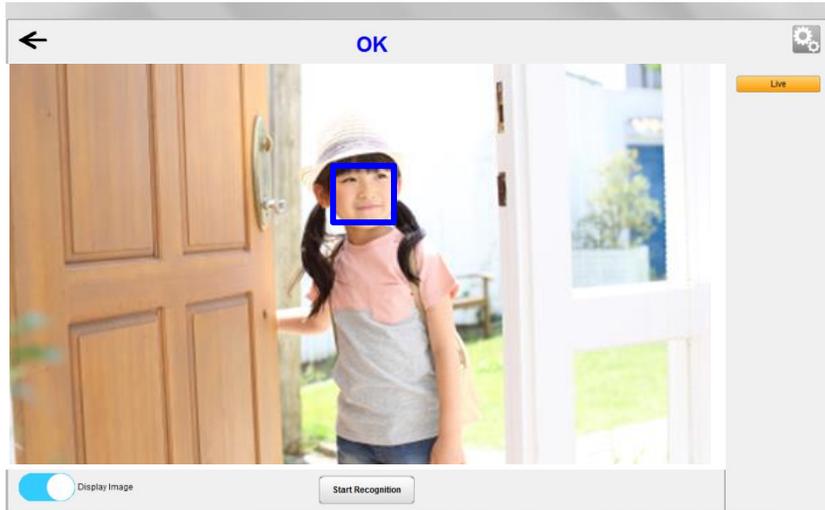
8.5 Start Individual Recognition

- Start **Individual Recognition**.
“Start” can now be used after registering facial images.
Select “Start” then “Start Recognition”.



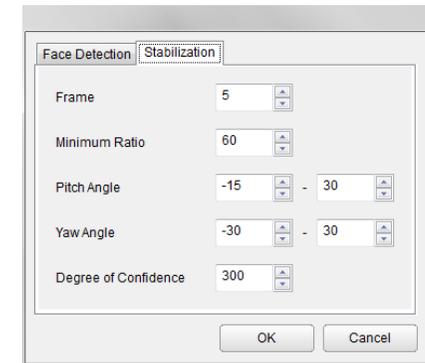
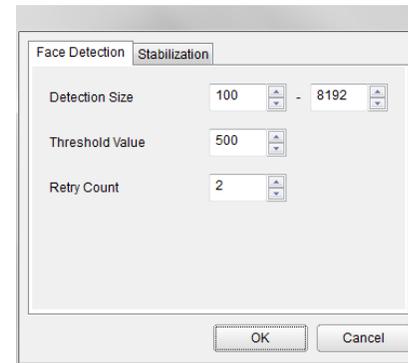
8.5 Start Individual Recognition

- Individual Recognition results are as follows:
 - OK** will be displayed for successful recognition and
 - NG** otherwise.



8.6 Change Individual Recognition Settings

- Change the **Individual Recognition** settings.
- Press to change the face detection and stabilization parameters.



Face Detection Parameters

- Detection size: Set the minimum and maximum size for faces. Setting a lower minimum size will detect more faces but also make the process take longer.
- Threshold value: Set the threshold value. A higher threshold value will reduce the number of false detections but also reduce the detection rate.
- Retry count: Set the retry count. If a person is no longer displayed) but one reappears (regardless if same person or not) within the number of frames set with the retry count, it will be considered the same person. Note that a high retry count will increase the possibility of swapping individuals being considered the same person.

Stabilization Parameters

- Frame: Number of frames used to stabilize properties through an averaging process of past frames.
- Minimum ratio: Minimum ratio to be achieved over multiple frames, used in order to stabilize the recognition.
- Pitch / Yaw angles: Angles outside of the set value will be discarded in order to improve quality of the stabilization of estimation results.
- Degree of confidence: Results with a degree of confidence lower than the set value will be discarded in order to improve the quality of the stabilization of estimation results.



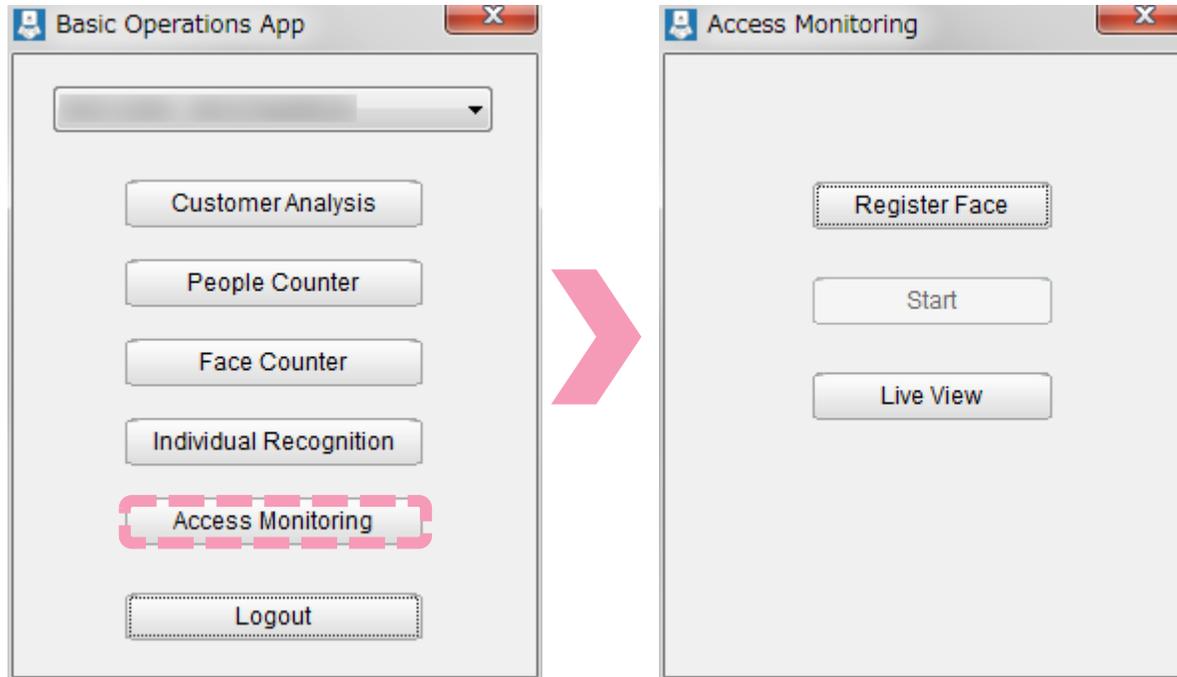
9. Access Monitoring

- Access Monitoring will recognize registered individuals, displaying their user ID, and “non-registered” for non-registered ones.



9.1 Access Monitoring Main Screen

Select "Access Monitoring".

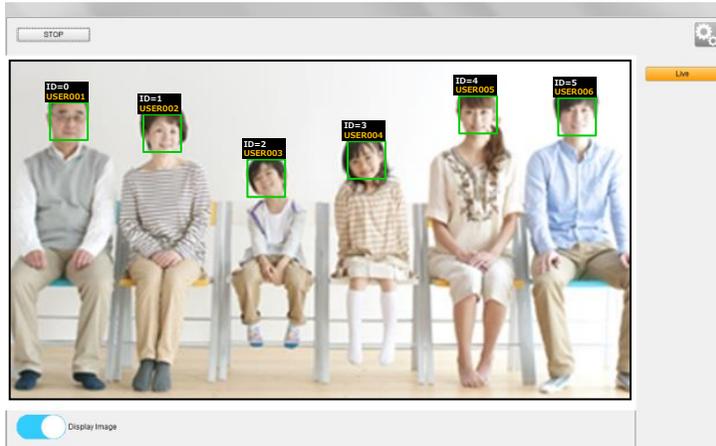
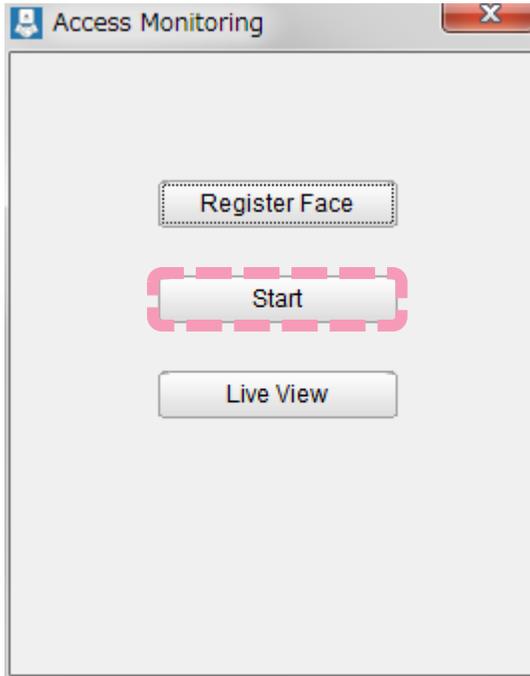


- Faces need to be registered in order to use **Access Monitoring**. The "Start" button will not be available with no face registered. The database of registered faces is shared for **Individual Recognition** and **Access Monitoring**.
- Select "Register Face" to register a face.
- Select "Start" to start **Access Monitoring**.
- Select "Live View" to view the live camera feed.

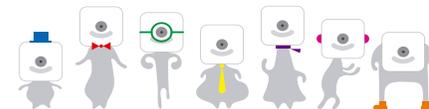


9.2 Start Access Monitoring

- Start **Access Monitoring**.
“Start” can now be used after registering facial images.
Select “Start” and “Start Recognition”.



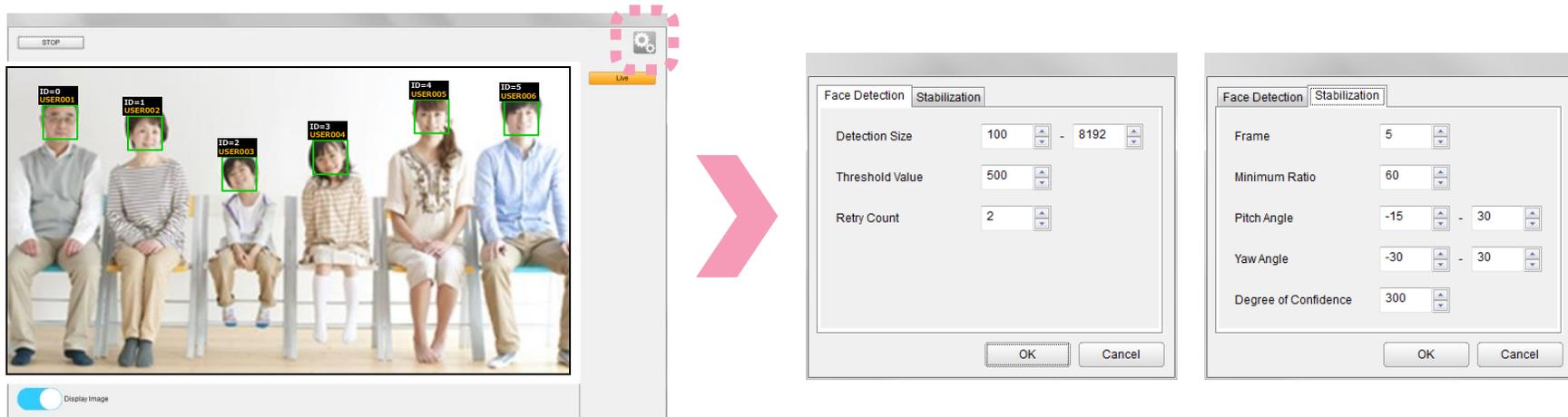
- A “?” will be displayed while the recognition process is running.
- The user ID of the registered users will be displayed while “Non-registered” will be displayed for non-registered faces.



9.3 Change Access Monitoring Settings **OMRON**

 Change the **Access Monitoring** parameters.

Press  to change the face detection and stabilization parameters.

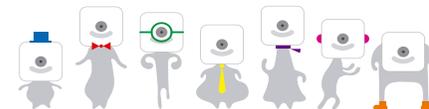


Face Detection Parameters

- Detection size: Set the minimum and maximum size for faces. Setting a lower minimum size will detect more faces but also make the process take longer.
- Threshold value: Set the threshold value. A higher threshold value will reduce the number of false detections but also reduce the detection rate.
- Retry count: Set the retry count. If a person is no longer displayed) but one reappears (regardless if same person or not) within the number of frames set with the retry count, it will be considered the same person. Note that a high retry count will increase the possibility of swapping individuals being considered the same person.

Stabilization Parameters

- Frame: Number of frames used to stabilize properties through an averaging process of past frames.
- Minimum ratio: Minimum ratio to be achieved over multiple frames, used in order to stabilize the recognition.
- Pitch / Yaw angles: Angles outside of the set value will be discarded in order to improve quality of the stabilization of estimation results.
- Degree of confidence: Results with a degree of confidence lower than the set value will be discarded in order to improve the quality of the stabilization of estimation results.



Revision History

Date	Rev	Contents	Prepared by	Reviewed by	Approved by
2016/02/04	A	First release	K.Tanaka	T.Inoue	O.Matsutake

