

Poor Man's NSA: Decoding & Reading Transmissions of MFA Egypt

There are some active networks in Arabic being around, first of all Egypt Ministry of Foreign Affairs. Generally, they follow a scheme of up to four steps (*Figure 1*):

- Calling the Embassy in SITOR-A [ATU-80 Arabic]
- Calling the Embassy in CODAN Chirp
- Sending files in CODAN 9001
- Concluding with some operators' chat in SITOR-A [ATU-80 Arabic]

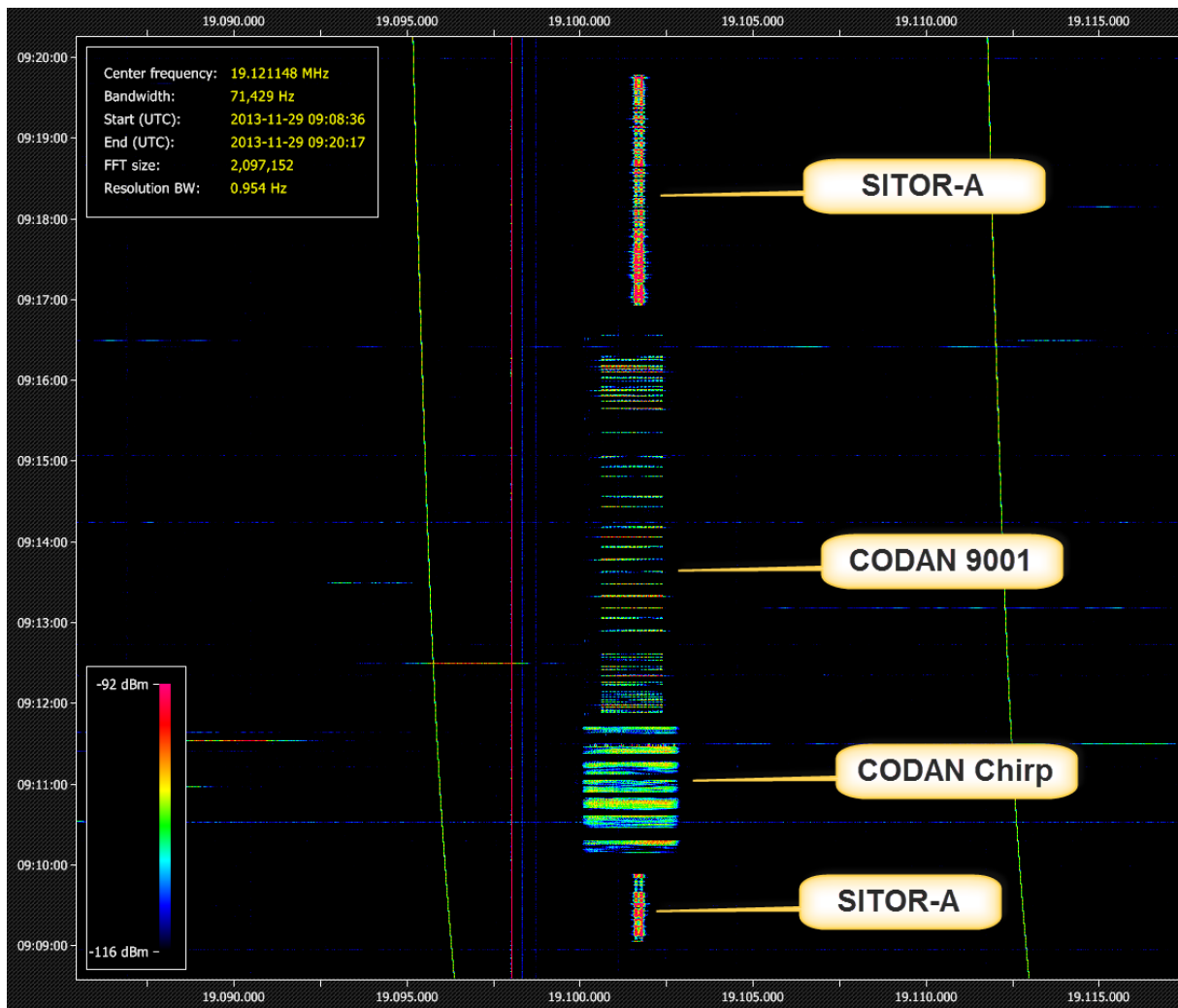


Figure 1: Transmissions of Egypt's MFA consists of up to four steps. Quite often you will find just SITOR-A. This sonagram has been made with [SDR-IP](#) and [SDR-RADIO](#). This software provides a "living sonagram", where you can tune via mouse click through time and frequency of an HF recording.

First step is *decoding*. As the whole transmission consists of three modes, non-professionals with not so deep pockets have to do some work-around. [Sorcerer](#) provides SITOR-A and CODAN Chirp. Open one instance each, SITOR-A centered at 1.700 Hz, CODAN Chirp at 1.500 Hz (*Figures 2 and 3*).

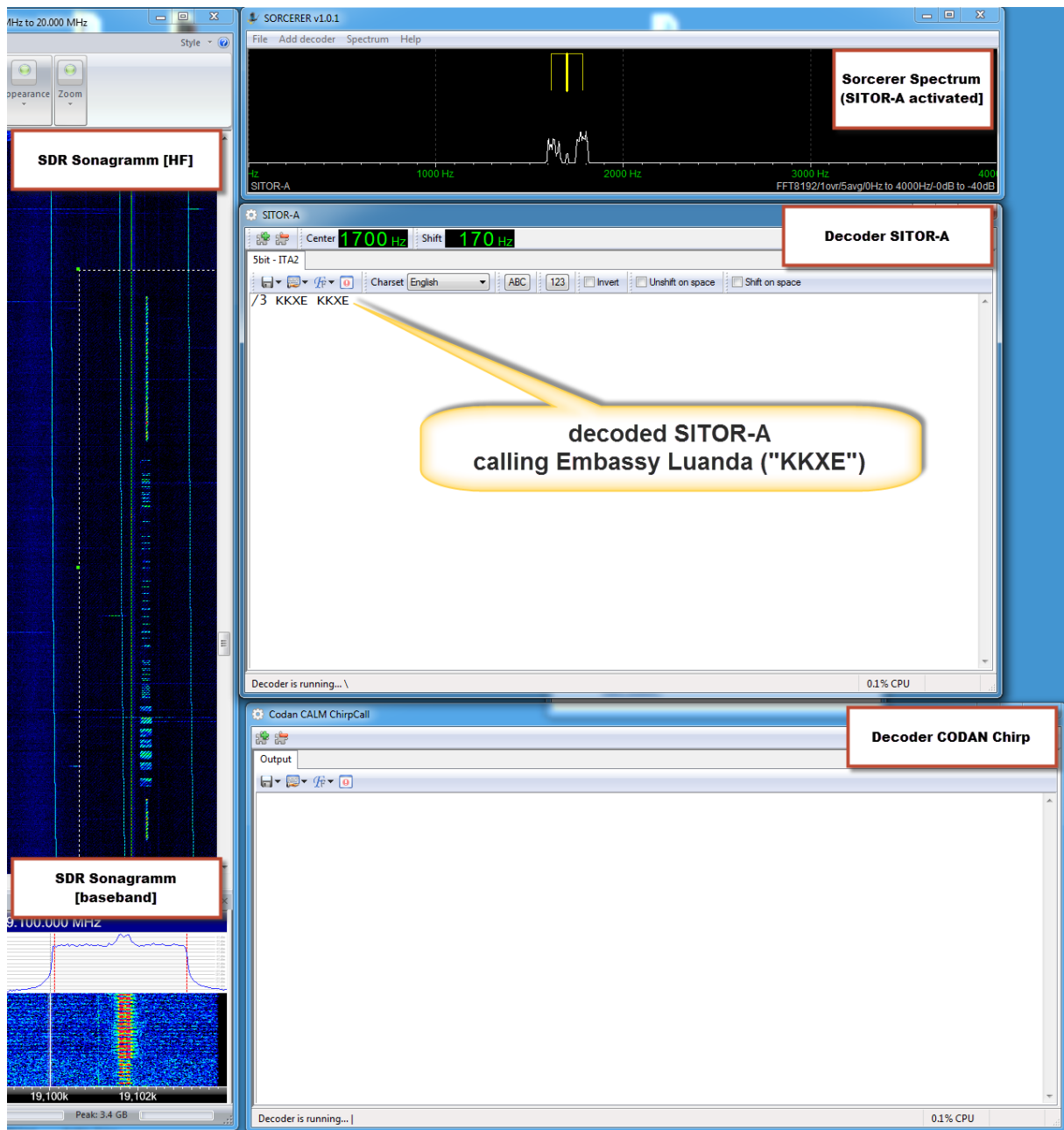


Figure 2: On the left the sonagram. On the right and main part of this figure Sorcerer's two instances, namely "SITOR-A" with just receiving the start of the transmission and "CODAN Chirp" waiting for an appropriate signal to decode, which ...

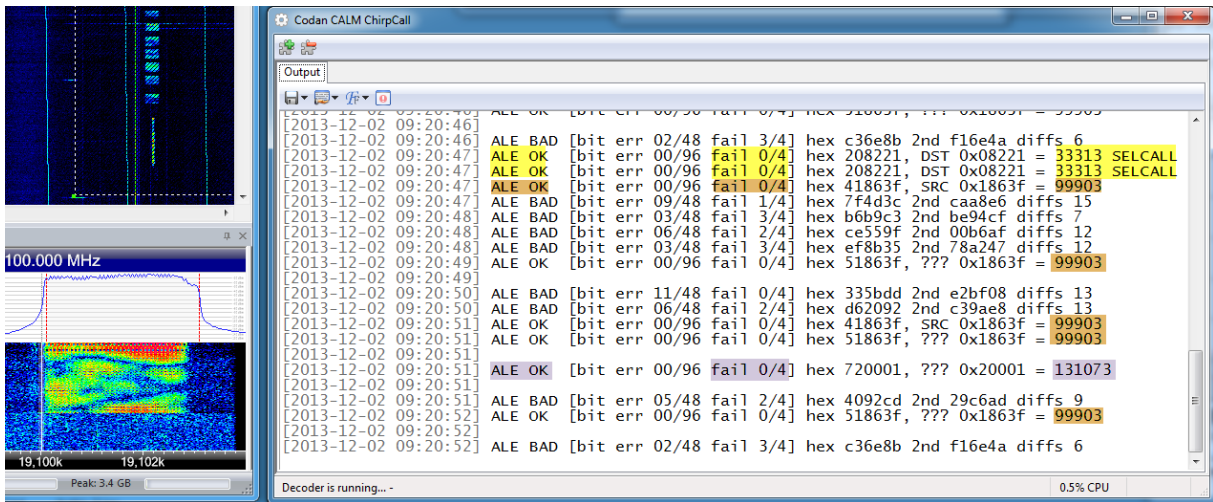


Figure 3: ... is shown here. "99903" (MFA Cairo) is calling "33313" (Embassy Luanda). Does anyone know what "131073" stands for?

The CODAN 9001 portion of the transmission, which may be a FAX, is no fun to read by the average listener (Figure 4, with W-Code). But he will have a chance with the SITOR-A portion of the transmission, see next page.

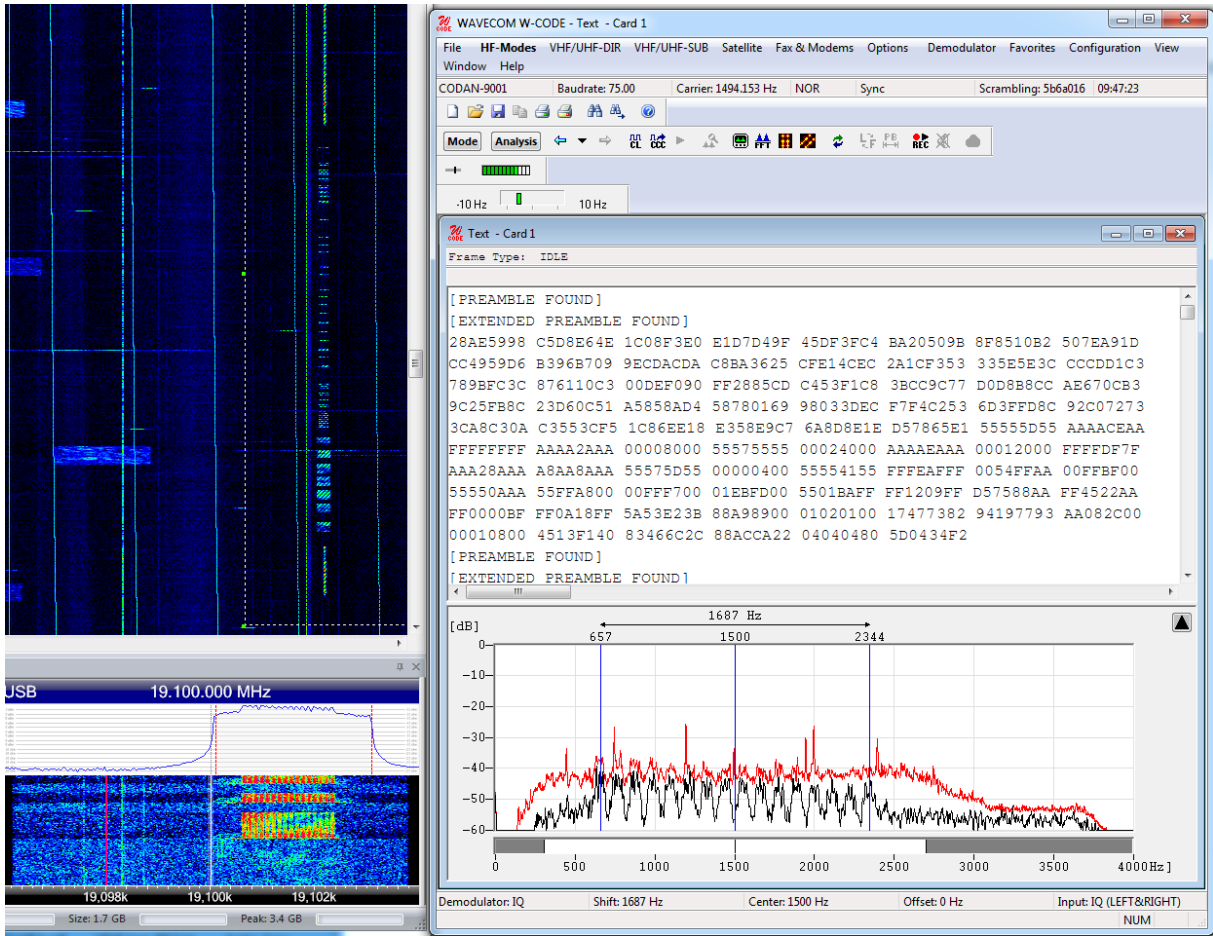


Figure 4: Decoding of a scrambled CODAN 9001 portion of the transmission.

Most decoders do convert ATU-80 Arabic into Latin characters (ITA2-Latin), as shown in *Figure 5*.

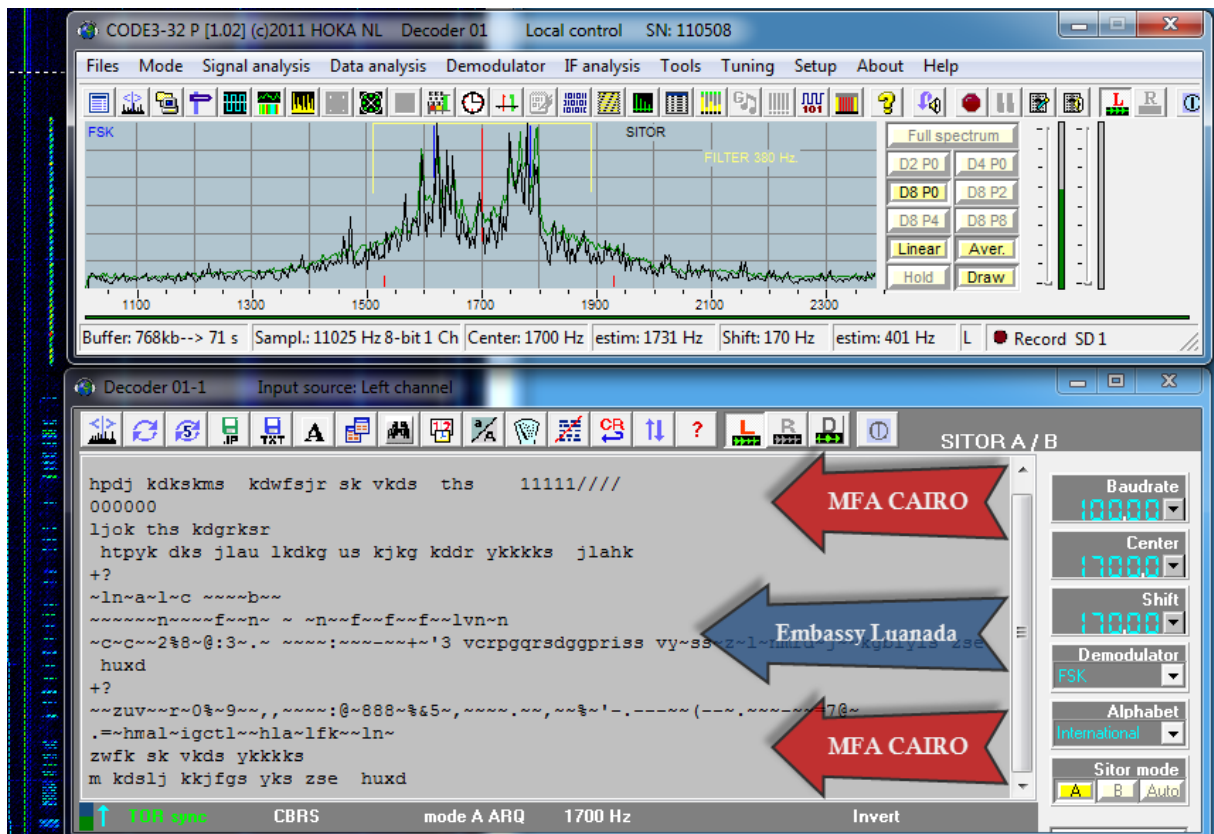


Figure 5: ATU-80 Arabic converted into ITA-2 Latin by [Code3-32P](#). This is the last part of the operation, considered operators' chat.

As I haven't found any proper (re-)conversion of the Latin text into Arabic (if you have more luck, a hint is welcomed!) in the web, I again took W-Code, switched to Arabic (*Figure 6*).

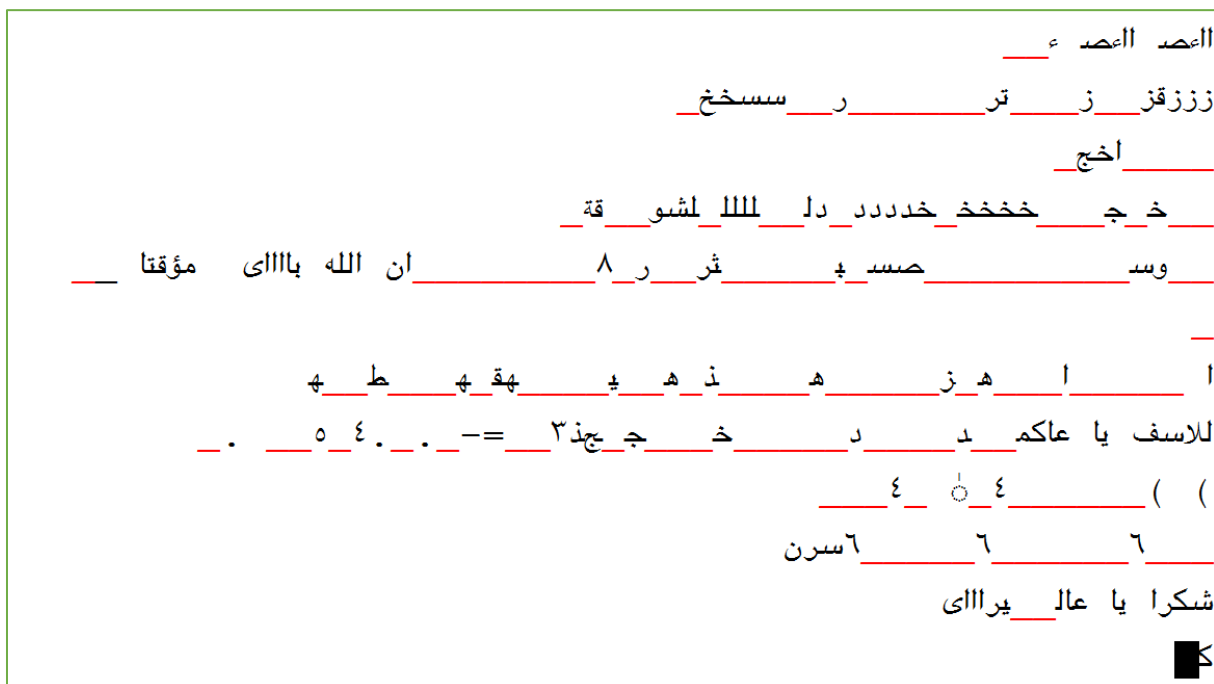


Figure 6: The text from Figure 5, here decoded by W-Code in Arabic.

In the next step, you load up this image (sic!) file to [NewOCR](#), switch to “Arabic”, let do the OCR process and eventually click “Google Translator” in this window - see *Figures 7 to 8*.

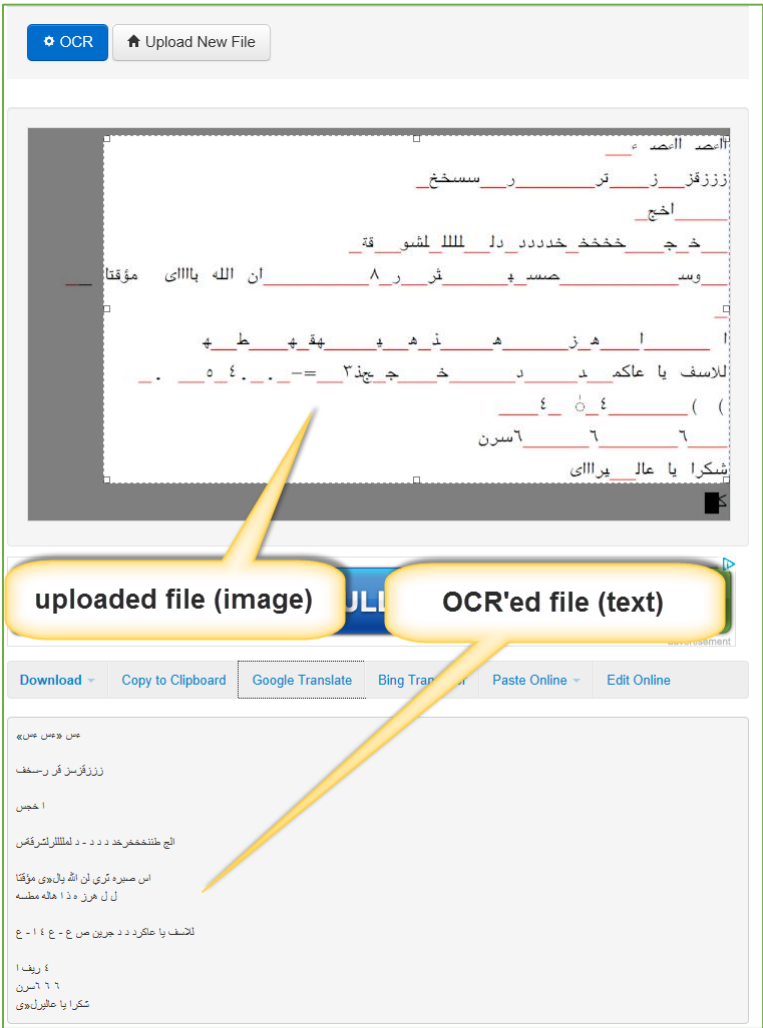


Figure 7: Upload image, and let the software recognize the text.



Figure 8: The translation is not really shaking the world, but a few words become readable, and it will show the concept. The quality of this automatic translation depends on the quality of reception & decoder plus the content of the text.

Here are two additional examples from shortwave, but this workflow of course does also work (much better) for FAX transmissions (INMARSAT!) and of course also for other languages than Arabic.

```
00 000 Tnr
C - p bend Dzkzzzzzkz g Zrriqzzzz - Zrsr Srrrr - t t

S,,,, 0.9 a Eadsoa and share my good brother p Ezz Gazzzz Zkzzzzsz button
Rrr - t - t l n l, LOHAS for you thinner Qahhaqqa flame Hi's Council
Ha irrigation over 4 4 for «the» s and the Kara
A
```

Figure 9: Operators' chat, 19.345 kHz, between MFA Cairo and Embassy Islamabad ("44405"), 08:06 UTC.

```
D Khaddkd Khaddkd Khgrgzzvzz Gazzzzshzzkzzzz g Zrrlrtrrrlz but - t
St g r Zlds for Sagaz «'s break
Here Klaaehr
Qahhaqy Gatef exhorted
Gg g d d cleared
N be the number of good h repealed vomiting N d Z

GGG - Zzzzzzvzzzzzkzzzzszr Rrtr real (5 5 What Qahb here to perdition
Dr. Nick Atn Tdl u 0.0 drape s 0 d for pf
Pastor Wu R - A ---- Aso - and the sixth - a - a --- Wu -
Idzzzkakj h Gazzvzz Lens
I g Srl Ikhrrrr - t t - t PL
Not for NH 0
R 0 Lhasa and Wei Ya and high end of the Hay
Zzzth the imam p Ke Deee Ee's high for P i urges.
```

Figure 10: Operators' chat, 19.522 kHz, 08:15 UTC; possibly Cairo <-> Beijing.