Note on Facial Recognition System (FRS) for Higher and Technical Education
Computer No: 1709553, Tender Id: 531869

30.08.2022

1. **Tender**: As per the Procurement Committee recommendations, tender was floated at AP e-procurement portal for procurement of **(Facial Recognition System) FRS with 1:N Ratio**, to capture the attendance for a set of individuals in one capture

2. **Contract Award:** The FRS contract has been awarded to Bidders who qualified for Reverse auction, with **price at Rs. 0.09 per student per day**. The successful bidders are: **Syntizen Technologies, RNIT Solutions, HR SQUARE LLP.**

3. **JnanaBhumi Digital Platform:** JnanaBhumi is the digital platform for education related activities such as Registration, Counselling, Admission, Examination, Incentive Distribution for students who are enrolled in Higher and Technical Education. Almost 4000 Institutions, 80000 Principals and Teachers and 17.5 lakh students are already enrolled in JnanaBhumi Platform. 12.5 lakh students have applied for scholarships. After 6 step validation process, 11.1 lakh students have been found eligible and are given incentives (Jagananna Vidya Deevana, Vasathi Deevana etc.)

4. **Integration of FRS with JnanaBhumi:** It has been decided to integrate FRS with JnanaBhumi as a mobile app that is plugged to the Digital Platform. This is done to ensure an integrated approach, have better user management and make the procedure seamless for users i.e. Principals and Teachers.

5. **Status Update**: The status update on FRS App development and integration with JnanaBhumi is as follows:

Sl. No.	Activity	Status
1.	Development of FRS App by the three selected Vendors	Completed
2.	Selection of Phase 1 Rollout Institutions (GDCs – 16, Other Colleges – 34, ITIs – 10, Polytechnics – 10) and identification of Nodal Persons	Completed
3.	Onboarding of all Teachers and Students in JnanaBhumi Portal	Completed
4.	API Integration of FRS Mobile App with JnanaBhumi	Completed
5.	SMS Gateway Integration	Completed
6.	FRS Mobile App availability on Playstore	01/09/2022
7.	Cyber Security Audit (By APTS / Other CERT-In Empaneled Agencies)	05/09/2022
8.	Launch of FRS based Attendance through JnanaBhumi FRS App	05/09/2022
9.	Dashboards for Monitoring of FRS based Attendance	05/09/2022
10.	JnanaBhumi Mobile App for Students	10/09/2022
11.	User Manuals, Help Desk, Grievance Handling	10/09/2022
12.	Workflow for Student Migration	15/09/2022
13.	Workflow for Authorised Leave of Absence to Students	19/09/2022
14.	Workflow for Other Exception Handling	22/09/2022
15.	Phase 2 of FRS Rollout	01/10/2022

6. **Other Issues**: The following items require decisions to be taken
a. **Issue of Work Order to Vendors** by APCFSS after obtaining consent / MoU from departments.

b. **Issuance of GO for launching FRS** (After stabilization of Phase 1 Institutions)

<u>Note on Integration of FRS with JnanaBhumi</u>

1. Following are the steps to be followed for Integration of FRS App with JnanaBhumi and release of Jagananna Vasathi and Vidya Deevena.
    a. API based integration of Students/Employees
    b. Attendance of Students/Employees using FRS
    c. Aadhaar Authentication for Scholarship Students
    d. Finalizing of Eligible Students

2. **Integration of Enrollment Data with FR App:** Separate service will be placed in JnanaBhumi Mobile App for login into the FRS App using Single Sign on.
    Following API's will be developed by JnanaBhumi technical team and shared with FRS implementing Agency.
    a. API for Sharing of Colleges & Courses
    b. API for Sharing of College-Courses
    c. API for Sharing of Student Data

3. **Students Facial Templates Enrollment through FRS App:**
    a. Students enrolled data of JnanaBhumi will be pulled by FRS App based on the College/Course/Course Year/Section and Employee mapping done by the Admin (College Principal). Based on Mapped Section, respective teacher will enroll student facial templates.

4. **Attendance of Students/Employees**
    a. **Capturing of Attendance in FRS App:** Basing on enrolment data of each college/Course/Course Year/Section. College Admin (Principal) will map Section to Teacher and prepare Timetable. Based on the Timetable, teacher will take the attendance of students using FR App of Schedule I/Schedule II.

5. **Sharing of Attendance Data with JnanaBhumi:**
    a. Attendance captured using the FRS App should be shared with JnanaBhumi using API. All students' data should be shared with Present/Absent details for the particular day. FRS solution Provider will give the following APIs to JnanaBhumi.
        i. API for sharing of Students Attendance Day wise
        ii. API for sharing of Teachers Attendance Day wise

6. **Aadhaar Authentication of Scholarship Students**
    a. All Students Enrollment data will be placed Course/Course year wise in the principal login of JnanaBhumi Mobile App for one time approval by the principal using Aadhaar Based Biometric Authentication. Students whose authentication was successful will be pushed to Welfare Officer Login.

7. **Finalizing of Eligible Students**
    a. Based on day wise attendance submitted through the FRS APP to JnanaBhumi, Total aggregate present days of each student can be arrived at any given point of time. Using total no of working days, attendance percentage can be calculated per each student. Final list of eligible and ineligible List will be prepared considering minimum 75% attendance as eligible.