

CONTACT INFORMATION	E-mail/XMPP: <a href="mailto:tjoppen@acc.umu.se">tjoppen@acc.umu.se</a> IRC: <a href="irc://irc.freenode.net">thardin@irc.freenode.net</a> PGP KeyID: 41BB2551 PGP fingerprint: A79D 4E3D F38F 763F 91F5 8B33 A01E 8AE0 41BB 2551	
SPOKEN LANGUAGES	Swedish, English	
EDUCATION	MSc, Department of Computing Science, Umeå university, 2013	
CERTIFICATIONS	Sun Certified Java Programmer (SCJP), 2011	
PROFESSIONAL EXPERIENCE	<p><b>Space Science Sweden</b>, Umeå, Sweden <span style="float: right;"><b>2015 – present</b></span>  <a href="https://www.spacesciencesweden.se/">https://www.spacesciencesweden.se/</a>  <a href="https://www.blogg.umu.se/umea-lunar-venture/">https://www.blogg.umu.se/umea-lunar-venture/</a>  Analog and digital electronics lead, software development lead. High-impedance measurement, analog/digital demodulation.</p> <p><b>UMIT Research Lab</b>, Umeå, Sweden <span style="float: right;"><b>2014, 2015 – present</b></span>  <a href="http://www.org.umu.se/umit/">http://www.org.umu.se/umit/</a>  Prototype work involving the FMI standard (<a href="https://fmi-standard.org/">https://fmi-standard.org/</a>).</p> <p><b>Intinor AB</b>, Umeå, Sweden – <a href="http://www.intinor.se/">http://www.intinor.se/</a> <span style="float: right;"><b>2015</b></span>  Backend work in C++ with xerces-c and cairo.</p> <p><b>CodeMill AB</b>, Umeå, Sweden – <a href="https://www.codemill.se/">https://www.codemill.se/</a> <span style="float: right;"><b>2008 – 2015</b></span>  Notable clients and projects:</p> <p><b>Vidispine</b> – <a href="https://www.vidispine.com">https://www.vidispine.com</a> <span style="float: right;"><b>2010 – 2015</b></span>  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"> <li>• Audio/video transcoder, remuxer with REST interface (C/C++, main developer/video guru)</li> <li>• Middleware (Java EE, minor work)</li> </ul> <p><b>RSA</b> – <a href="http://www.rsabiomedical.se/">http://www.rsabiomedical.se/</a> <span style="float: right;"><b>2015</b></span>  Work on mdesk, a tool for doing orthopedic preoperative planning and templating. C++.</p> <p><b>Umbio</b> – <a href="http://www.umbio.com/">http://www.umbio.com/</a> <span style="float: right;"><b>2013 – 2014</b></span>  Serial servo motor control in Java, porting C# code to Java.</p> <p><b>BBC</b> – <a href="https://www.bbc.co.uk">https://www.bbc.co.uk</a> <span style="float: right;"><b>2011 – 2012</b></span>  The Digital Media Initiative project via Vidispine. Mostly C.</p> <p><b>Cantemo</b> – <a href="http://www.cantemo.com/">http://www.cantemo.com/</a> <span style="float: right;"><b>2012</b></span>  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"> <li>• Meta Media Creative Technologies – <a href="http://www.mmct.com/">http://www.mmct.com/</a></li> <li>• 10dot1 – <a href="http://www.10dot1.co.uk/">http://www.10dot1.co.uk/</a></li> </ul> <p><b>Dokufant</b> – <a href="http://www.dokufant.se/">http://www.dokufant.se/</a> <span style="float: right;"><b>2012</b></span>  Video transcoding backend.</p> <p><b>Playing for Change</b> – <a href="http://www.playingforchange.com/">http://www.playingforchange.com/</a> <span style="float: right;"><b>2012</b></span>  Backend work in Python (Django).</p> <p><b>TableDrum</b> – <a href="http://www.tabledrum.com/">http://www.tabledrum.com/</a> <span style="float: right;"><b>2008 – 2009</b></span>  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.</p>	

**HARDWARE AND SOFTWARE SKILLS** Build systems / CI:  
 • CMake, GNU make, ninja, Jenkins, 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, bzd

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** **FFmpeg/Libav** **2010 – present**  
 Notable contributions:  
 • LXF demuxer (maintainer)  
 • OPAtom support in MXF demuxer (maintainer)  
 • Various fixes and features for the AIFF, WAVE, MOV, GXF and FLIC demuxers  
 • Several formats made playable on stdin

**MXFLib** **2010 – 2012**  
**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** Various successful hobby projects:  
 • NES Flash ROM cartridge  
 • Battery powered capacitive touch talking alarm clock  
 • Switch operated "is it open?" indicator sign for Umeå Hackerspace, hooked up to the web and an IRC bot  
 • Tearing down and repaired an old analog oscilloscope  
 • Hand cranked MP3 player with supercapacitor energy storage

Familiar subjects:  
 • Linear and switching regulators  
 • EMC  
 • Microcontrollers (PIC, AVR)  
 • Four-layer PCB design in KiCAD  
 • Etching  
 • Reflow soldering  
 • RF

**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).

**Umeå Hackerspace** – <https://www.umeahackerspace.se/> **2013 – present**  
Active since the middle of 2013, mostly in charge of maintaining order in the electronics lab. 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 – present**  
I brew beer with a few friends every now and then, mostly ale. It usually ends up quite tasty!

**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.