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Tracking Interface Hub

Design Discussions

1. **List all the components that will be being tracking this scope.**

Following components will be being handled in this current scope.

|  |  |  |  |
| --- | --- | --- | --- |
| Direction | Tabs (Component) | Message | Additional Info |
| Inbound | Clinical Notes | Clinical Notes | Provider Notes |
| Outbound | Clinical Notes | Clinical Notes | Provider Notes |
| Inbound | Superbill | Superbill |  |
| Outbound | Superbill | Superbill |  |
| Inbound | Immunization | History and Forecast |  |
| Outbound | Immunization | Immunization |  |
| Outbound | Laboratory | Lab Order | Order no |
| Inbound | Laboratory | Lab Result | Order no | Accession No |
| Outbound | Laboratory | Lab Result | Order no | Accession No |
| Inbound | Appointment | Appointment | Appointment Date and Time |
| Outbound | Appointments | Appointments | Appointment Date and Time |
| Inbound | Demographics | Demographics |  |
| Outbound | Demographics | Demographics |  |
| Outbound | Radiology | Radiology Order | Order no |
| Inbound | Radiology | Radiology Results | Order no | Accession No |
| Outbound | Radiology | Radiology Results | Order no | Accession No |
| Inbound | Document | Document | Destination: Document Manager “Folder Name > Document name and date |

1. **We have a tab for each clinical component to view tracking, will we add a tab to view All Components Together?**

No, there will be no All Tab now and in future as well.

1. **How components from 10g will be being track in 11x tracking?**

The Integration Team will provide a shared library, **iHubTransactionManager.dll**. It is the responsibility of each respective team to invoke the **Send** method of this library based on the configured triggers or events. For instance, if an interface is set to send an ADT message upon the creation of a new patient in the CureMD application, the Prescription Team will be responsible for calling the **Send** method from **iHubTransactionManager.dll**. Below is the detailed documentation for integrating **iHubTransactionManager.dll** into the respective module.



1. **Will a user have an option to view a component in 10g which is built in 11x?**

No, Tracking of Components built in 11x will be available in 11x product only.

1. **How will we integrate new components in this system?**

Although the design schema is equipped to support the tracking of various clinical components, future integrations will require an evaluation of the current architecture based on the specific nature of each component. This ensures that any new additions align with system capabilities and performance expectations.

1. **Is Archiving required in this system? if yes explain the implementation.**

Yes, archiving will be necessary for stored HL7 messages to reduce database size. A scheduled job will handle the archiving process, ensuring that HL7 messages older than one month are archived. However, logs will remain exempt from this archiving process.

1. **How will we implement Fuzzy Matching and Soundex Match in Patient Identification mechanism?**

Standardization Techniques:

1. **Lowercasing**: Convert all strings to lowercase to avoid mismatches due to case differences (e.g., "John" and "john").
2. **Whitespace Removal/Normalization**: Trim excess spaces or normalize whitespace between words (e.g., "John Doe" becomes "John Doe").
3. **Punctuation Removal**: Remove or ignore punctuation marks (e.g., "Dr. John-Doe" becomes "Dr John Doe").
4. **Accent Removal**: Remove diacritical marks (e.g., "José" becomes "Jose").
5. **Soundex/Phonetic Matching**: Apply phonetic algorithms to match strings that sound similar (e.g., "Smith" and "Smyth").

We will create a new Table for Patient Matching **PatientSearchX** having Columns

1. PatientId
2. PracticeId
3. FirstName
4. LastName
5. DateOfBirth
6. SSN
7. AccountNumber
8. ChartNumber
9. StandardFirstName
10. StandardLastName
11. SoundexFirstName
12. SoundexLastName

A DB Job will be responsible to sync these columns from Patient main table to this new table, Job will sync the data after every 6 hours.

Following Code will be used to for Soundex Calculation and Standardization.

Soundex: *SOUNDEX('String Name')* *–- SQL’s default function.*

Standardization:

*Declare @input varchar(50) = ' Jhon Doe -'*

*SET @input = LOWER(@input);*

*SET @input = LTRIM(RTRIM(REPLACE(REPLACE(@input, ' ', ' '), ' ', ' ')));*

*SET @input = REPLACE(@input, '.', '');*

*SET @input = REPLACE(@input, ',', '');*

*SET @input = REPLACE(@input, '-', '');*

*SET @input = REPLACE(@input, '\_', '');*

*SET @input = REPLACE(@input, '/', '');*

*SET @input = REPLACE(@input, '!', '');*

*SET @input = REPLACE(@input, '@', '');*

*SET @input = REPLACE(@input, '#', '');*

*SET @input = REPLACE(@input, '$', '');*

*SET @input = REPLACE(@input, '%', '');*

*SET @input = REPLACE(@input, '^', '');*

*SET @input = REPLACE(@input, '&', '');*

*SET @input = REPLACE(@input, '\*', '');*

*SET @input = REPLACE(@input, '(', '');*

*SET @input = REPLACE(@input, ')', '');*

*SET @input = REPLACE(@input, '[', '');*

*SET @input = REPLACE(@input, ']', '');*

*SET @input = REPLACE(@input, '{', '');*

*SET @input = REPLACE(@input, '}', '');*

*SET @input = REPLACE(@input, ';', '');*

*SET @input = REPLACE(@input, ':', '');*

*SET @input = REPLACE(@input, '''', '');*

*SET @input = REPLACE(@input, '"', '');*

*SET @input = REPLACE(@input, '<', '');*

*SET @input = REPLACE(@input, '>', '');*

*SET @input = REPLACE(@input, '?', '');*

*Select @input;*