Log4OM 2 Remote Control interface v.1.1

Overview

Control interface is an **UDP** message interface that receive and returns information to the caller. There is also an "unsolicited interface" that is able to originate status messages from Log4OM user interface and broadcast them to the current network (broadcast message to 255.255.255.255) rather than sending them to a specific IP/port destination on user configuration.

Old "remote control messages" are still parsed for retro compatibilty if parsing of the remote control message fails due to an incorrect format received.

Inbound messages

Inbound message format is XML. Inquiry message is a standard message with some required XML fields that contains message payload if necessary.

All incoming messages should be marked with a message type identifier and an unique ID (if missing, a default GUID will be assigned). All answers will be marked with the same message ID and type identifier.

ALIVE

This message is used to test Log4OM service availability.

```
<RemoteControlRequest>
    <MessageId>C0FC027F-D09E-49F5-9CA6-33A11E05A053</MessageId>
    <RemoteControlMessage>Alive</RemoteControlMessage>
</RemoteControlRequest>
```

Answer:

```
<RemoteControlResponse>
    <MessageId>C0FC027F-D09E-49F5-9CA6-33A11E05A053</MessageId>
    <RemoteControlMessage>Alive</RemoteControlMessage>
    <Done>True</Done>
</RemoteControlResponse >
```

GetRadioStatus

This message is used to poll connected radio status from Log4OM. The same message is also sent (on a different port) autonomously by Log4OM as part of his unsolicited status message creation. Format of the message is different from standard as it's kept equal to the one defined in N1MM protocol.

```xml
<RemoteControlRequest>
     <MessageId>C0FC027F-D09E-49F5-9CA6-33A11E05A053</MessageId>
     <RemoteControlMessage>GetRadioStatus</RemoteControlMessage>
</RemoteControlRequest>
```

Anwer:

```xml
<RadioInfo>
     <app>LOG4OM</app>
     <StationName>MY_PC</StationName>
     <OpCall>IW3HMH</OpCall>
     <RadioNr>1</RadioNr>
     <Freq>1410000</Freq>
     <TxFreq>1410000</TxFreq>
     <Mode>USB</Mode>
     <ActiveRadioNr>2</ActiveRadioNr>
     <IsSplit>false</IsSplit>
     <IsTransmitting>2</IsTransmitting>
</RadioInfo>
```

Freq is represented as values to the tens digit with no delimiter

SetTxFrequency

```xml
<RemoteControlRequest>
     <MessageId>C0FC027F-D09E-49F5-9CA6-33A11E05A053</MessageId>
     <RemoteControlMessage>SetTxFrequeny</RemoteControlMessage>
     <Frequency>14075000</Frequency >
</RemoteControlRequest>
```

Freq should be provided in Hz without signs

Answer:

```xml
<RemoteControlResponse>
     <MessageId>C0FC027F-D09E-49F5-9CA6-33A11E05A053</MessageId>
     <RemoteControlMessage>SetTxFrequeny</RemoteControlMessage>
     <Done>True</Done>
</RemoteControlResponse>
```

SetRxFrequency

```xml
<RemoteControlRequest>
      <MessageId>C0FC027F-D09E-49F5-9CA6-33A11E05A053</MessageId>
      <RemoteControlMessage>SetRxFrequeny</RemoteControlMessage>
      <Frequency>14075000</Frequency >
</RemoteControlRequest>
```

Freq should be provided in Hz without signs

Answer:

```xml
<RemoteControlResponse>
      <MessageId>C0FC027F-D09E-49F5-9CA6-33A11E05A053</MessageId>
      <RemoteControlMessage>SetRxFrequeny</RemoteControlMessage>
      <Done>True</Done>
</RemoteControlResponse>
```

SetMode

```xml
<RemoteControlRequest>
      <MessageId>C0FC027F-D09E-49F5-9CA6-33A11E05A053</MessageId>
      <RemoteControlMessage>SetMode</RemoteControlMessage>
      <Mode>USB</Mode>
</RemoteControlRequest>
```

Answer:

```xml
<RemoteControlResponse>
      <MessageId>C0FC027F-D09E-49F5-9CA6-33A11E05A053</MessageId>
      <RemoteControlMessage>SetMode</RemoteControlMessage>
      <Done>True</Done>
</RemoteControlResponse>
```

SetCallsign

Set the Callsign provided on the user interface. Note: if a callsign is already visible on user interface and was manually set by the operator this message will be discarded.

```
<RemoteControlRequest>
    <MessageId>C0FC027F-D09E-49F5-9CA6-33A11E05A053</MessageId>
    <RemoteControlMessage>SetCallsign</RemoteControlMessage>
    <Callsign>G4POP</Callsign>
</RemoteControlRequest>
```

Answer:

```
<RemoteControlResponse>
    <MessageId>C0FC027F-D09E-49F5-9CA6-33A11E05A053</MessageId>
    <RemoteControlMessage>SetCallsign</RemoteControlMessage>
    <Done>True</Done>
</RemoteControlResponse>
```

ClearUI

Clears the user interface from previously set callsign. Note: If a callsign is already visible on user interface and was manually set by the operator this message will be discarded.

```
<RemoteControlRequest>
    <MessageId>C0FC027F-D09E-49F5-9CA6-33A11E05A053</MessageId>
    <RemoteControlMessage>ClearUI</RemoteControlMessage>
</RemoteControlRequest>
```

Answer:

```
<RemoteControlResponse>
    <MessageId>C0FC027F-D09E-49F5-9CA6-33A11E05A053</MessageId>
    <RemoteControlMessage>ClearUI</RemoteControlMessage>
    <Done>True</Done>
</RemoteControlResponse>
```

WorkedBefore

Returns info about previous contacts with the provided callsign.
Band and mode parameters are BOTH optional and may provide more details when provided

```xml
<RemoteControlRequest>
    <MessageId>C0FC027F-D09E-49F5-9CA6-33A11E05A053</MessageId>
    <RemoteControlMessage>WorkedBefore</RemoteControlMessage>
    <Callsign>G4POP</Callsign>
    <Band>20m</Band>
    <Mode>CW</Mode>
</RemoteControlRequest>
```

Answer:

```xml
<WorkedBefore>
    <MessageId>C0FC027F-D09E-49F5-9CA6-33A11E05A053</MessageId>
    <Valid>True</Valid>
    <Callsign>G4POP</Callsign>
    <Worked>{Application answer}</Worked>
</WorkedBefore>
```

Answer assume following values:

- NotWorked: Callsign has never been worked before
- Worked: Callsign has been worked (on another mode/band if no band mode have been provided)
- WorkedSameBand: Callsign has been worked on same band (but not mode)
- WorkedSameMode: Callsign has been worked on same mode (but not band)
- WorkedSameEmissionType: Callsign has been worked on same emission type but not on same mode (emission types are PHONE / CW / DIGITAL)
- WorkedSameBandMode: Callsign has been worked on same band and mode
- WorkedSameBandEmissionType: Callsign has been worked on same band and emission type but not the same exact mode

As example:

20m CW is worked same band of 20m USB

20m AM is worked same band / emission type of 20m USB

20m PSK31 is worked same emission type of 10m FT8

Unsolicited messages

Log4Om sends automatic messages, when enabled, reporting some information to listeners.

Messages can be broadcasted on a specific port or specifically directed towards a single IP / port on user needs. Messages are sent when something changes or, on user request, every 5 seconds and when something changes.

RADIO STATUS message

This message is transmitted everytime a change happens on the CAT layer. Prerequisites for the message are:

1) CAT engine is running and connected to a valid radio

2) Message output is enabled in program configuration

Message format:

See GetRadioStatus message