

# Modes, Modes and more Modes...

Let's take the mystery out of choosing the right signals analysis and decoding suite



# WHAT CAPABILITIES SHOULD YOUR ANALYSIS AND DECODING SUITE HAVE?



Of course, the only answers are: the most accurate, relevant and up-to-date tools and decode solutions that keep up with the ever-changing signals environment.

Anything less and you are compromising your mission, weakening your capabilities and spending money on tools you don't need. Here are the most important factors to achieve value for money when deciding on a decoding suite and the rules we at Comint Consulting live by.

## IRRELEVANT MODES

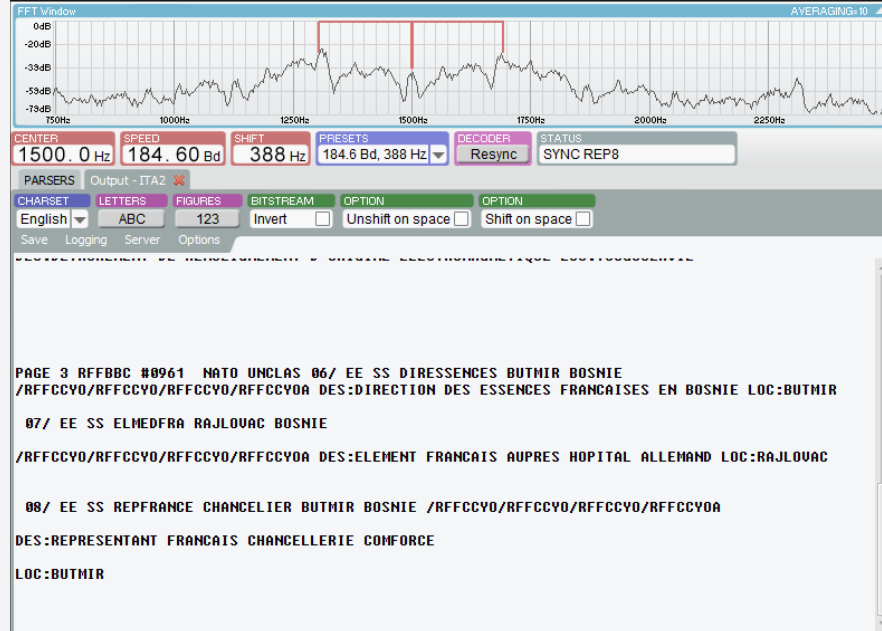
### WHY PRETEND?

We feel strongly about NOT offering modes that are no longer on-air in any fashion. Here is a list of "modes" (\*) that are NO LONGER used that you can acquire from other products in this field (list is current as of January 2013):

- » ARQ6-70
- » ARQ6-90
- » ARQ6-98
- » ARQ-M2-242
- » ARQ-M2-342
- » ARQ-M4-242
- » ARQ-M4-342
- » ARQ-N
- » AUTOSPEC
- » HC-ARQ
- » HNG-FEC
- » POL-ARQ
- » RUM-FEC
- » SI-ARQ
- » SI-AUTO
- » SI-FEC
- » SPREAD-11
- » SPREAD-21
- » SPREAD-51
- » ARQ-M4-242
- » SWED-ARQ
- » VISEL

This list could be much longer if it were to include additional amateur modes of no interest to a SIGINT professional, and we also don't believe in superfluously padding a list of modes with tonal systems of dubious or nil usefulness - most are long off the air, or used by taxi or electrical companies in very small areas of the world. These deceptive practices certainly make for a more impressive and long list of modes - but it is a waste of time and money for a professional to have to wade through. Sadly, some of the above modes have not been on-air anywhere in the world for more than TWO DECADES!

# A GOOD DECODER GIVES YOU WHAT YOU WANT!



## ACCURATE DESCRIPTION

### WHY MISLEAD?

Many products in this marketplace, unfortunately, contain inaccurate information, especially in their naming schemes. Some names are made-up names, and still others confuse alphabetic coding systems with the name of the actual equipment or waveform. We don't believe professionals should have to tolerate inaccurate information -- it leads to inaccurate and confusing results! Some common and misleading inaccuracies we see in this field:

- » 405-395 - NO, NOT ITS REAL NAME
- » 81-29 - NO, NOT ITS REAL NAME
- » 81-81 - NO, NOT ITS REAL NAME
- » AK 10 FEC 101 - NO, NOT ITS REAL NAME
- » ALIS AND ALIS-2 - REAL NAMES R&S GM856/7 AND GM2XXX SERIES MODEMS' PROPRIETARY WAVEFORMS. SADLY, THOUGH NEITHER HAS ANYTHING TO DO WITH THE SIX MODES OF THE REAL ALIS MODE
- » CIS-11 (AKA TOR/G-10/11) - NO, NOT ITS REAL NAME
- » CIS-12 - NO, NOT ITS REAL NAME AND THERE ARE MORE THAN A DOZEN MODEM INPUTS
- » CIS-14 (AKA TOR/G-12) - NO, NOT ITS REAL NAME
- » CIS-36-50 (AKA BEE) - NO, NOT ITS REAL NAME
- » CIS-50-50 - NO, NOT ITS REAL NAME
- » CROWD-36 - NO, NOT ITS REAL NAME
- » DUP-ARQ - REAL NAME SIEMENS CHP-200 MODEM; THERE ARE 3 VARIANTS ACTUALLY ON-AIR; NONE OF WHICH ARE PROCESSED NOR ACCURATELY IDENTIFIED BY OTHER PRODUCTS IN THE MARKET
- » DGPS - WHICH SYSTEM? AT LAST COUNT, THERE ARE NEARLY 3 DOZEN SYSTEMS, INCLUDING SOME DEDICATED TO SUPPORT CERTAIN MILITARIES
- » FIRE (AKA MS5, CIS-12) - NO, NOT ITS REAL NAME AND THERE ARE A DOZEN VARIANTS NOT ADDRESSED
- » GW-FSK, GW-PSK (ETC) - GLOBE WIRELESS' GL-5100 MODEM - WHY NOT SIMPLY SAY SO?
- » RUSS 200-450 - NO, NOT ITS REAL NAME
- » ... AND SO ON.

## TECHNICAL AND PERFORMANCE

### BE ACCURATE

We also see a whole host of decode modules in expensive products in the market who have many technical parameters simply wrong. Some of those we see most often are:

- » AN INCORRECT CENTER FREQUENCY (CF) FOR A MODEM
- » AN INCORRECT BITMAP CAUSING DECODED BITS TO BE TRANSLATED TO AN INACCURATE ALPHABET IN THE OUTPUT DISPLAY
- » VARIANTS ARE NOT KEPT UP WITH EVEN FOR COMMON MODES: THINGS CHANGE, TELECOMMUNICATIONS EQUIPMENT MANUFACTURERS ARE CONTINUALLY IMPROVING THEIR OFFERINGS - DO YOUR DECODERS KEEP UP?
- » SOME CLAIM TO DO "ALL CRCs" OF THE VARIOUS FACTOR MODEMS, BUT NEW CRCs ARE MAPPED EVERY MONTH, SO THIS IS A PATENTLY FALSE CLAIM

## LET'S GET THE GEARS TURNING!

**Make the right choice for your needs.  
Make sure that your decoder does  
what you really need it to do!**

**Spend wisely** - why pay for a collection of 'solutions' that aren't really relevant or that you don't care about?

**Be informed** - inaccurate and incomplete solutions lead to inaccurate and incomplete results; if you are a SIGINT professional, a hobby solution is NOT for you.

### NEED HELP OR ADVICE?

We are here to help. And the best thing of all - we will give you an honest and responsible answer to your questions. Contact us today at [info@comintconsulting.com](mailto:info@comintconsulting.com)!

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[info@comintconsulting.com](mailto:info@comintconsulting.com)

