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European University Alliance for Global Health

## eduTAP

Bridging the Gap Between Vision and Reality

for the European Student Card



## The European Student Card (ESC)

A building block of **Erasmus+** and the European Student Card **Initiative (ESCI)** a project by the European Commission

### **ESC BACKGROUND & CONTEXT**

A historical look into the ESC





## **History of the European Student Card** Idea by → Jean-Paul Roumegas (Ies Crouse)

#### 2012 - 2013

- Signing of a protocol of Intent
- Bilateral Franco-Italian agreement between:
  - Fondazione ENDISU
  - ANDISU,

2

Cnous

#### November 2013

 Exchange between the Cnous and the CPU on European Student Card

#### 2016

- Institutional structuring at European level
  - → Erasmus+ Strategic Partnership
- 2016 2018 → European Student Card Project

5



#### 2019 – 2020 → MyAcademicID Project

6

2025 - Goal

3 4

- December 2015
- Memorandum of Understanding
- Student Unions of 4 countries:
- France
- Germany
- Ireland,

Italy

Exchange within ECStA

#### 2020 - 2022

- European Digital Student Service Infrastructure Project
- ESC-Tension Project European Student Card Extension and Adoption





7



offer their students a European Student card

• All European / Erasmus+ Higher Education Institutions







ENDISU

## EUGLOH

Comité National

de la Carte Étudiant

### **ESC BACKGROUND & CONTEXT**

Benefits of the ESC

The European Student Card introduces a common European identity for higher education students so that their student status can be easily verified across Europe when in mobility abroad.



Added European dimension to their ٠ student status.

- Avoid the need to issue a new student card for mobile students.
- Gain access to a wider network of users.



### **ESC BACKGROUND & CONTEXT**

**European Student Card features** 

The European Student Card is not a new card but represents an upgrade to existing student cards. Depending on the institution issuing the card, the ESC can be in a digital or a physical format and can be integrated into student cards with any type of technology (e.g., chip technology, magnetic stripe, etc). The ESC can be issued directly by the higher education institution or co-branded. The main elements that characterise a ESC are the following :



The new ESC logo (launched in October 2024) facilitates the implementation and recognition of **European Student Cards**. The <u>graphic charter</u> provides guidelines on how to implement the new logo.

### **HOW DOES THE ESC WORK?**

### What is the ESC-Router (ESC-R)?

EUGLOH

The European Student Card Router (ESC-R) is a **platform** that allows higher education institutions and other card issuers to **issue and manage ESCs**, as well as **verify student status**. The ESC-R was launched on the European Commission's cloud on **October 23rd 2024**.

		European Commissio	n ESC Router	university_user4@europa.com
European Commission Welcome to the European Student Card Router	EU Login AcademicID or new users register choose more options	<ul> <li>Home</li> <li>European Student Cards</li> <li>Cardholders</li> <li>Card Management</li> <li>Import Cards</li> <li>Organisations</li> </ul>	Back      Card validation Validates ESC-Router cards.  978416d7-f2ae-103d-b28c-3334567× Q	
This portan allows organisations to manage European Student Carlos and view documentation. Excrementation Excrementation Control Control Carlos Control Control Carlos Cont Carlos	envirents, usard@wsrpa.com	<ul> <li>✓ Card Validation</li> <li>☑ Documentation</li> <li>▲ Current Version</li> <li>Q Api search</li> <li>↓↑ Changelog</li> <li>Backwards Compatibility</li> <li>☑ SDKs</li> <li>☑ Github repositories [2]</li> <li>✓ Maven packages [2]</li> <li>☑ Log out</li> </ul>	Card information European Student Card Number (ESCN) 978416d7-f2ae-103d-b28c-333456789123 Status ACTIVE Organisation University 4	Expiry Date 2025-06-27 Uropean Student Card
The needs of existing users were also considered in the migration process from the previous to new and avoiding any downtime. Please ensure your organisation details are up-to-date and resolve any issuing European Student Cards. We invite you to consult the materials we prepared along with the <u>General and Tech specifications</u> . Do you need support or guidance regarding the implementation of the European Student Card or the Check the <u>FAQs</u> in our website or contact our <u>service desk</u> and we will be pleased to assist you!	ESC-Router, keeping the same web address pending actions in your account to continue a use of the ESC-Router?			

### **HOW DOES THE ESC WORK?**

Student status verification

When scanning the QR code\* of a European Student Card to validate the status of a student, the higher education institution or service provider is presented with a similar screen:



\* For basic validation, no specific equipment is required to scan the QR code of a European Student Card. The QR code can be simply scanned with a smartphone or similar device.



### **LEVEL OF ESC ADOPTION**

The ESC Adoption across countries

**18** 

#### European countries are issuing ESCs

European Student Cards issued in:

**15** *EU Member States and third countries associated to the E+ Programme issuing ESCs* 

**3** Third countries not associated to the E+ Programme issuing ESCs\* \*(Albania, Andorra, Bosnia & Herzegovina)

#### Additional countries connected to the ESC-R:



EU Member States and third countries associated to the E+ Programme connected to the ESC-R, but not issuing ESCs



Data from the new ESC-Router (February 2025)

### **LEVEL OF ESC ADOPTION**



**ESC** adoption statistics



Some more numbers to understand:Sorbonne UniverErasmus+ Program Students: > 20.000.00020 % turnover per year  $\rightarrow$  44.000.000 Students since 2015ESC started 2012  $\rightarrow$  3.4 M issued Card  $\rightarrow$  less that 15 % of all Students ever had an ESC (hologram) $\rightarrow$  less than 7.5 % of all current Students have an active ESC  $\rightarrow$  100 % mendators by the started set of the started s



Organisation	Country	Cards
Université d'Aix-Marseille		135,218
Université de Strasbourg		104,714
Université Paris 1 Panthéon- Sorbonne	0	91,359
Université de Montpellier		90,225
Universidad de Málaga		81,308
Université Paris-Est Créteil UPEC		77,592
UNIVERSITA DEGLI STUDI DI TORINO		76,144
Université Paris X - Nanterre		71,260
UNIVERSITE CLERMONT AUVERGNE		70,812
Sorbonne Université		70,498

## **European Student Card**

Vision vs. Reality → Back to Reality

## The European Student Card

- Vision of the European Commission: Towards a European Education Area
- ✓ The European Student Card Initiative (ESCI)
  - → Students can get their status verified easily across Europe
  - $\rightarrow$  Access to on- and off-campus services
  - → easier access to student services at host universities on a mobility programme
- European Charter for Higher Education (ECHE) of the Erasmus+ Program



FUG



# A great vision!





### 9 Universities, 1 Goal: Building Europe's Campus for Global Health



### **EUGLOH 2.0 Consortium Partners**



→ UNS & UiT are from non-member states of the European Union

### Key Goals

- Interdisciplinary Global Health programmes across universities striving towards a joint European degree.
- A vibrant, multicultural and inclusive inter-university campus.
- Seamless mobility for students, staff and professionals physical and virtual.
- Strong links between higher education, research and local socio-economic ecosystems to prepare young people for the jobs of tomorrow.
- Empowering future generations to find solutions for Global Health challenges.



### **EUGLOH campus cards current state and connected services**

### $\rightarrow$ Vision:

All university members should be able to use services of host university while on visit



### Status of four core members (IT wise)

### Ludwig-Maximilians-Universität München

- Legic CTC Cards (Legic Advant + Prime)
- Payment (Studierendenwerk München)
- Cloud-Printing and Scanning (Secure-Printing and Payment)
- Library
- Ticket for Public Transport System

### **Université Paris-Saclay**

- NXP Mifare DESfire Cards
- Payment (izly les Crous)
- Library
- Physical Access Control

### Lunds universitet

- NXP Mifare Classic Cards
- Physical Access Control (online and offline)
- Login at copiers (for copy/print/scan)
- Library
- Several other services, but not any payment services

### Universidade do Porto

- NXP Mifare Classic Cards / Java Cards with Mifare Classic emulation
- Library
- Physical Access Control
- Canteen & cafeterias
- Printing Service
- Attendance









## Interoperability

to access on and off-campus services

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## **Interoperability Mind Game**

Imagine you are a EUGLOH student from Paris-Saclay on a two-week blended learning mobility to U.Porto

you have a Student ID for Paris-Saclay, with the European Student Card (old style) hologram and QR-Code



- You are not enrolled in U.Porto, as it is just a short-term mobility program
- Paris-Saclay is a EUGLOH Partner, well known in U.Porto, so the card is trusted

- Want to use the Library, to use the recommended literature on the course
- Want to print the script and copy some articles for a book
- Want to go with the other student to the canteen
- Want to access the classrooms and register for attendance
- → I believe in the European Student Card promises and believe that I just can use my own card from Paris
- → What will happen?





## **Interoperability Mind Game**

Imagine you are the Person in the Library at U.Porto

- You were asked by the student to use the Services of your University
- Get the books
- Print and copy things
- Can the student use the Service immediately?
- What does they need?
- Would you scan the QR-Code?

→ What can you do as a student or the service provider just with the hologram (old-style) or the new Logo and a QR-Code?

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## **Interoperability Mind Game**

What if the Student comes from another University that is not a well-known Partner?



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## **QR-Codes and IT-Security**

### QR-Codes can contain multiple calls to action

- URLs
- Text
- Call
- WiFi
- Money Transfer
- ...

QR-Codes where not designed for humans, they were for machines

As humans used them, Cybercriminals started to weaponized QR-Codes

- QR-Code Phishing (Quishing)
- ✓ QR-Code bases Malware Attacks
- ✓ QR-Code Invoice and Payment Scams
- $\rightarrow$  You only use QR-Codes and scan them, when you are in charge and control of creating them  $\rightarrow$  *trust*

@ Link	≣Text	🛛 E-mail	🕒 Call	🗩 SMS	
🖭 V-card	(S) WhatsApp	🙃 WI-FI	PDF	ДАрр	
🕒 Images	Video	📽 Social Media	苗 Event	IIII 2D Barcode	
1 Complete the c	ontent				
letwork name	Туре	of encryption	Password		
SSID	Ту	pe of encryption	WI-FI p	bassword	
Hidden network					
2 Design your QF	R Code				
Frame Sh	ape Logo				



## **QR-Code and online Verification**

If you have an centralized Online Verification System

- Centralized data store with personal data
- For easy direct access of verification results
   → no authentication
- Logging of all verifications
  - Including ESCN in URL-Path
  - IP of Verifier (Service Provider & Location)
- Original ESC Router: Name, ESI and Photo in verification results included
   → Public on the Web

} ≌ə box.europeanstudentcard.eu + छ і
SC Router
European Student Card Status
The European Student Card is funded by the European Commission and establishes a common European identity for higher education students. Students can get their student status verified easily across Europe with their European Student Card.
Status
Active
Expiry Date
2025-06-30
Card Issuer
University 4
Academic level
Master

		STUDENT STATU:	5
₩ ESC		Status	non-student
		Card number	
(APA)	STUDENT STA	ATUS	
ESC	Status	Student	
	Card number	e6480dc0- a6bd-0019	9fba-1035- 32465463
	European stud identifier	ient FR-346-371	
	Expiration date	e December	1. 2018
	Academic leve	Unknown	







## Interoperability?

### to access on and off-campus services?

→ a hologram or Logo does not provide interoperability a URL in a QR code as a solution?

security, privacy, ...?







## Interoperability

to access on and off-campus services

## → Interoperability is about service access

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## **Access Services** → a question of interoperability

#### Electronic payment / **Physical Access Control Discount and promotions** Identification Library services Transport Identification cashless campus • Areas (campus, parking lot) • Access to / borrow • On campus services Discounts on cultural • Physical media (book, (university shuttle service) Status verification • Canteen & cafeterias • Buildings activities audio and video media) Public transport tickets Museums Proof of entitlement • Vending machines Rooms • E-media (book, audio and & discounts theaters Single Sign On / 2FA / • Printing / scanning Classrooms video media) (secure & follow me printing) FIDO2 • Learning spaces Shops Computer rooms Ticketing Attendance check • Learning spaces Restaurants (secure & follow me printing) • Check-in for exams Offices • attendance at courses Accommodation facilities • Time recording (i.e., dorms) Electronic Signature • Sports facilities (of legal documents) on- & off-campus $\rightarrow$ on-site usage online services Universität and the state elD.AS

providing service  $\rightarrow$  create benefits



## The Benchmarks – User Experience is key

### eduTAP is about Service Access on-site (on and off campus)

- For Member of the Higher Education Institution
- For incoming members of other Higher Education Institutions / Partners Mobility (short- and long-term)

For the person User Experience is key, it should be as easy and simple as possible

Benchmark Examples



WLAN Access



Login to Online Services

→ To access services on site it should be as **easy** as using the WLAN with eduroam

→ Immediate access on arrival



## Key to all Services -> Identification / Authentication

- Triple-A-System
  - (Identification)
  - Authentication
  - Authorization
  - Accounting
- **On-site services access** is about proving your entitlements and identity
- *"something we know"* as an authentication method for on-site service access is not very efficient, best a combination of *"something we have"* + *"something we are"* → Smartphone Wallet passes + authentication via biometrics









## **Identification / Authentication for Service Access**

- Interoperability happens on the reader side → contactless communication protocols are better than visual codes
- Almost all readers in the market could read more than one standard (maybe a firmware upgrade necessary)
- QR-Codes are not considered a secure identification element (especially with an URL as content)





## European Student Card -> Services - Interoperability





Access to physical and digital services during their mobility, e.g. to the library or public transport



Access to physical services on-site? → chip cards / smart cards?

### or eduTAP



## Path to an interoperable campus card





### Trust-Level: NO-TRUST



## eduTAP – mission:

- **digitizing cards** → passes in the smart device **wallet**s
- leveraging the possibilities of smart devices for interoperability
- enable *easy* service access on-site

chip card / smart card



- enable HEIs and Service Providers to:
  - create, issue, and manage passes within the smart device wallet
  - interact with wallet passes to give access to services, identify, and verify the status of students and staff
- enable students and staff members to access services on-site, easy and consistent





## eduTAP – educational tapping

tap to ...

- tap to identify yourself,
- ✓ tap to verify your status,
- tap to proof your entitlement,
- ✓ tap to claim a discount,

tap to access a service on-site directly:

- tap to pay (open and close loop-payments),
- ✓ tap to open a door,
- ✓ tap to lend a book,
- ✓ tap to take a campus shuttle.



https://eduTAP.eu

no app, just tap!

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### European Student Card -> Services and Service Consumers



### TBARED



## **Access Services** → a question of interoperability

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providing service  $\rightarrow$  create benefits

### TBALED



## Digitizing cards vs. leveraging the possibilities of smart devices → Stages of Digitalization – Period of Digital transformation







Viete .

## Digitizing cards vs. leveraging the possibilities of smart devices

	chip card / smart card	We are still thinking in cards terms → campus cards / corporate cards (Student IDs / employee badge)		Versionset
	Front	<ul> <li>Card as an integrated element</li> <li>→ multiple applications in one card</li> </ul>	9:30 5G 🚛	9:41 Unit Contraction of the second s
		• Front & Back of a CR80 / ID-1 card	(1))	<b>⊈Cash \$226.78</b>
$\left( \right)$		<ul> <li>Limited amount of visual space</li> </ul>		
		• Card as branding space (Corporate Design)	···· 4321 <b>VISA</b>	materiard
	Back	Passes in smart device wallets are a disruptive technology,	CVS Pharmacy ExtraCare  CVS Pharmacy ExtraCare  Best Buy Wy Best Buy Wy Best Buy	● UNIFORM GOODS CO.
		$\mathcal{I} \rightarrow$ Let's think in terms of this technology	Papera Brow	

LGA



### Digitizing cards vs. leveraging the possibilities of smart devices $\rightarrow$ Users Expectations Student and mobile payment 2023

Walle

--- 4321

+CVS

BEST\_

- Don't stick to old technology if your user expects something modern
- Integration and Interoperability
- The **Smartphone** is the essential working tool for younger generations
- Higher Education Institutions should provide credentials in modern ways •
- Student IDs / Campus IDs should be recognized and accepted anywhere • just as plastic Student IDs
- Be compliant  $\checkmark$
- $\checkmark$  Be Secure  $\rightarrow$  implement IT-Security best practices
- Respect privacy
- Respect self-sovereignty and decisions of users

→Think from a user perspective (user-centric-optimization)







## Digitizing cards vs. leveraging the possibilities of smart devices Reinvent the wheel vs. evolution of the wheel





- Wallet as a container for multiple "cards"
- each pass has its own design
- ✓ additional information for the users
- User can select which service they want to use
  - $\rightarrow$  digital self-sovereign identity (SSI)





## Path to an interoperable campus card $\rightarrow$ HEIDI



### TBARED



## **Access Services** → a question of interoperability

#### Electronic payment / **Physical Access Control Discount and promotions** Identification Library services Transport Identification cashless campus • Areas (campus, parking lot) • Access to / borrow • On campus services Discounts on cultural • Physical media (book, (university shuttle service) Status verification • Canteen & cafeterias • Buildings activities audio and video media) Public transport tickets Museums Proof of entitlement • Vending machines Rooms • E-media (book, audio and & discounts theaters Single Sign On / 2FA / • Printing / scanning Classrooms video media) (secure & follow me printing) FIDO2 • Learning spaces Shops Computer rooms Ticketing Attendance check • Learning spaces Restaurants (secure & follow me printing) • Check-in for exams Offices • attendance at courses Accommodation facilities • Time recording (i.e., dorms) Electronic Signature • Sports facilities (of legal documents) on- & off-campus $\rightarrow$ on-site usage online services Universität and the state elD.AS

providing service  $\rightarrow$  create benefits

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## Medium → Services



providing service  $\rightarrow$  create benefits





## **Technical details and features of Wallets / Passes**

The wallet is a **container for multiple passes** 

### **Technical features:**

- Expressmode (Apple)
- Battery reserve (pass is still usable if phone has powered off; important for keys, transit tickets, payment)
- Groupable
- Validity dates
- Remote updateable / revokable
- Offline usable ( $\rightarrow$  non traceable)
- Host Card Emulation possible



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## **Technical details and features of Wallets / Passes**

- $\checkmark$  Technical details and features of Wallets / Passes  $\rightarrow$  Path to an interoperable campus card
- if each pass (technology) can be individually selected and leveraged, and the Pass in the Wallet can be selected by the reader (Smart Select / Auto-Presentment)

Pass Pass Pass Smart Select / Express Mode Selector  $\rightarrow$  Card bundle  $\rightarrow$  Card bundle Design – visual presentation Visual design of a Visual design of a Data-Slot  $\rightarrow$  Smart Tap / VAS / Mifare / mDoc (ISO/INC 18013-5) pass (images) pass (images) Wallet-Wallet-App Wallet-Wallet-Presentation data Presentation data • Account-binding • App App App Presentation Data-structure Host Card Emulation Mifare DESFire **OS Wallet API Operating System** (OEM-specific default: HID Seos Layer (OS) Google Smart Tap Legic NEON • API for ... Apple VAS / ECP 2.0) Hardware-Layer (access to) Data-structure in HCE NFC / BLE / UWB security level Secure Element / Security Chip Subscriber Identity Module SIM/eSIM

### $\rightarrow$ one pass per service





## **Technical details and features of Wallets / Passes**

- For contact less communication is NFC the protocol
- Communication via ISO 14443
- Data Formats (File System access)
  - Google Smart Tap
  - Apple VAS (Value Added Services)
  - NFC ECP 2.0 (Enhanced Contactless Polling)
  - Host Card Emulation (HCE: of proprietary Protocols)
    - Mifare DESfire (via Mifare2GO / NXP secure element)
    - Legic NEON / Advant (via Legic Connect)
    - HID Seos
    - → internal the Secure Module acts as a JCOP smart card
  - ISO 18013-5 Personal Identification → NFC handover to BLE or WiFi Core functionality in Android and iOS OS API
- Security consideration required by use case





## Apple and Google have good ideas, but









## **Technical details and features of Wallets / Passes**

### Detail view on the Wallet



→ The eduTAP solution is wallet agnostic, not bound to a specific Wallet provider or company

→ eduTAP just enables HEI and Service Providers to easily create and issue wallet passes

## **Issuing process of wallet passes**

→ importance for the users – always the same process





redeming

eduTAP Service Directory EUGLOH

## **Credential Management Platform and eduTAP Components**

• Architecture of the delivery system HTTP





## **Transition of credentials into the Smartphone Wallets**

















An das Lesegerät halten





### Transition of credentials into the Smartphone Wallets Examples: Event Tickets

### EUGLOH Lund University EUGLOH Annual Summit 2023 Datum Trid 12 juni 2023 O9:00

### EUGLOH Annual Summit 2023 in Lund



Lund University

Evenemangets sluttid 14 juni 2023 17:00

Biljettnummer 16a84efd98f94a11a501a8b9c871bb1c

Helgonavägen 3, 223 62 Lund, Schweden

- National Emergency Number
- 📞 University Security
- Corganizer Contact (Kristina Miolin)
- Organizer Contact (Christina Grossmann)
- 🖸 Organizer Contact
- Event Homepage
- 🕤 Program

### ECCA 2024



Università Cattolica - Milan European Campus Card Association Conference 2024

Date 15-17 May, 2024

> Ticketinhaber / Organisation Alexander Loechel / Ludwig-Maximilians-Universität München



#### European Campus Card Association Conference 2024 Ticketinhaber Awander Loechtl Universitä Cattolica - Milan Universitä Cattolica - Milan

Veranstaltungsbeginn 15. Mai 2024, 18:00

Veranstaltungsende 17. Mai 2024, 15:00

Ticketnummer dd09d90a8edb4e0498d93fa47ca56e3

Date 15-17 May, 2024

Organisation Ludwig-Maximilians-Universität München

📞 Veranstalter-Kontakt

Nationale Notrufnummer
 Veranstalter Kontakt

Veranstaltungswebseite

S Programm

S ECCA Webseite

Zur Verwendung an Terminal halten

0

Karte/Ticket kann nur für ein Google-Konto verwendet werden Anderes Geräf/Konto verwenden

Veranstaltungsticket in Google-Diensten verwenden Benachrichtigungen und Updates zu Veranstaltungen bei Google Kalender, Google Assistant und anderen Diensten

Die Daten auf diesem Ticket liegen in der Verantwortung de Ticketausstellers oder Händlers. Mödlicherweise erhältst du

مر Karte/Ticket kann nicht geteilt werden Weitere Informationen zum Teilen über Google Wall



86

21:50





### **Transition of credentials into the Smartphone Wallets Examples:** Active and potential IDs for LMU Munich



**Google Wallet** 

Google Wallet

### **Apple Wallet**

4100000090

41

otheksauswei

0000

An das Lesegerät halten



### Transition of credentials into the Smartphone Wallets Examples: LMU Munich Benutzerkonto – Pass Portal

	🛓 Gisela Mustermann 🔍	🛦 Gisela Mustermann 🔻	
	٠		Add loyalty card
♦ > Wallet Passes > Overview		● 〉 Wallet Passes 〉 Mensa Pass	
← Zurūck		◆ Zurück	Studierendenwerk München Oberbayern
Manage your Wallet Passes		Digital Mensa Pass (pilot project)	
The LMU Munich offers you to use your smartphone Wallet as identification medium for various services on and of	f campus.		Mensa
Wallet Passes		In the pilot phase only the Google Wallet is supported.	
The following list shows the Wallet passes that are currently available to you.  Staff ID		General Information	<b>)</b>
Use this to prove your identity as an staff member.	>	With the digital Mensa Pass, your affiliation to a status group (student or employee) is transmitted directly to the cash register system – automatically activating the correct price category. Subsequently, you can easily pay with your regular bank card (physically or digitally), too can add the digital Mensa Pass here to your Wallet app and then conveniently use it via your smartphone. For more information, please visit digital Mensa Pass.	
		Google Wallet	
Student ID Use this to prove your identity as a student.	>	By adding the digital mensa pass to your Google Wallet, you agree to the data protection information and the terms of use.	After adding your loyalty card to Wallet, you'll see your point balance and loyalty benefits in places like Maps, Shopping, and more. You can turn this off in Google Wallet passes data or on an individual pass in the Google Wallet app.
Digital Library Pass		Google Wallet	Pass providers can automatically add related passes, promotions, offers and more to your existing passes which can be controlled on your device in Wallet settings.
Use this to access services at the library.	>		Terms and Privacy Policy
			Add
Digital Mensa Pass (pilot project)			
ldentīty with your digital Mensa Pass – pay with your bank card.	>		
		Impressum   Datenschutz	
European Student Card Coming soon. Stay tuned!		~	



### $\rightarrow$ Plan to have all pass types online at LMU by end of May 2025

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### Transition of credentials into the Smartphone Wallets Examples: LMU Munich – Mensa Discount & Payment





## **Transition of credentials into the Smartphone Wallets Examples:** European Student Card v1.1 in the Wallet





Discount off-campus •

•

YOUCEF Taha

Poster of birth

2000-01-01

For usage at HEIs that accept the ESC .



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## Medium → Services



providing service  $\rightarrow$  create benefits



## **Trust level / Assurance Level**

→ Very important for IDENTIFICATION & AUTHENTICATION  $\rightarrow$  Quality of identity (personal) data  $\rightarrow$  Type of authentication & consequences for identification medium



### substantial / medium

- Authentication
- certificate based
- FIDO2
- Smart ID username / email • Identity proofing:
  - $\rightarrow$  officially confirmed
  - $\rightarrow$  check of a government issued photo-ID

### Authentication

high

- elD.AS compliant  $\rightarrow$  In eID of EU Citizen IDs
  - $\rightarrow$  Provided by HEI for foreign Students
- Identity proofing:
- $\rightarrow$  Officially confirmed
- $\rightarrow$  Identity document checked
  - to be genuine and represent the claimed identity
- **Qualified signature**



normal

Authentication:

+ password

Identity proofing:

address





## **Common Identification pass using ISO/IEC 18013-5 model**

- The "ISO/IEC 18013-5 Personal Identification" model is designed to support
  - A protocol for two devices to establish a secure wireless communication channel and exchange structured request and response message
  - Identification of the credential holder (user binding)
  - Selective release of data elements by the credential holder (data minimization / consent)
  - Pre-consent mechanism for frequently repeated processes (e.g. discount payment at Student Affairs Unions)
  - A protocol to retrieve credential data directly from the mobile device of the holder, purely offline, facilitating availability and non-traceability
  - An optional protocol to retrieve additional data from the issuing authority
  - A mechanism to establish integrity and authenticity of the credential data
  - A mechanism to confirm device binding (signing at transaction time)
  - Multi-document and multi namespace aware ← extendable for other use cases
- Established governmental credential format that is already in use → mobile driving licence / eu.europa.ec.eudiw.pid.1
- Already supported by the OEM-Smartphone-Manufactures (Apple and Google
   → see: <u>https://android-developers.googleblog.com/2020/11/privacy-preserving-features-in-mobile.html</u>)
- No additional infrastructure costs



## ISO/IEC 18013-5 Data model



Reuse of directory Data (common eduGAIN attributes): **%eduGAIN** 

- portrait (photo, mandatory for identification documents)
- givenNames
- sn (surname)
- email
- eduPersonAffiliation / eduPersonScopedAffiliation
- eduPersonEntitlement
- eduPersonAssurance
- schacHomeOrganization
- schacPersonalUniqueCode → European Student Identifier (ESI) MyAcademicID
- schacDateOfBirth
- schacYearOfBirth
- schacPlaceOfBirth
- schacExpiryDate

۲

...



works like a Shibboleth authentication on-site  $\rightarrow$  trained processes





### The common Authentication method in the educational sector

Shibboleth – local or in federation (national or multi-national ightarrow eduGAIN-AAI) ightarrow SAML2 or OIDC –



Diese Single-Sign-On-Lösung Shibboleth erlaubt Ihnen den einheitlichen Zugang zu diversen Webanwendungen der LMU und anderer Universitäten innerhalb des Deutschen Forschungnetzes (DFN).

Bei der erstmaligen Anmeldung, oder wenn Sie die Checkbox Übermittelte Daten anzeigen auswählen, erhalten Sie eine Übersicht Ihrer personenbezogenen Daten, bevor diese an die Webandwendung übertragen werden.

Nach dem Login haben Sie so lange ohne erneute Anmeldung Zugang zu allen Shibboleth-fähigen Webanwendungen, bis Sie den Browser schließen. Zum Logout müssen Sie daher den Browser komplett beenden.

Impressum | Datenschutzerklärung | Kontakt und FAQ

formationsweitergal	bean MyAcademicID IAM Service
schreibung des Dienstes: Th the services of the Europea asmus+. The MyAcademicID	he MyAcademicID IAM Service provides Identity and Federated access manage an Student Card Initiative and the services directly supporting the digitisation of DIAM Service is provided by GÉANT using the eduTEAMS service. In disease Directu
ps://wiki.geant.org/display,	/SM/MyAcademicID+Identity+and+Access+Management+Service
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Berechtigung	urn:mace:dir:entitlement:common-lib-terms
Persönliche ID	@lmu.de
Zugehörigkeit	staff@lmu.de member@lmu.de student@lmu.de employee@lmu.de
eduPersonTargetedID	HV6nox/0SxEhyzkH4z+vlGNdD80=
duPersonUniqueId	7b719738ecae7b120b6383786b47fe98@lmu.de
/orname	Simon
-Mail	@campus.lmu.de
	uni-muenchen
chacHomeOrganization	lmu.de
chacPersonalUniqueCode	urn:schac:personalUniqueCode:int:esi:lmu.de:
lachaama	

Wählen Sie die Dauer, für die Ihre Entscheidung zur Informationsweitergabe gültig sein soll:

O Bei nächster Anmeldung erneut fragen.

——Ich stimme zu, dass meine Informationen dieses Mal an den Dienst weitergegeben werden.

Diese Einstellung kann jederzeit mit der Checkbox auf der Anmeldeseite widerrufen werden.

Ablehnen Akzeptieren

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ingridudi	emicID   Provider
This page is intended for Identity Provide towards the MylicademicID service.	roperators, who want to test the attribute release of their Identity Provider
Attribute Release Sta Please find below a list of the attributes are attribute values that were received.	tus for Students sector for the MyAcademidD service, marking any problems found with the
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<b>a</b> The name of the user is released	
The email of the user is released	
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The European Student Identifier of t	he user is released
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Hold Here to Present

Starship Concert Ha

Proof of Age



## eduTAP proposal for an ESC v3

The promise of the European Student Card fulfilled

- A Verifiable Credential (mDoc ISO/IEC 18013-5)
- Works offline and non traceable
- All relevant data for identification and status verification
- Interoperable for Identification and simple service access
- A global solution









## eduTAP – educational tapping – What is eduTAP?

- eduTAP the concept
  - of splitting integrated campus cards into separate service passes and
  - a harmonized identity pass
- eduTAP the software to enable HEIs and Service Providers to:
  - create, issue, and manage passes within the smart device wallet
  - interact with wallet passes to give access to services, identify, and verify the status of students and staff members

The eduTAP concept helps to fulfill the great vision of the European Student Card and enable interoperability

TB/ALED



## Demo → Download an eduTAP created pass



https://demo.edutap.eu/









## eduTAP – educational tapping

tap to ...

- tap to identify yourself,
- ✓ tap to verify your status,
- tap to proof your entitlement,
- ✓ tap to claim a discount,

tap to access a service on-site directly:

- tap to pay (open and close loop-payments),
- ✓ tap to open a door,
- ✓ tap to lend a book,
- ✓ tap to take a campus shuttle.



https://eduTAP.eu

no app, just tap!





### European Campus Card Association (ECCA) Conference 2025 LMU München → 26.05.2025 – 28.05.2025

### **ECCA CONFERENCE PROGRAM** May 26th to 28th 2025, Munich

### Day 1 - Monday May 26th

Registration	17:30 - 19:00
LMU Museum Tour	18:00 - 19:00
Welcome Reception & Networking	19:00 - 21:00

### Day 2 - Tuesday May 27th

Session 1: Welcome & Keynote	Presenter	Time
Registration		8:30 - 9:00
Welcome	ECCA & LMU	9:00 - 9:20
Keynote	Keynote Speaker	9:20 - 10:00
Session 2: Innovation & Trends		
European Student Card Update	DG EAC / NTT Data	10:00 - 10:25
The new European elD scheme – enabling public and private communication security	Reinhard Posch, Austrian Federal Government	10:25 - 10:50
Break & Exhibition Time		10:50 - 11:30
eduTAP & eduTAP@LMU	Alexander Loechel, LMU	11:30 - 12:00
Wallets & Verifiable Credentials in education: a new way of dealing with student identities and diplomas	Jan Du Caju, KU Leuven, Belgium	12:00 - 12:25
Experiences and learnings from the development and deployment of large-scale NFC Wallet solutions	Dan Isaaman, Dot Origin, Germany	12:25 - 12:45
Lunch & Exhibition Time		12:45-14:00

Day 2 - Tuesday May 27th (continued)			
Session 3: Migration from Physical to Digital	Presenter	Time	
The Modern Campus - Tomorrow's Campus, Today	Danny Smith & David Stallsmith, ColorID, USA	14:00 - 14:30	
Student ID Pass in Apple Wallet	Alfredo Neumann, Elatec, Germany	14:30 - 15:00	
Break & Exhibition Time		15:00 - 15:40	
From Physical to Digital Equivalents, what is a Trustworthy and Interoperable Solution?	Ewald Ulrich, Ana-U, Austria	15:40 - 16:10	
We don't lock you in: we open doors to the future	Ján Mátik & Magnus Lundberg, SystemHouse Solutions, Sweden	16:10 - 16:35	
Are you ready for a smarter, more connected campus? Your students are!	David OʻDriscoll & Kamil Targalski, HI Global	) 16:35 - 17:00	
Gala Dinner		19:30 - 22:00	

Day 3 - Wednesday May 28th

Session 4: Workshop & Campus ID Case Studies	Presenter	Time
Norkshop - 'Exploring the future - what tools will students use in ten years? A panel of experts shares their insights on he long-term future'.	Panel of experts - DC4EU, Google, ESN, HEI, Service Provider, Studierendenwerke	9.15:10:00
The future of student ID systems, apps and beyond	Tamas Molnar, Humboldt University	10:00 - 10:20
Road to a new WURcard at Wageningen University & Research	Ed Dijkers, IDWare International® OmniCard, & Rene de Koster, WUR, Netherlands	10:20 - 10:45
Break & Exhibition Time		10:45- 11:30
Session 5: Mobile Devices & Digital Wallets		
Creating a seamless campus payment experience	Marcus van der Waal, KUARIO	11:30 - 11:55
Serving universities with secure credential issuance solutions	Alicia Gomez-Venti, Entrust, & Richard Rogers, EMOS	11:55 - 12:25
SIC – digitalising on all fronts	Tomáš Vyskočil, ISIC	12:25 - 12:50
unch & Closing Ceremony		12:50 - 14:00

### https://conference.ecca.eu/

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A.C.

#### EUROPEAN CAMPUS CARD ASSOCIATION 2025 CONFERENCE

MAY 26TH TO 28TH MUNICH, GERMANY Ludwig Maximilian University



Registration & Further Information https://eccaconference.eu

ລ info@ecca.eu

#### THE HIGHLIGHTS

- Student / Campus ID
- Digital Credentials
- Migration to Digital Wallet
- Interoperability
- Mobile Devices
- Workshops
- Practical Demonstrations



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