



EMREX

**- the user-centered solution for electronic
transfer of student data**

Tor Fridell

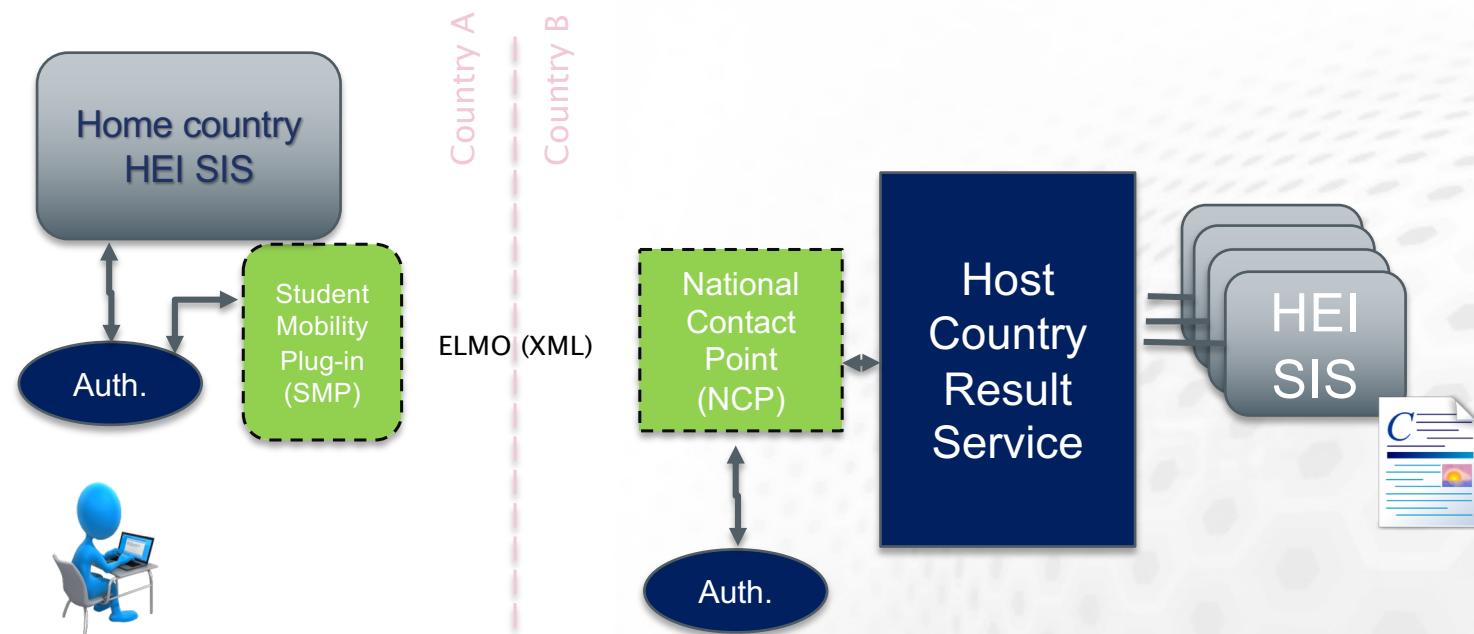


What is EMREX?

- ➊ A system where a student can fetch assessment data from a host university after exchange studies and bring it back electronically to the home university.
 - Transcript of records
 - Diploma Supplement information
- ➋ User driven, student centered



How EMREX works





Tor Fridell 1961-06-16



Welcome to EMREX!

This service will enable you to import your awarded credits from other higher education institutions abroad connected to EMREX. Importing your records is a quick and easy process.

1. Select the country from which you want to retrieve your credits from.
2. Use the credentials from the host university where you studied to log into the system where your credits are stored.
3. Select the credits you want to import.
4. Review and confirm the selection. The records will be sent to your home university and you may save a copy in PDF format.
5. When the import is finished, please answer a few questions about the service to help us develop EMREX further.

So let's get started by selecting a country!

Choose Your Exchange Country:

Croatia

[Select](#)

Denmark

[Select](#)

Finland

[Select](#)

▶ Italy

Netherlands

[Select](#)

Norway

[Select](#)

▶ Poland



Sweden

[Select](#)

Tor Fridell 1961-06-16[1. Select courses](#) [2. Confirm selection](#) [3. Back to home university](#)

Select courses to import

Filter course list

Higher Education Institution	Level	Time period
<input type="checkbox"/> Linköping university	<input type="checkbox"/> Bachelor	From <input type="text" value="yyyy-MM-dd"/>
		To <input type="text" value="yyyy-MM-dd"/>
Reset		

 Computer Science and Engineering - 270 credits | TDDDA | Linköping university[Next](#)

Title	Credits	Code	Grade	Date
▶ Introductory Physics	5.0	TFFY06	4	1983-10-24
▶ Introduction to Computer Science	7.5	TDDA01	5	1984-02-08
▶ Physical Laboratory Work, introductory course	4.5	TFFM05	G	1984-03-27
▶ Basic Electronics	5.0	TSDT61	3	1984-04-07
▶ Switching Theory and Logical Design	7.0	TSEA05	3	1984-05-23
▶ Programming and Program Development Project in Pascal	7.5	TDDA52	4	1984-07-02
▶ Methodology of Program Development	6.0	TDDA62	4	1984-10-23
▶ Digital Project Laboratory	6.0	TSEA31	G	1985-03-01
▶ Numerical Algorithms	5.0	TANA42	4	1985-04-17
▶ Electrical Measurements, basic course	3.0	TFMÄ06	G	1985-05-30
▶ Computer Hardware and Architecture	7.0	TSEA15	3	1985-05-31

Signature Not Verified
Digitally signed by emrex_it@mu.se
Date: 2019.06.04 10:24:17 CEST
Reason: Signed by Swedish EMREX - NCP
Location: Sweden



Transcript for Tor Fridell (1961-06-16)

Institution: Linköping University

Module: Computer Science and Engineering I TDDDA

Code	Title	Level	Type	Credits	Result	Date
TFFY06	Introductory Physics	Bachelor	Course	5.0	4	1983-10-24
TEN1	Examination		Class		4	1983-10-24

Courses

Code	Title	Level	Type	Credits	Result	Date
TGTU30	Environmental Technology	Bachelor	Course	4.0	G	1989-03-17
LAB1	Laboratory		Class		G	1989-03-17
TEN1	Examination		Class		G	1989-03-17
TFFY47	Engineering Mechanics D	Bachelor	Course	4.5	3	1991-08-23
TEN1	Examination		Class		3	1991-08-23
716G18	Horror Fiction	Bachelor	Course	7.5	G	2011-11-04
EXAM	Examination		Class		G	2011-11-04



Background

- ➲ EU Erasmus+ project (2015-2017)
- ➲ DK, FI, NO, IT, PL, SE
- ➲ Secure and fast electronic transfer of achievement results
- ➲ **User-driven** approach to (my) data management (GDPR)
- ➲ **Building block**: uses local infrastructure, integration into other services and processes
- ➲ Standard data format for automation (ELMO)



The outcomes

- ➲ The EMREX project ended in 31 December 2017.
- ➲ The project delivered what it promised: the solution was piloted and was put **in production**
- ➲ The experiences from the field trial showed that the technical solution is easy to use, adaptable to different national contexts, and greatly appreciated by the students.

Current NCP-partners



Uddannelses- og
Forskningsministeriet

Ladok



UNIT



Dienst Uitvoering Onderwijs
Ministerie van Onderwijs, Cultuur en
Wetenschap



agency for science and higher education



Our vision

- ➲ Enabling digitalization of any process in need of assessment data - before, during and after studies
- ➲ Goes beyond Erasmus+ mobility
 - student mobility programs
 - joint degrees, double degrees
 - admission services
 - recruitment solutions
 - credential evaluation
 - All countries in the world



Governance

- ➊ EMREX User Group consists of
 - full-members, meaning organizations responsible for one or more NCPs.
 - associated members, meaning parties interested in EMREX, either through having an SMP or considering building an NCP or SMP.
- ➋ Executive Committee elected with representatives from Finland, the Netherlands, Norway, Poland and Sweden



Statistics 2018, first year in production

Usage measured from NCP

	CR	DK	FI	IT	NL	NO	PL	SE	Total
Number of connections	196	0	116	9	21	18115	119	357	18737
Number of Successful data transfers	196	0	54	0	0	14273*	119	312	14758
Number of errors	0	0	62	9	21	3842**	0	45	3979

*Majority from recruitment systems

** Cancelled by user

Reasons for errors:

Students picking their own university instead of partner university

Missing code made transcript misinterpreted

NCP bug when course with zero credits

Insufficient ID information



Usage measured from NCP

Example: Calls to Swedish NCP

	No
emrex.its.umu.se/smp/onReturn	21
emrex01.csc.fi/smp/onReturn	7
fsweb.no/soknadsweb/ncpdata	71
fsweb.no/studentweb/ncpdata	201
studentweb.uio.no/studentweb/ncpdata	54
usosweb.amu.edu.pl/kontroler.php?_action=dla_stud/studia/oceny/emrex/importujElmo	1
usosweb.umk.pl/kontroler.php?_action=dla_stud/studia/oceny/emrex/importujElmo	1
usosweb.uw.edu.pl/kontroler.php?_action=dla_stud/studia/oceny/emrex/importujElmo	1
Total	357



Status per country





Croatia

- ➔ NCP in production since August 2018
- ➔ HEIs choose to join on a voluntary basis
 - 5 of 8 major universities have joined
 - 9 colleges
- ➔ ELMO 1.3
- ➔ authentication through Croatian eIDAS node
- ➔ SMP planned for central admissions



Denmark

- ⌚ Stable NCP has been in production during 2017 but technical issues stopped it 2018.
- ⌚ Student Information Systems about to be replaced, hard to prioritize.



Finland

- ➲ NCP covers all HEIs (national data warehouse, powered by CSC)
- ➲ EMREX SMP used by 2 HEIs actively, others sporadically
- ➲ Learning opportunity data will be available more comprehensively in following years
- ➲ HEI's are in the middle of a large-scale student system migration



Italy

- ⌚ NCP in operation for 2 HEIs and used by both of them
- ⌚ SMP operational but not used
- ⌚ Plans to include more HEIs, but the issue to allow students to filter results is still there...



The Netherlands



- ⌚ EMREX National Contact Point
 - ELMO 1.2
 - EMREX Client



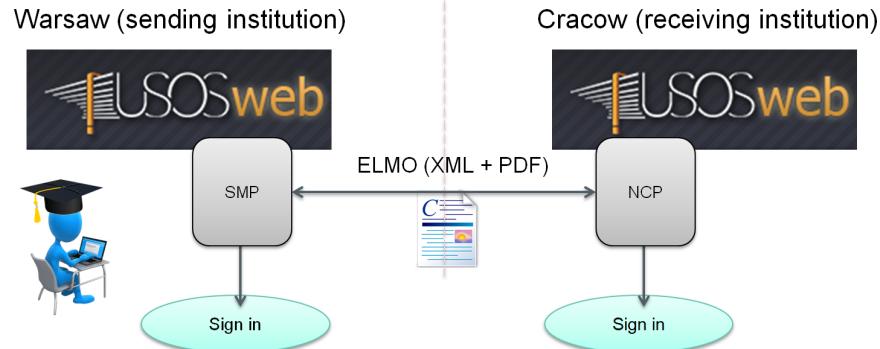
Norway



- All universities and colleges connected.
- ELMO 1.3.
- Prepare for use of eID (eIDAS).
- Extended use of EMREX in recruitment systems.
- New projects to automate processes based on data from EMREX.
- Concrete plans to connect vocational higher education, upper secondary schools and Enic-Naric (results of recognition from Nokut)
- SMPs in public and private sector



Poland



- ➲ 8 Polish public universities currently registered.
- ➲ Both SMP and NCP in the same system (USOSweb).
- ➲ Possible users: over 60 HEIs from consortium MUCI.
- ➲ Plans to add SMP to the central admission system for the internal mobility program.
- ➲ Plans to connect to login.gov.pl (eID node).



Sweden

- One SIS, Ladok, run by a consortium covers 37 HEI:s in Sweden, which is practically all
- NCP in operation for all 37 HEI:s
- SMP as standalone in operation, covers the same area
- Secure transfer of pdf to staff within SIS

What's in the future



- ➲ Extending the network
 - Ongoing: China (NCP), Germany (NCP), Belgium (SMP & NCP)
- ➲ ELMO enhancements
 - Diploma Supplement (1.4)
 - Results of recognition
 - Student information
 - Other issues
- ➲ Collaboration; EU-initiatives, GDN

More info



- 👉 Main website:

<http://www.emrex.eu>

- 👉 ELMO standard

<https://github.com/emrex-eu/elmo-schemas/releases>

