

CONTACT INFORMATION	E-mail/XMPP: tjoppen@acc.umu.se IRC: thardin@irc.freenode.net PGP KeyID: 41BB2551 PGP fingerprint: A79D 4E3D F38F 763F 91F5 8B33 A01E 8AE0 41BB 2551 OMEMO fingerprint: 268B0C9A 2F0CCCD1 225DBDAB DB0DBF10 8216F3C6 C60E66C8 3ED2241C D80DF330
SPOKEN LANGUAGES	Swedish, English
EDUCATION	MSc, Department of Computing Science, Umeå university, 2013
CERTIFICATIONS	Sun Certified Java Programmer (SCJP), 2011
PROFESSIONAL EXPERIENCE	<p>Space Science Sweden, Umeå, Sweden 2015 – present https://www.spacesciencesweden.se/ https://www.blogg.umu.se/umea-lunar-venture/ Analog and digital electronics lead, software development lead. High-impedance measurement, analog/digital demodulation.</p> <p>UMIT Research Lab, Umeå, Sweden 2014, 2015 – 2018 http://www.org.umu.se/umit/ Prototype work involving the FMI standard (https://fmi-standard.org/).</p> <p>Intinor AB, Umeå, Sweden – http://www.intinor.se/ 2015 Backend work in C++ with xerces-c and cairo.</p> <p>CodeMill AB, Umeå, Sweden – https://www.codemill.se/ 2008 – 2015 Notable clients and projects:</p> <p>Vidispine – https://www.vidispine.com 2010 – 2015 A toolbox for building Media Asset Management systems. Includes two major parts, both of which I've been involved with:</p> <ul style="list-style-type: none"> • Audio/video transcoder, remuxer with REST interface (C/C++, main developer/video guru) • Middleware (Java EE, minor work) <p>RSA – http://www.rsabiomedical.se/ 2015 Work on mdesk, a tool for doing orthopedic preoperative planning and templating. C++.</p> <p>Umbio – http://www.umbio.com/ 2013 – 2014 Serial servo motor control in Java, porting C# code to Java.</p> <p>BBC – https://www.bbc.co.uk 2011 – 2012 The Digital Media Initiative project via Vidispine. Mostly C.</p> <p>Cantemo – http://www.cantemo.com/ 2012 Work on plugins for Cantemo's Portal (a Django-based web front-end for Vidispine). Sub-clients we've been involved with:</p> <ul style="list-style-type: none"> • Meta Media Creative Technologies – http://www.mmct.com/ • 10dot1 – http://www.10dot1.co.uk/ <p>Dokufant – http://www.dokufant.se/ 2012 Video transcoding backend.</p> <p>Playing for Change – http://www.playingforchange.com/ 2012 Backend work in Python (Django).</p>

TableDrum – <http://www.tabledrum.com/> **2008 – 2009**
 An iPhone application which does realtime audio classification to figure out which drum sounds to play based on how the user drums on nearby surfaces. Part of my master's thesis.

HARDWARE AND SOFTWARE SKILLS Build systems / CI:

• CMake, make, ninja, Jenkins, GitLab CI, docker

Higher-level languages:

- C (pref. C99), C++, Java, Python, bash, SQL, Matlab/Octave

Instruction set familiarity:

- x86, AVR, 6502

Version control systems:

- git, svn, hg, bzt

Video editing:

- kdenlive, Final Cut Pro 7, Final Cut Pro X, Avid Media Composer 5

Operating Systems:

- Windows, Mac OS X, Debian GNU/Linux (including Ubuntu and other variants)

Other:

- \LaTeX , LyX, LibreOffice

FREE SOFTWARE PROJECTS **FreeDV/codec2** – <https://freedv.org/> **2017 – present**
 Ultra-low bitrate voice codec. Build system and optimization work.

FFmpeg/Libav – <https://ffmpeg.org/> **2010 – present**

Notable contributions:

- FreeDV .c2 muxer/demuxer and codec2 wrapper (maintainer)
- LXF demuxer (maintainer)
- Lots of work on the MXF demuxer, such as OPAAtom support, improved seeking and optimizations
- Various fixes and features for the AIFF, WAVE, MOV, GXF and FLIC demuxers
- Several formats made playable on stdin

MXFLib – <http://freemxf.org/> **2010 – 2012**

LibMXF – <http://ingex.sourceforge.net/libMXF/> **2011 – 2012**

Projects of my own creation:

James – <https://github.com/Tjoppen/james> **2010 – 2012**

An XML schema compiler for C++

Pyjames – <https://github.com/Tjoppen/pyjames> **2011 – 2012**

Like James, but outputs Python code instead of C++

ELECTRONICS Familiar subjects:

- Power electronics
- Microcontrollers (PIC, AVR)
- Passive and active filters
- Baluns, RF impedance transformers
- Antenna design and simulation (nec2c)
- Six-layer PCB design in KiCAD
- Etching
- SMT, reflow soldering
- EMC

OTHER HOBBY
PROJECTS

Amateur radio

2015 – present

I'm involved in the amateur radio scene under the callsign SA2TMS. Interests center around digital voice (FreeDV) and low power (QRP), or even very low power (QRPP). Currently serving on the board of SK2AT (2018).

Umeå Hackerspace – <https://www.umeahackerspace.se/>

2013 – present

Active since the middle of 2013, mostly in charge of maintaining order in the electronics lab and teaching people how to diagnose and repair broken electronics. Served as vice chairman in 2014.

Demoscene

2010 – present

Production for PC, Atari 2600 and NES, including two games and several demos (one of which won Revision 2012).

Homebrewing

2007 – 2016

Brewed beer for quite a while, which usually ended up quite tasty. Haven't done so in quite a while now however.

Battlegrounds 2 – <http://www.bgmod.com/>

2007 – 2012

A total conversion mod for Half-Life 2. Mostly coding, a little bit of mapping and animating.