



## TECHNOLOGY OVERVIEW





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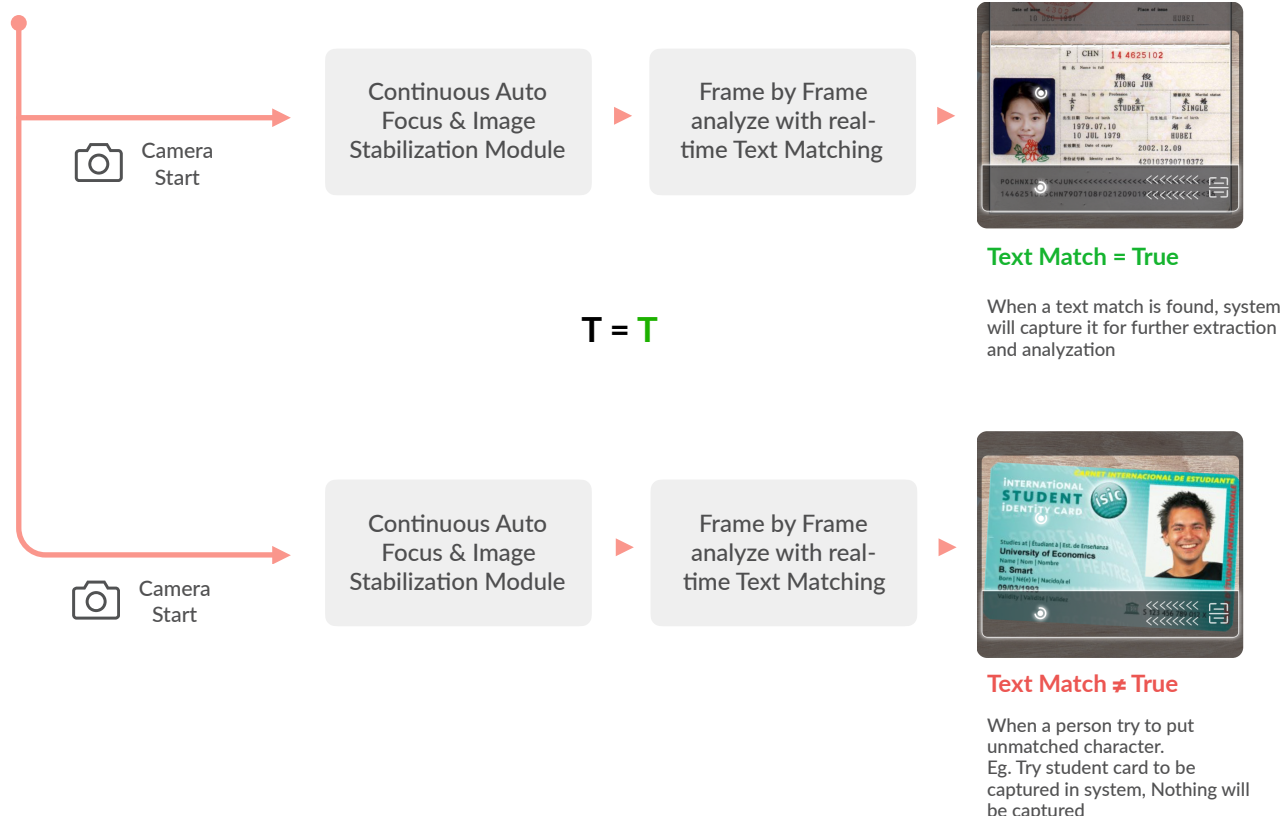


Veiris built our technology from ground to top, ensuring fully customizable based on enterprise request.

Right now Veiris supports 3 character types for character recognition which are **Chinese simplified**, **Chinese traditional** and **English**.

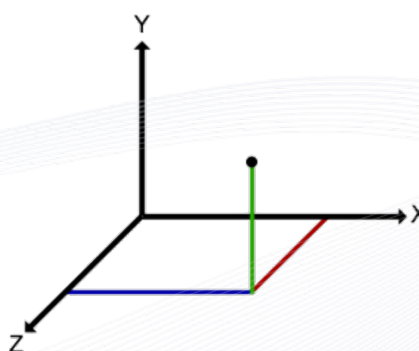
If your enterprise requires us to add local ID card which we haven't supported it yet. send sample to us and we'll add it for you!

Our technology start with **real-time text matching** within front end of our Application



## Tilt Tolerance

Veiris **Text Match** capability is fully working up to 10 ° tilt tolerance on XYZ axis





## | Template Matching

Template matching ensure the document provided is within the same format of standard in specific country.

Eg. Chinese ID card between citizen A and citizen B will have same layout, color, font and format.

## | Color & Hologram Check

Ensuring it is not a black and white document and if hologram exist in document (several local ID card have hologram embedded as security layer)

## | Integrity Check

In tempered document, there always be a small mistake.

Eg. in font size, or others (as we couldn't describe this part openly for security reason). This Features will try to detect any abnormality in provided document.

## | Hand signature Recognition (optional)

Eg. On Malaysia & Indonesia ID card, we are able to extract hand signature and providing the output within our SDK and can be used for matching the signature within account opening form on banks .

## | Face Extraction

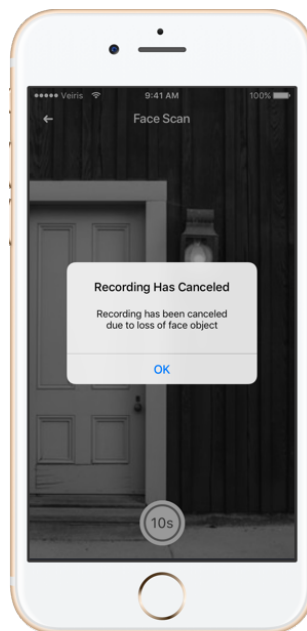
Extracting face from document for further analysis (page 5)

Veiris' SDK comes with real-time face recognition that ensure your users stay on camera during streaming session, eliminating any fraud possibilities and maintain best distance from user to camera for optimum result.

In case of users decide to remove their face during the session, Veiris will stop all session and re-ask users to repeat and maintaining users' face stays on camera during streaming session.

Maintaining user distance with the camera & continuous auto focus on users' face area for optimum results

Ensuring real-person during streaming session



Automatic terminate session when face is not detected

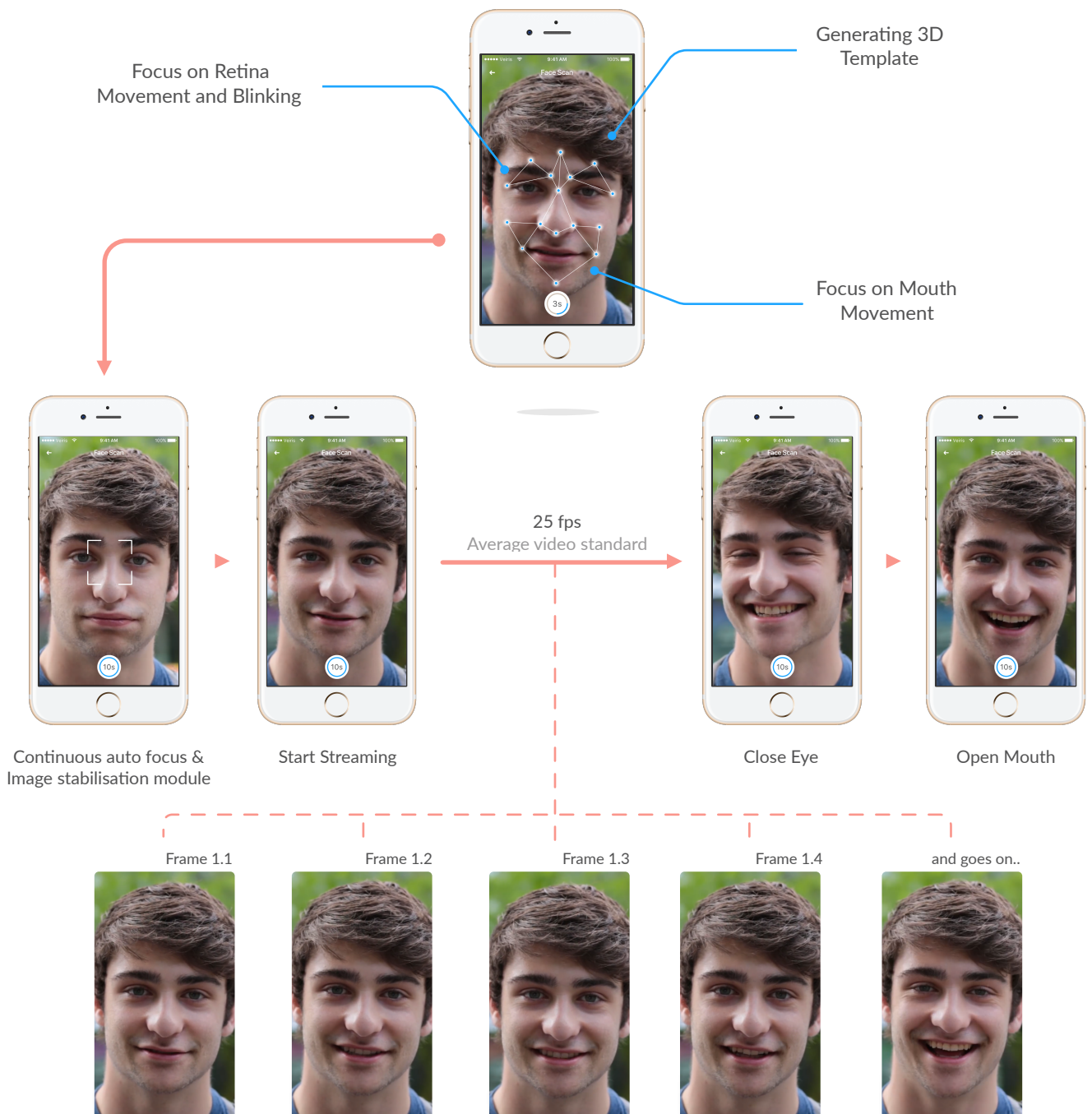
## Real-Person Analysis and Detection Through Micro-Expression & 3D Module

Although face recognition is a common technology , analysis of Real-person remotely is a different challenge of computer vision technology.

Here at Veiris we built a powerful analysis algorithm that allow our technology to detect and compare real-person matching with ID document.

*"Average people blink only last for 300 ms (milliseconds), approximately a third of a second"*

## Face Streaming Analysis



Veiris then compile all of the frame that we receive to detect micro expression and conclude whether face in the streaming is a real-person or just a static image



## Face Verification Analysis 10 Point Comparison



Within the compile of all the frame rate, Veiris checked from Frame 1 - End of the streaming frame that all faces in the frame streaming is exactly the same person.



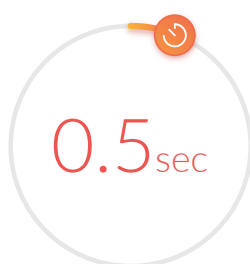
**People face is asymmetrical.**  
(except you are ghost) *boohoo..*

The technology that we use in real-person detection then compare 10 vital points on face given to determine the similarity between streaming and picture of your ID card.

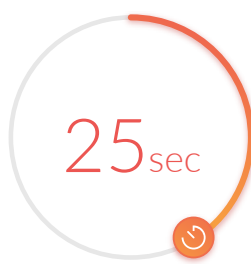
Instead of giving overall score, we breakdown our technology to analyze within the 10 vital points (left side and right side of the face) then providing score on each point and let our merchant to decide based our score we given.

## VEIRIS is Extremely Fast and Accurate

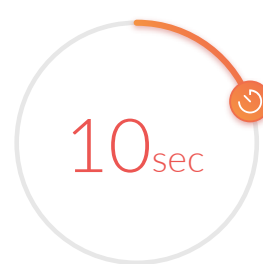
### | Speed



Text Extraction  
From Capture to Result



Real Person Detection  
From Streaming to Result



Face Verification  
From Image to Result

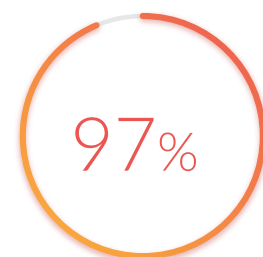
### | Accuracy



Text Extraction  
From Capture to Result



Real Person Detection  
From Streaming to Result



Face Verification  
From Image to Result





For any suggestion, bug report and product information  
visit [veiris.com](https://veiris.com) or contact us at [hi@veiris.com](mailto:hi@veiris.com)