



Kamailio World -
Conference
2019
Fraunhofer
Forum Berlin

KAMAILIO WORLD CONFERENCE

May 06-08, 2019, Berlin, Germany

Elena-Ramona Modroiu - Daniel-Constantin Mierla

welcome





Agenda

- **May 07 - Conference Sessions**

- 09:00 - 10:30 [Spektrum] Presentations
- 10:30 - 11:00 [Atrium] Coffee Break
- 11:00 - 12:30 [Spektrum] Presentations
- 12:30 - 13:30 [Atrium] Lunch
- 13:30 - 15:30 [Spektrum] Presentations
- 15:30 - 16:00 [Atrium] Coffee Break
- 16:00 - 18:45 [Spektrum] Presentations

- May 07 - Social Event - Cocktail Party - Drinks - Finger Food
 - 19:00 - 21:00 [Atrium]

- **Spektrum** - the conference room
- **Atrium** - the expo area (just outside of the conference room)
- **Dom** - the catering area (next to expo area)

- **May 08 - Conference Sessions**

- 09:00 - 10:30 [Spektrum] Presentations
- 10:30 - 11:00 [Atrium] Coffee Break
- 11:00 - 12:30 [Spektrum] Presentations
- 12:30 - 13:30 [Atrium] Lunch
- 13:30 - 15:30 [Spektrum] Presentations
- 15:30 - 16:00 [Atrium] Coffee Break
- 16:00 - 18:00 [Spektrum] Presentations



Interactive Sessions

- **May 06 - Workshops (yesterday)**

- [Spektrum] Kamailio - Ask Me Anything

- **May 07**

- 16:30 - 17:15 [Spektrum] Markus Monka - Your Deployment On Stage - 5 Slides In 5 Minutes
- 17:30 - 18:30 [Spektrum] Randy Resnick - Visions Under Construction

- **May 08**

- 11:45 - 12:30 [Spektrum] James Body - Dangerous Demos

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WIFI

- Network Name (ESSID): **FhG-Guests** or **FhG-Feranstaltung**

- Open a browser, try to access a web page:
 - username: **FraunhoferForum**
 - password: ... *see the flyers* ...

- Flyers with these details are on the back of the room
 - if needed, ask the registration desk for support

Registration VAT

*** According to European Union regulations, VAT at the location of the event must be charged to all participants. The 19% German VAT is already included in the price.*

*Participants with a valid EU VAT number **can claim the VAT** back in their country of origin, each local tax authority should provide an electronic portal for this operation.*

Non-European taxable persons can still reclaim the German VAT using the paper-based procedure.

http://ec.europa.eu/taxation_customs/taxation/vat/how_vat_works/vat_on_services/index_en.htm#supply_services

you can claim back 19% from your country tax authority



Social Networking

- **Twitter hashtags: #KamailioWorld or #KamailioWorld2019**
- ***Twitter Accounts***
 - @KamailioWorld
 - @kamailio
- ***Facebook - kamailio (page)***
 - <https://www.facebook.com/Kamailio>
- ***LinkedIn - kamailio (group)***
 - <https://www.linkedin.com/groups/kamailio-145924/about>



Live Video Stream

<http://live.pascom.net>

pascom[®]







past
year
in
review

2018-2019

Evolution Highlights

- SER - SIP Express Router - started in September **2001** inside Fraunhofer Fokus Institute, Berlin
- Open sourced under GPL in September **2002** with about a dozen of modules
 - acc, auth, mysql, sl, group, tm, ...
- IPv6 since **2002** - reviewed and properly reinforced to modules since 2012
- Forked to OpenSER in **2005**
- SIMPLE IM&Presence since **2006**
- First embedded inline scripting language - perl - since **2007**
- Renamed to Kamailio in **2008**
- Reunited source code of Kamailio and SER in **2008**
- Asynchronous TCP and TLS since **2008**
- SCTP transport layer since **2008**
- Asynchronous SIP routing processing (suspend-resume) since **2008**
- Config parameters reload framework without restart since **2008**
- IMS-VoLTE extensions since **2009**
- Remote user registration since **2010**
- DMQ - distributed message queue framework - since **2011**
- NoSQL, more scripting languages, JSON, RPC, ... during **2010 - 2015**
- KEMI - embedded scripting languages for SIP routing logic since **2016**
 - Ability to use Lua, Python, JavaScript, Ruby, Squirrel to define SIP routing logic
- Reload of KEMI SIP routing logic without restart since **2016**
- Anycast flexibility since **2018**

Kamailio Major Releases

- ❖ 0.7.x (2001)
- ❖ 0.8.x (2002)
- ❖ 0.9.x (2004)
- ❖ 1.0.x (2005)
- ❖ 1.1.x (2006)
- ❖ 1.2.x (2007)
- ❖ 1.3.x (2007)
- ❖ 1.4.x (2008)
- ❖ 1.5.x (2009)
- ❖ 3.0.x (2010)
- ❖ 3.1.x (2010)
- ❖ 3.2.x (2011)
- ❖ 3.3.x (2012)
- ❖ 4.0.x (2013)
- ❖ 4.1.x (2013)
- ❖ 4.2.x (2014)
- ❖ 4.3.x (2015)
- ❖ 4.4.x (2016)
- ❖ **5.0.x (2017)**
- ❖ **5.1.x (2017)**
- ❖ **5.2.x (2018)**
- ❖ **5.3.x-dev (2019)**

New Modules

- 5.2.x -

acc_json
app_python3
app_ruby
db_redis
ims_ipsec_pcscf
pua_json

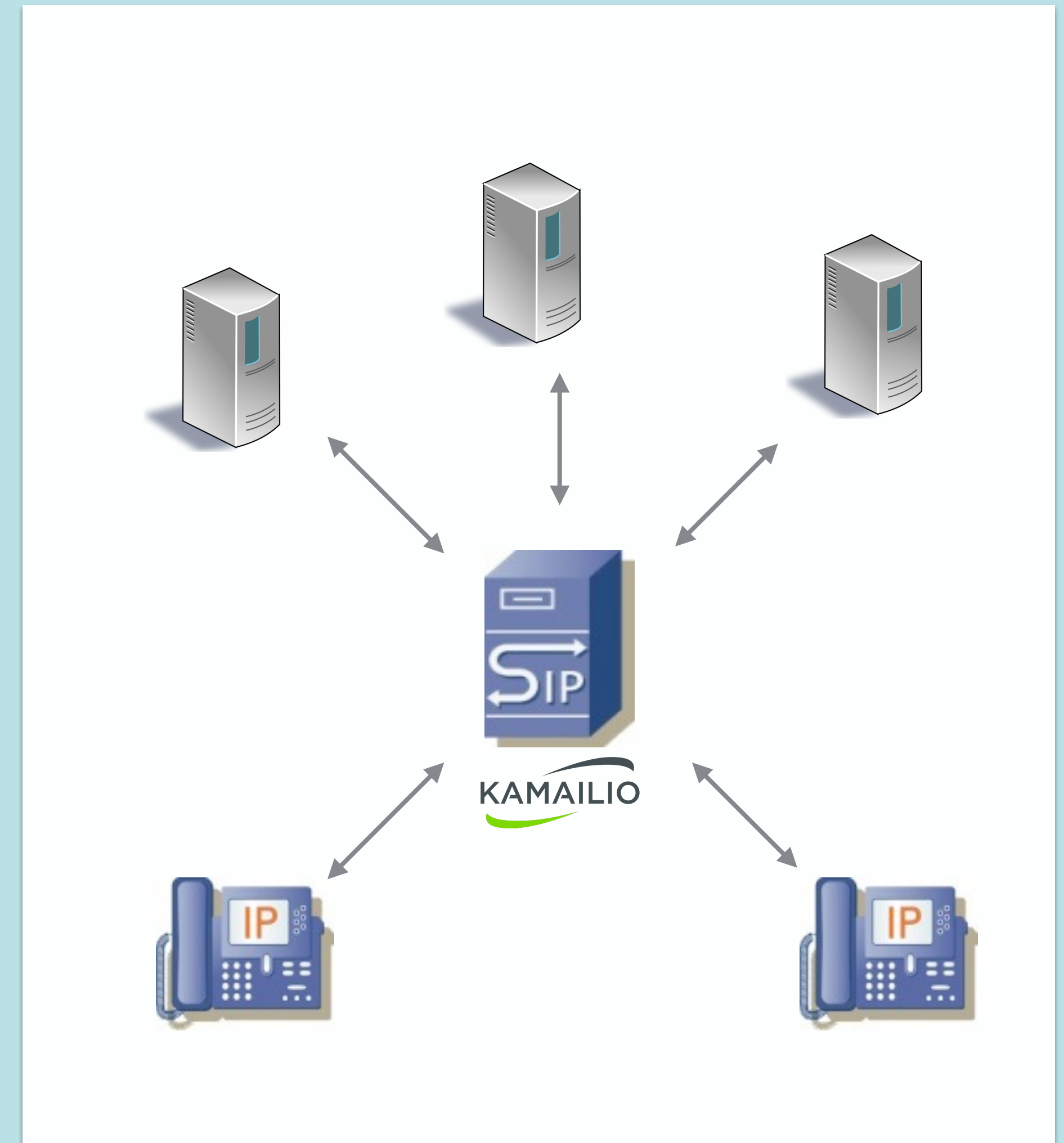
- devel -

rtp_media_server
secfilter

MAJOR IMPACT

Dispatcher

- The load balancer module
- Replaced use of AVPs with XAVPs
 - warning: config file upgrade required
- Indexing with AVL trees
 - faster when dealing with large number of records
- Select from many groups with different algorithms at once
 - `ds_select_routes("1=4;2=$var(alg)", "ruri", "$var(limit)")`
- Latency statistics - congestion control dispatching
- Ongoing: delete and insert records in memory via RPC commands, without DB/file reload



MAJOR IMPACT

- Call recording and transcoding in RTPEngine
- Redis support for DB backed
- Load dialog records from database on demand based on Call-Id or those dialog records that not yet in memory cache
- Distributed message queue (dmq) continuous monitoring of the nodes and startup option with no active nodes
- Substantial set of enhancements for IMS/VoLTE extensions



- TLS configuration enhancements, including options to set more profiles for any local address with different SNI
- TLS support for OpenSSL engine and private keys in HSM
- Distribution of presence states between SIP server nodes using dmq
- Media stream handing in Kamailio via rtp_media_server module

Kamailio Development Meeting

September 2018, Dusseldorf
@sipgate

2 days - 256 commits
unified module interface



MAJOR IMPACT

openssl - libssl v1.1

- Incompatible API with libssl 1.0
- Removed the option to set external lock/mutex functions
- Breaks TLS module - can result in blocking SIP routing
- *Short term solutions:*
 - Compile with libssl 1.0.x
 - Preload library that replaces the Posix lock/mutex API
- *Long term solutions:*
 - Address the case with openssl project
 - Allow setting process shared flag
 - Allow setting again external lock/mutex functions



OpenSSL
Cryptography and SSL/TLS Toolkit

Near future plans

- Sort out a proper solution for openssl - libssl v1.1
- Collaborative projects
 - sponsored by several companies
 - ims - volte extensions: proper integration
 - presence - blf: review and use of modern technologies
- Continuous integration
 - unit testing
 - building packages
- Documentation: KEMI - Native Scripting unification
 - At next development meeting?!?

Kamailio Business Directory

Anyone offering services related to Kamailio can get listed there with:

- *name and contact coordinates*
- *short description*

<https://www.kamailio.org/w/business-directory/>

[Home](#) [Features](#) [Download](#) [Business Directory](#) [Management](#) [Contact Us](#)

Business Directory

This is a list of companies and individuals offering commercial products or services based on Kamailio or SIP Express Router (SER). The list is managed by Kamailio project, if you want to apply to be listed check first the [Business Directory Rules](#). Also, check our [Business web page](#) for other details regarding business environment related to this project.

Disclaimer: whilst we do the best to select serious applications, Kamailio and SER projects, along

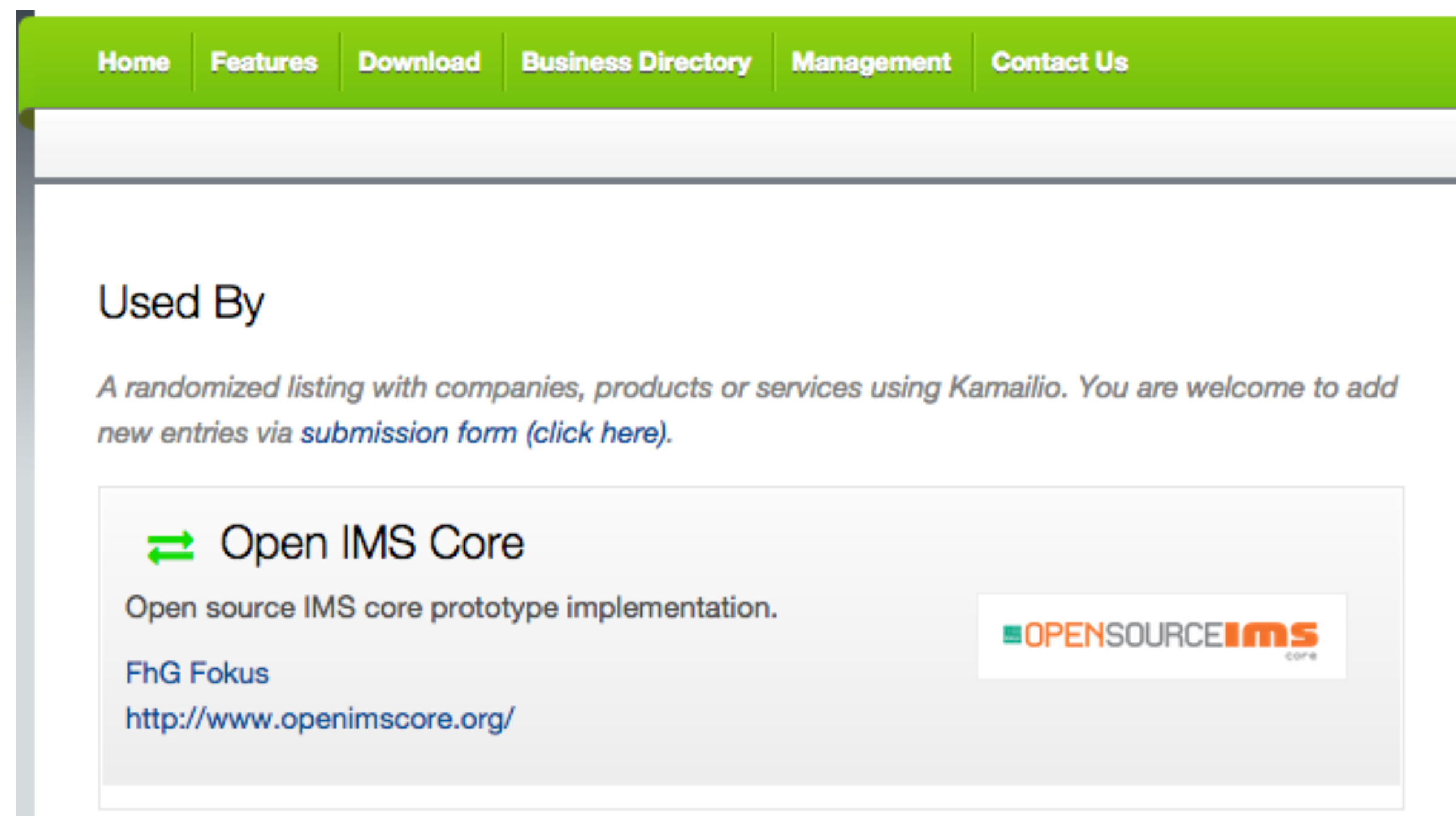


Kamailio Used-By Directory

Anyone using Kamailio can get listed there with:

- *name and contact coordinates*
- *short description*
- *logo*


<https://www.kamailio.org/w/used-by/>



Home | Features | Download | Business Directory | Management | Contact Us

Used By


A randomized listing with companies, products or services using Kamailio. You are welcome to add new entries via submission form ([click here](#)).

 **Open IMS Core**

Open source IMS core prototype implementation.

FhG Fokus

<http://www.openimscore.org/>







<https://www.asipto.com/sw/kamailio-admin-book/>





Thank You!

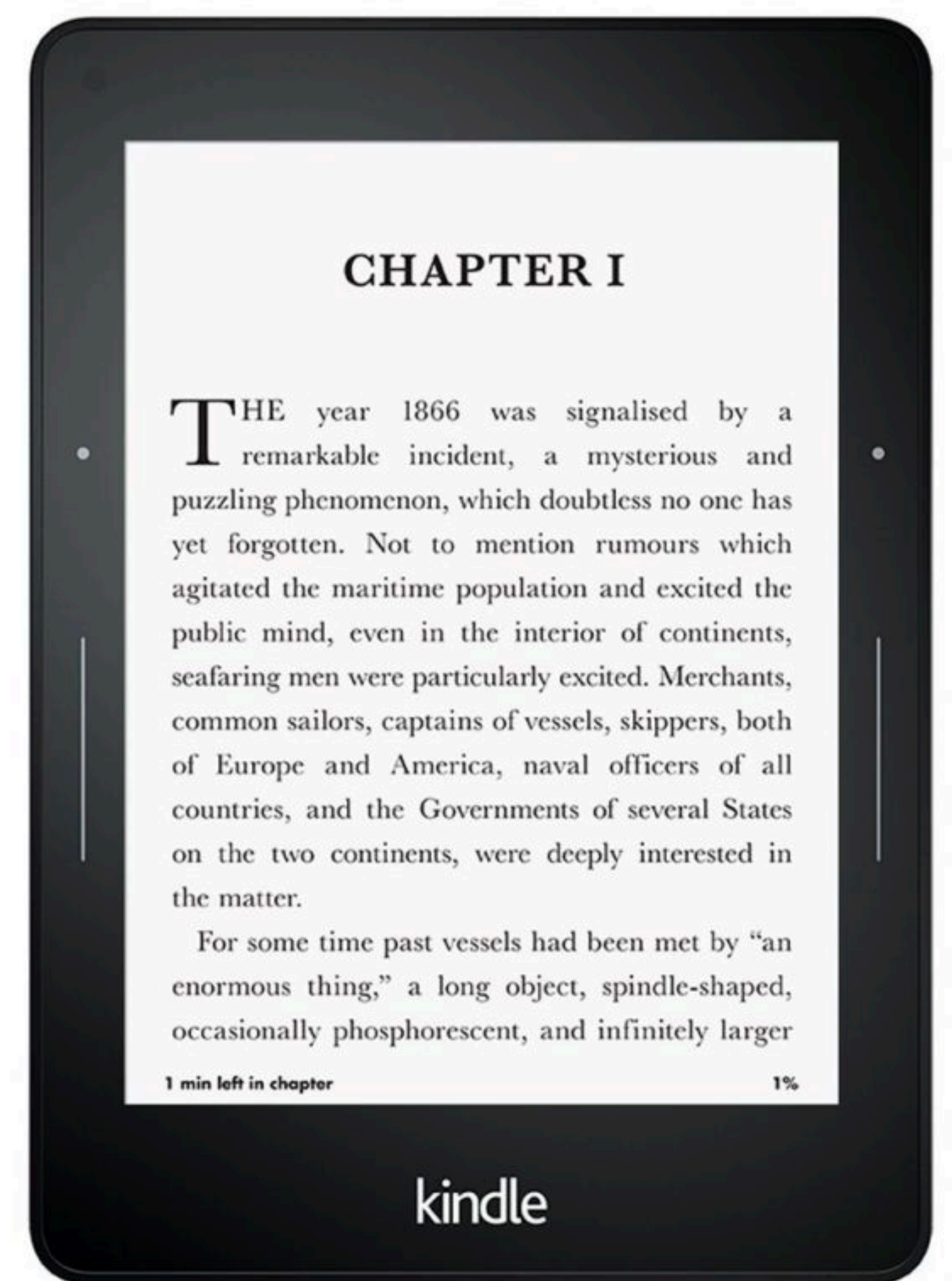


Enjoy the event!

Elena-Ramona Modroiu
Daniel-Constantin Mierla
www.asipto.com

Evosip Survey

Get the chance to win a Kindle reader and other gadgets.



<https://www.research.net/r/SFW3TV7>

Boat Trip - Berlin City Center

Meeting time: 19:00, Monday, May 6, 2019

Departure time: 19:15

Location: Pier Domaquareé

Address: Liebknechtbrücke, 10178 Berlin (Mitte)

Direct in front of the DDR Museum, opposite the Berlin Cathedral (Berliner Dom). From the exit of Kamailio World building facing the Spree river, walk about 100m on the left side.

Boat company: Berlin Wasser Taxi

Boat name: Maria

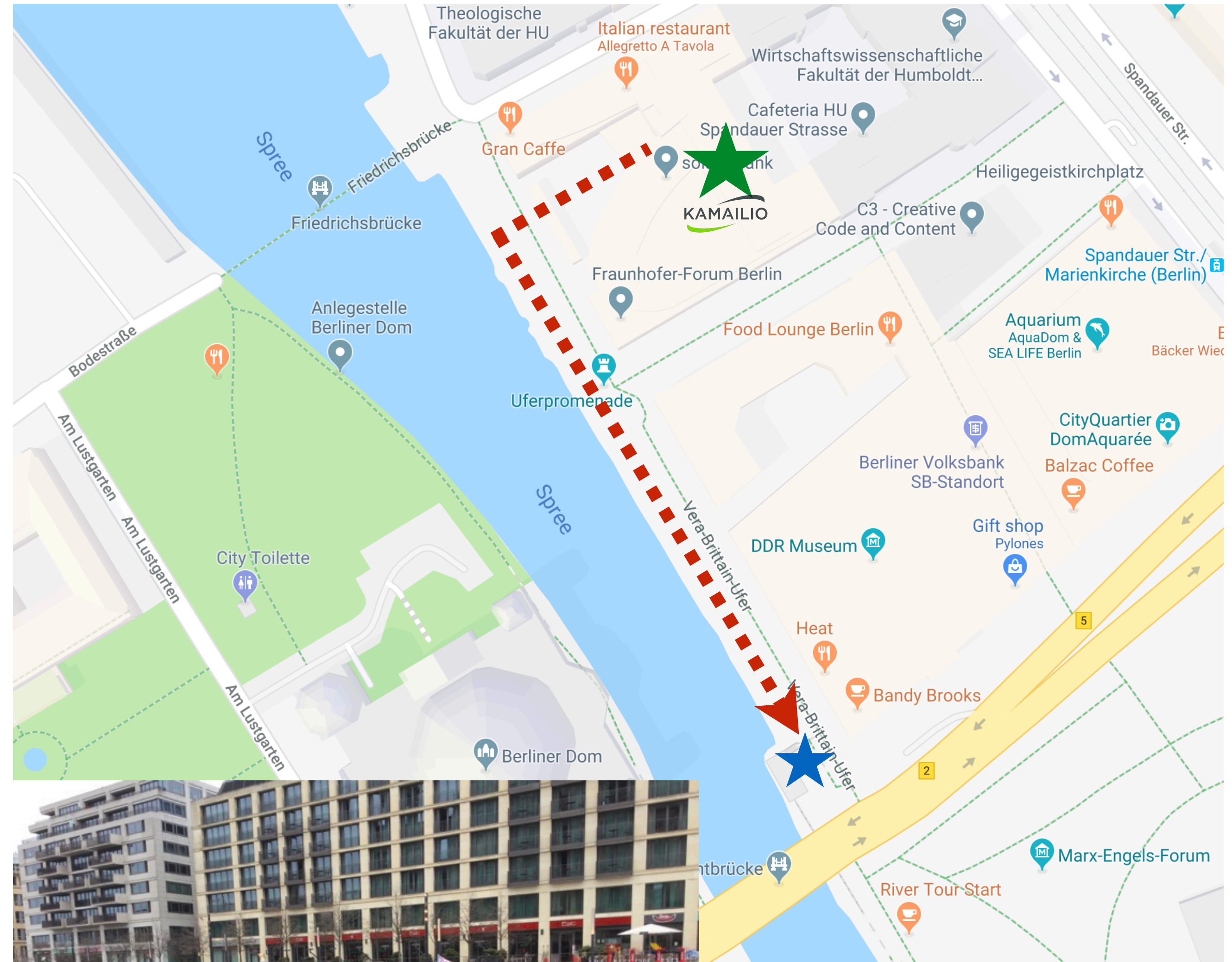
Important notes:

- *have the conference badge with you*
- *the capacity of the boat is limited, therefore the participants that purchased the Conference Only package must contact first the registration desk to check if there are still available seats and get the attendee badge.*



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City Sightseeing*

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Drinks
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Fun*