IEcgAccess Open Interface for the EcgViewer Version 1.2

Implementing the open interface enables a proprietary or standard based ECG data to be viewed by the EcgViewer.

A sample solution for binary ECG data is provided in the “OEMEcg” sample solution. Output of the project is “OemLib.dll”.

After implementing your own solution, go to EcgViewer setup menu and select General->ECG Formats->Use OemLib.dll option.

Below is the C# code for the open interface IEcgAccess:

```csharp
/// <summary>
/// IEcgAccess Interface to implement read/write API
/// </summary>
public interface IEcgAccess
{
    /// <summary>
    /// Reads entire record at the given path and returns true if successful
    /// </summary>
    bool Read(string fileName);

    /// <summary>
    /// Writes entire record to the given path and returns true if successful
    /// </summary>
    bool Write(string fileName);

    /// <summary>
    /// Patient related info is grouped here
    /// </summary>
    Person PatientInfo
    {
        get;
        set;
    }

    /// <summary>
    /// ECG related info, excluding ecg data, is grouped here
    /// </summary>
    SignalInfo EcgInfo
    {
        get;
        set;
    }
```
/// <summary>
/// Diagnose related info is grouped here
/// </summary>
Diagnostic DiagnoseInfo
{
    get;
    set;
}

/// <summary> gets or sets ECG data as specified by IEcgAccess interface </summary>
ArrayList EcgData
{
    get;
    set;
}

/// <summary> Simple DateTime structure </summary>
public struct DateAndTime
{
    public int Year;
    public int Month;
    public int Day;
    public int Hour;
    public int Minute;
    public int Second;
}

/// <summary> Personal Details of the patient. </summary>
public struct Person
{
    /// <summary>Patient Identification Number, reasonable length 40 characters</summary>
    public string ID;

    /// <summary>First Name</summary>
    public string FirstName;

    /// <summary>Second Last Name</summary>
    public string SecondLastName;

    /// <summary>Last Name</summary>
    public string LastName;

    /// <summary>0.Not known 1.Male, 2.Female, 9.Unspecified</summary>
    public int Sex;
/// <summary>
/// 0.Unspecified, 1.Caucasian, 2.Black, 3.Ori ental
/// </summary>
public byte Race;

/// <summary> Weight in specified units </summary>
public int Weight;

/// <summary>
/// </summary>
public byte WeightUnit;

/// <summary> Height in specified units </summary>
public int Height;

/// <summary>
/// 0.Unspecified, 1.Centimeters, 2.Inches, 3.Millime ters
/// </summary>
public byte HeightUnit;

/// <summary> Date of birth specified in DateAndTime str ucture </summary>
public DateAndTime Birth;

/// <summary> Age in years </summary>
public int Age;

public struct SignalInfo
{
    /// <summary>
    /// Enter Lead names EXACTLY as decribed in Lead
    /// Identification Codes table.
    /// Do not put extra spaces or characters in between.
    /// Example: "I,II,III,aVR,aVL,aVF,V1,V2,V3,V4,V5,V6"
    /// </summary>
    public string Leads;

    /// <summary>
    /// If all lead recording lengths are not same, create and
    /// set this array to specify lead lengths in samples.
    /// If same, no need to use this field.
    /// </summary>
    public uint[] LeadLengths;

    /// <summary>
    /// A/D value corresponding to 1 mv at the input
    /// </summary>
    public double ADU;

    /// <summary> Sampling rate in samples per second </summary>
    public double SRATE;
}
public DateAndTime Acq;

public double BaselineFilter;

public double LowPassFilter;

public byte FilterBitMap;

public string TextModel;

public byte LanguageCode;

public byte CapabilitiesBitMap;

public byte ACMainsFrequency;

public string DeviceSN;

public string DeviceSCP;
/// <summary> Manufacturer of Acquisition Device </summary>
public string DeviceMF;

/// <summary>
/// Details related to Diagnosis and Medical history
/// </summary>

public struct Diagnostic
{
    /// <summary> Systolic blood pressure in mmHg </summary>
    public ushort Systolic;

    /// <summary> Diastolic blood pressure in mmHg </summary>
    public ushort Diastolic;

    /// <summary> Acquiring Institution Description </summary>
    public string AcquiringInstitute;

    /// <summary> Referring Physician </summary>
    public string ReferringPhysician;

    /// <summary> Diagnosis or the referral indication </summary>
    public string Diagnosis;

    /// <summary> Medical History </summary>
    public string MedicalHistory;

    /// <summary> Remarks and free text </summary>
    public string FreeText;
}