
진행상황 발표

Finger Keyboard



Contents

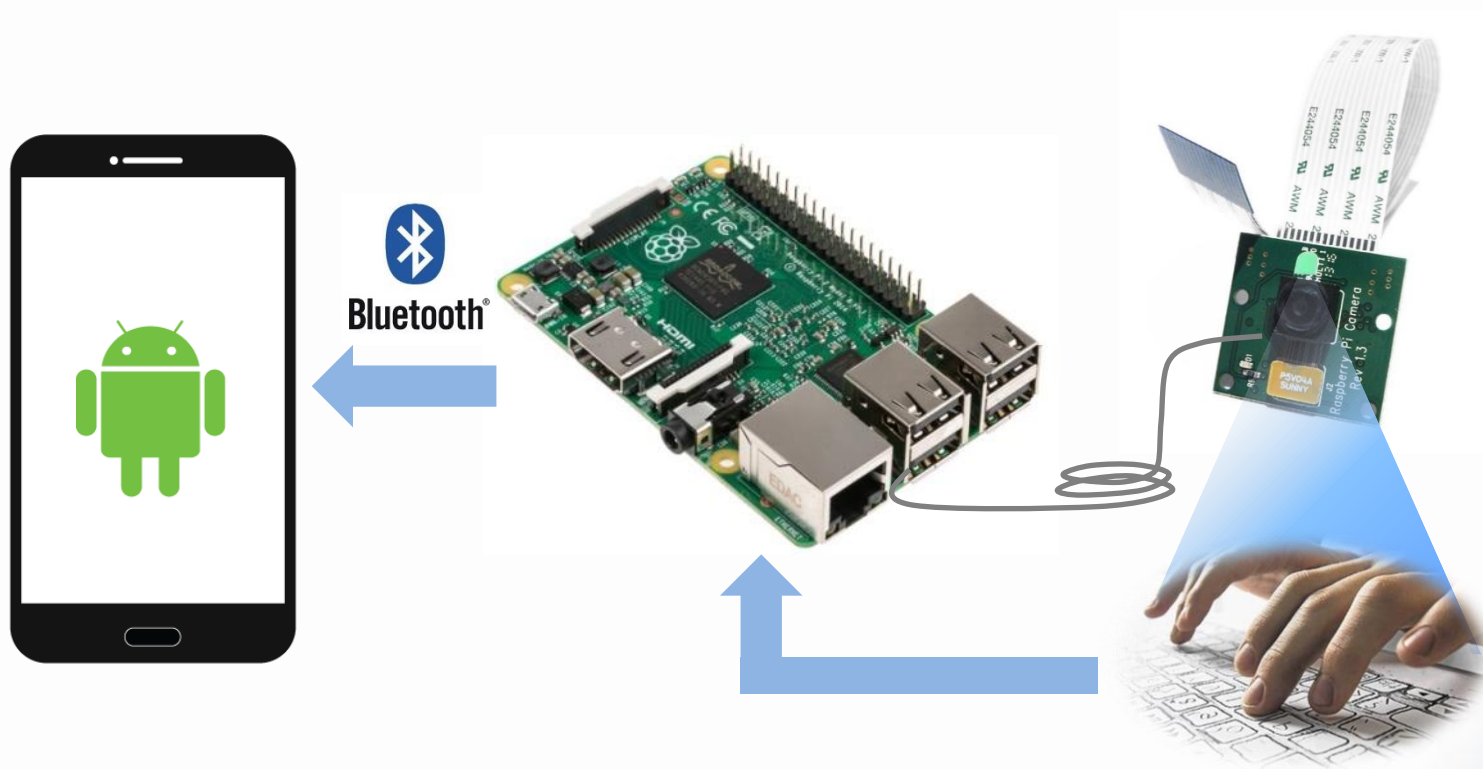
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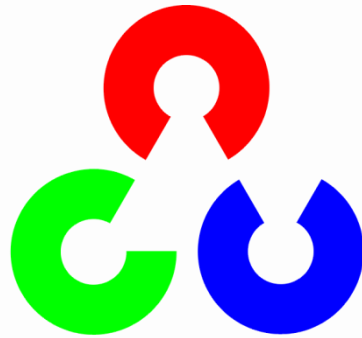
01

프로젝트 소개

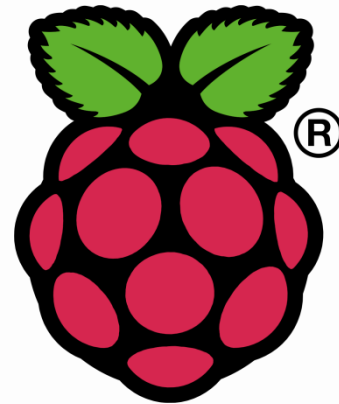




1. Open CV

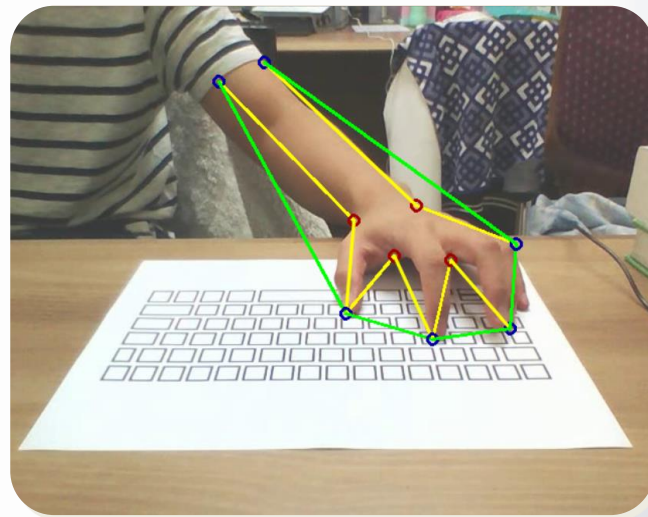


2. Raspberry Pi



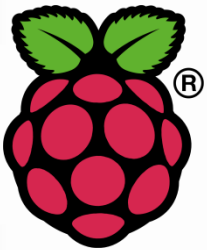
1. Open CV

- 윤곽선 검출



1. Bluetooth 통신

2. Raspberry Pi



2. SDP 프로토콜을 사용

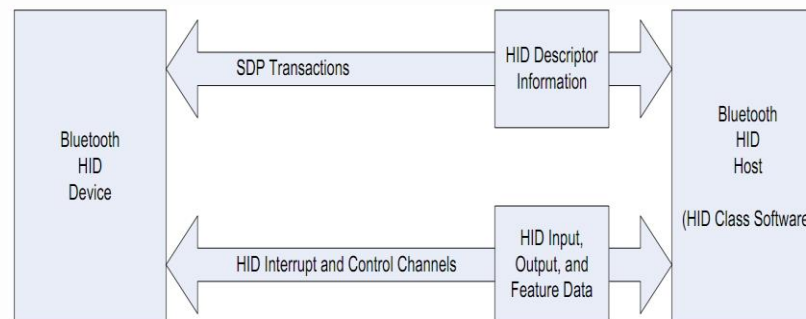


Figure 2.1: How Descriptors and Data are transferred from the HID Class Device



문제점과 해결방안

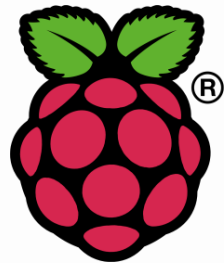
1.Open CV



Depth Detecting 카메라 한대로 불가능

카메라 2대를 통해 stereo cam-> 3D vision

2.Raspberry Pi



IPC 통신 구현 문제

Child 프로세스를 통해 해결



예정 작업

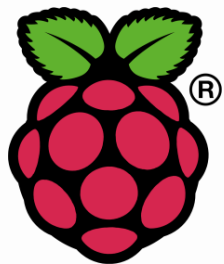
1. Open CV



3D Vision Source Coding

속도 개선을 위한 Source Refactoring

2. Raspberry Pi



Pitooth IPC 구현 및 테스트

카메라 두 대를 이용한 구현



04

데모 시연

```

454         keyCorners[i].x = cvmGet(result, 0,0)/t;
455         keyCorners[i].y = cvmGet(result, 1,0)/t;
456
457         cvCircle(op, cvPointFrom32f(keyCorners[i]), 1, CV_RGB(255,0,0), 1);
458     }
459     setkbRegion(keyCorners, 0, 16);
460     setkbRegion(keyCorners, 64, 14);
461     setkbRegion(keyCorners, 120, 14);
462     setkbRegion(keyCorners, 176, 13);
463     setkbRegion(keyCorners, 228, 12);
464     setkbRegion(keyCorners, 276, 7);
465     setkbRegion(keyCorners, 304, 1);
466     setkbRegion(keyCorners, 308, 3);
467     showRectangleData(op);
468
469     cvResetImageROI(dstImage);
470     cvResetImageROI(op);
471
472     cvShowImage("op", op);
473     cvSaveImage("backgroundImage.jpg", dstImage); //background image capture
474     mode = CATCH_SKIN_COLOR;
475     printf("사용자의 손등을 지정된 영역에 가득차게 두십시오. 준비가 완료되면 마우스 왼쪽 버튼을 누르세요\n");
476 }
477 else if(mode == CATCH_SKIN_COLOR){
478     cvCircle(dstImage,center, 100, CV_RGB(0,255, 0), 3);
479 }

```





A Venn diagram consisting of two overlapping circles. The left circle is solid black, and the right circle is a light blue color. The intersection of the two circles is shaded in a darker blue. The text "& A" is written in black font within the intersection area.

& A