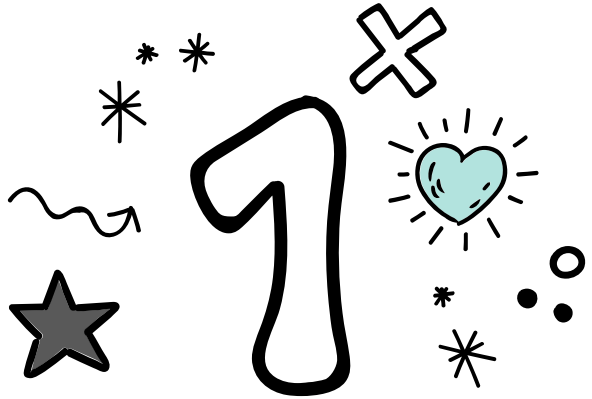
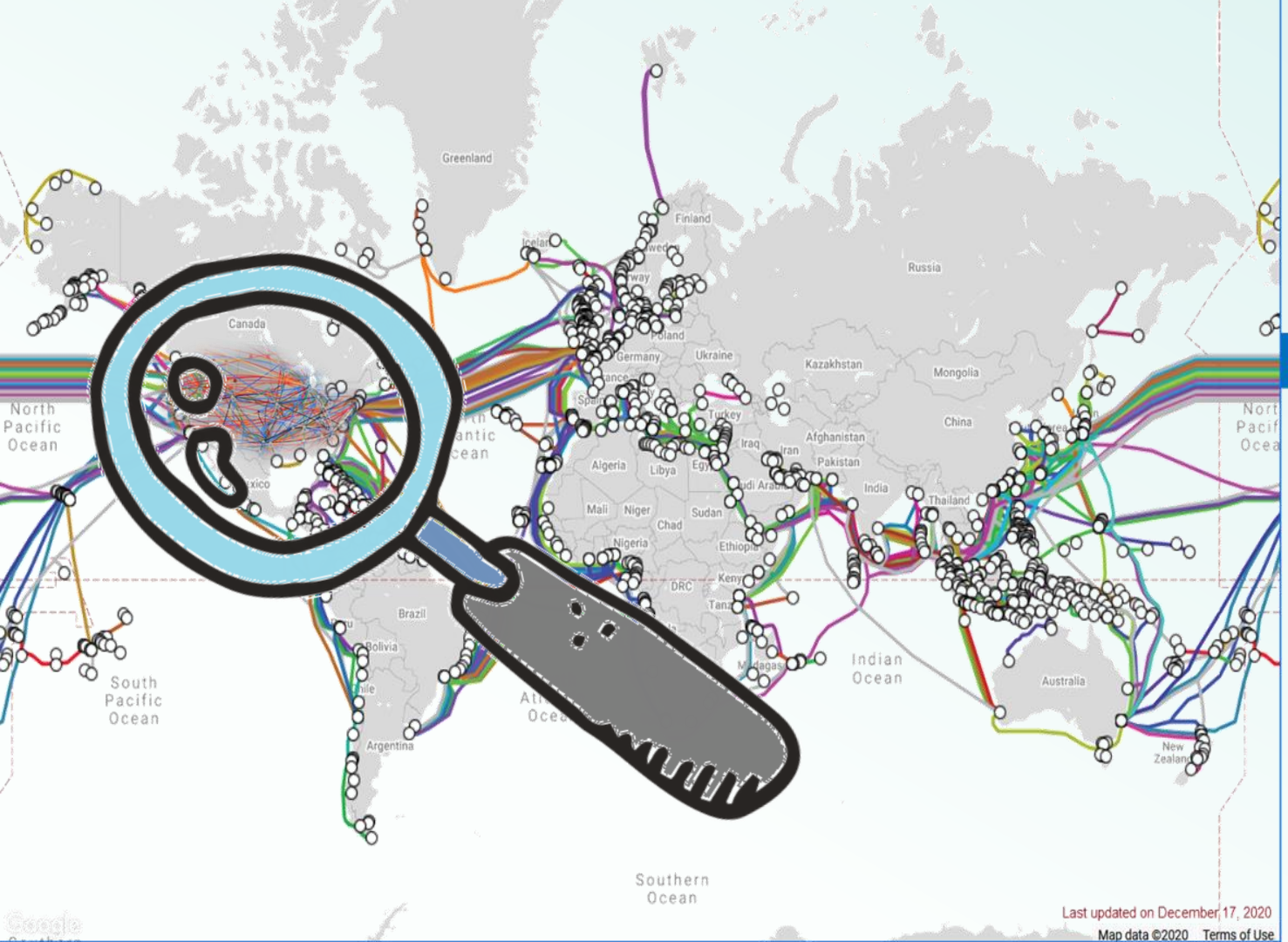
Physics & Math in Optical Networks

Mohammad Hadi
Sharif University of Technology



Optical Networks



TeleGeography

Submarine Cable Map

The Submarine Cable Map is a free and regularly updated resource from TeleGeography.

Got a question about how we make this map? Or about how submarine cables work? Look no further.

HMN TECH EQUINIX

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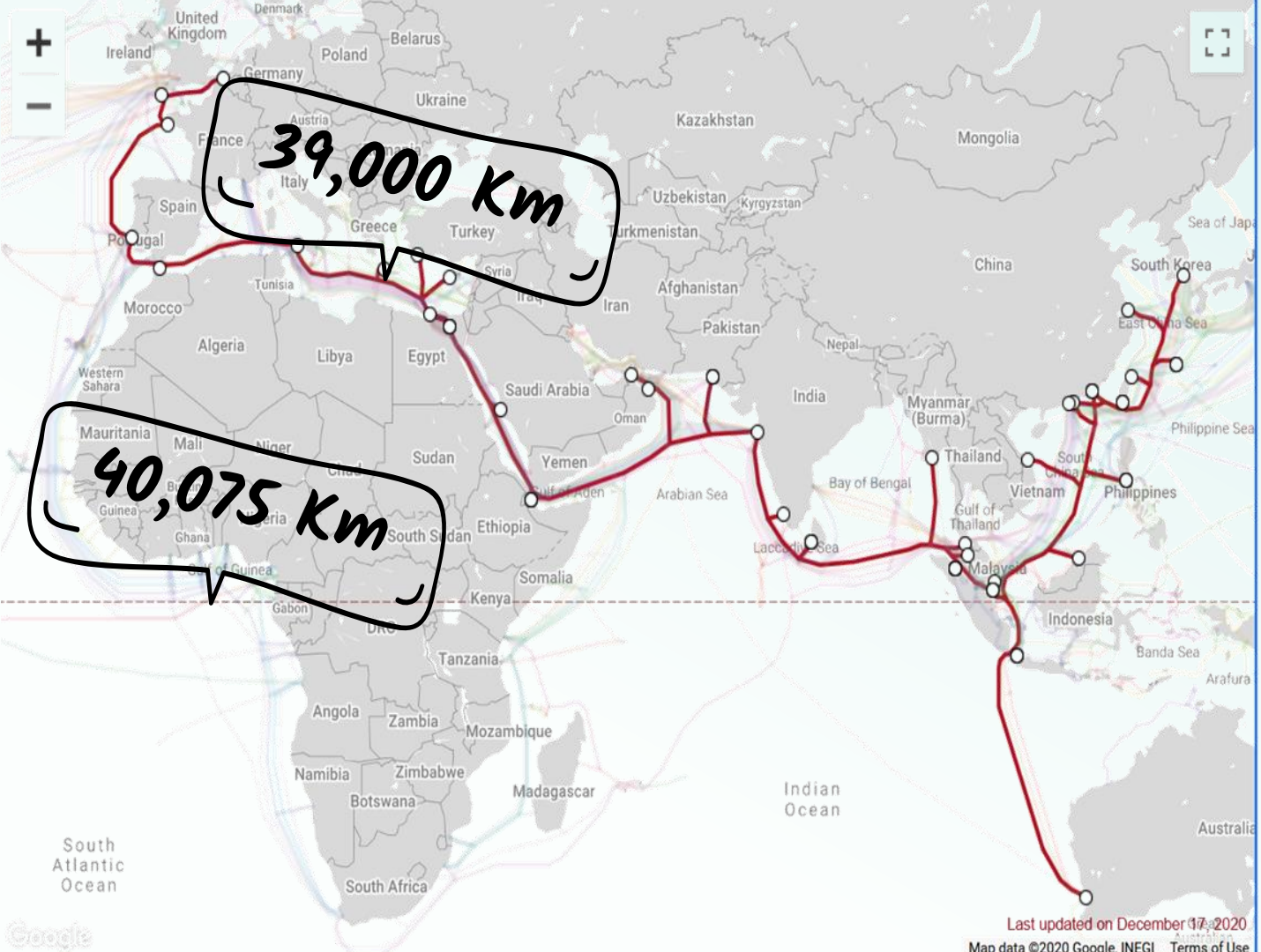
Search

Submarine Cables

2Africa
ACS Alaska-Oregon Network (AKORN)
Aden-Djibouti
Adria-1
AEConnect-1
Africa Coast to Europe (ACE)
Alaska United East (AU-East)
Alaska United Southeast (AU-SE)
Alaska United Turnagain Arm (AUTA)
Alaska United West (AU-West)
ALBA-1
Aletar
Alonso de Ojeda
ALPAL-2
America Movil Submarine Cable System-1 (AMX-1)
Americas-I North
Americas-II
Amerigo Vespucci



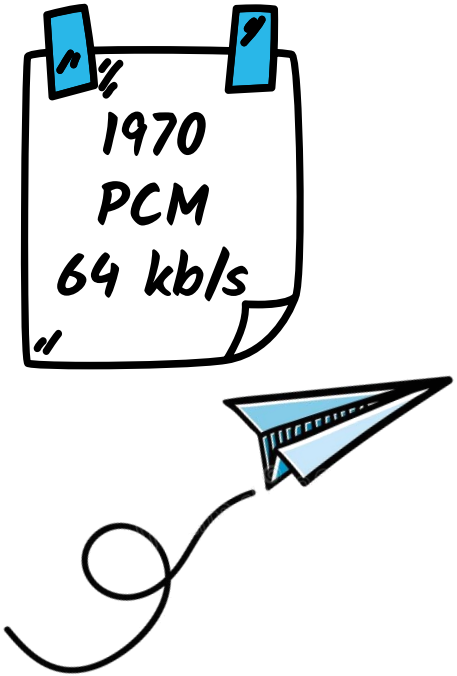
SeaMeWe-3

Email link

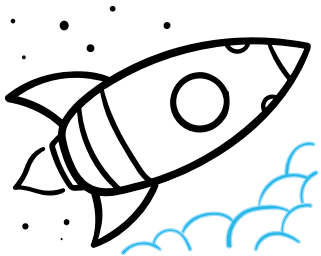
RFS: 1999 September
Cable Length: 39,000 km
Owners: Orange, BT, KDDI, Singtel, Telecom Italia Sparkle, Telekom Malaysia, OTEGLOBE, AT&T, BICS, CAT Telecom Public Company Limited, China Telecom, Deutsche Telekom, Etisalat, Telecom Egypt, CTM, Indosat Ooredoo, Jabatan Telecom Brunei, KT, Altice Portugal, Maroc Telecom, PLDT, Saudi Telecom, Sri Lanka Telecom, Turk Telekom, Tata Communications, Chunghwa Telecom, Verizon, KPN, Telekom Austria, Singtel Optus, Telstra, VNPT International, Omantel, PCCW, Pakistan Telecommunications Company Ltd., Cyta, eir, LG Uplus, Softbank Corp, Telkom South Africa, Rostelecom, Orange Polska, Singtel Optus, Telecom Argentina, Myanmar Post and Telecommunication (MPT), Vocus Communications, Djibouti Telecom, Embratel, Vodafone, Turk Telekom International, Ukrtelecom, Singtel Optus, Tunisia Telecom
URL: http://www.seamewe3.net

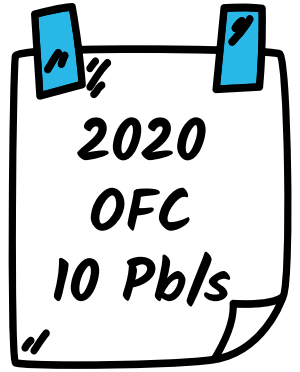
Landing Points

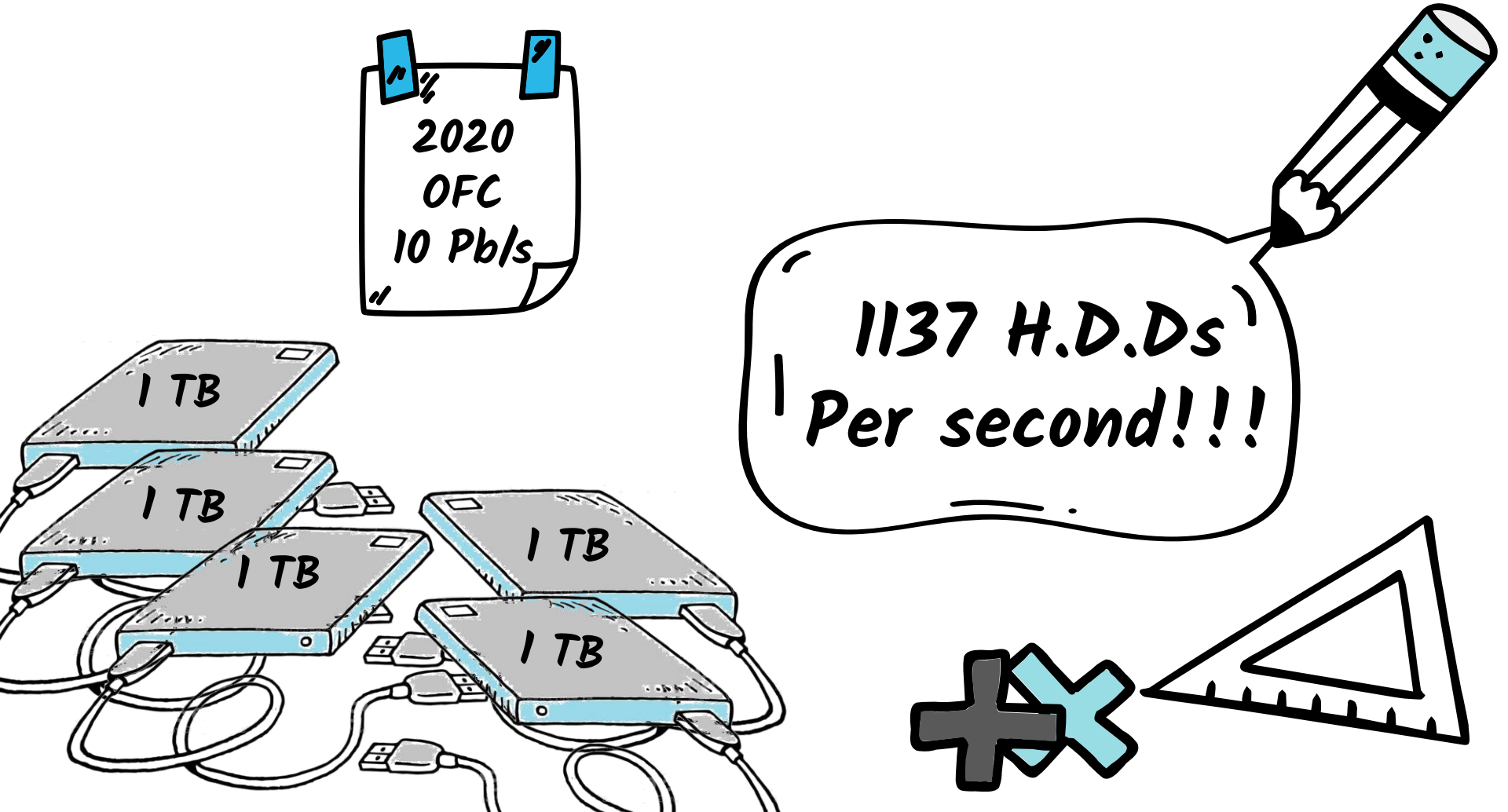
Alexandria, Egypt
Ancol, Indonesia
Batangas, Philippines
Chania, Greece
Chongming, China
Cochin, India
Danang, Vietnam
Deep Water Bay, China



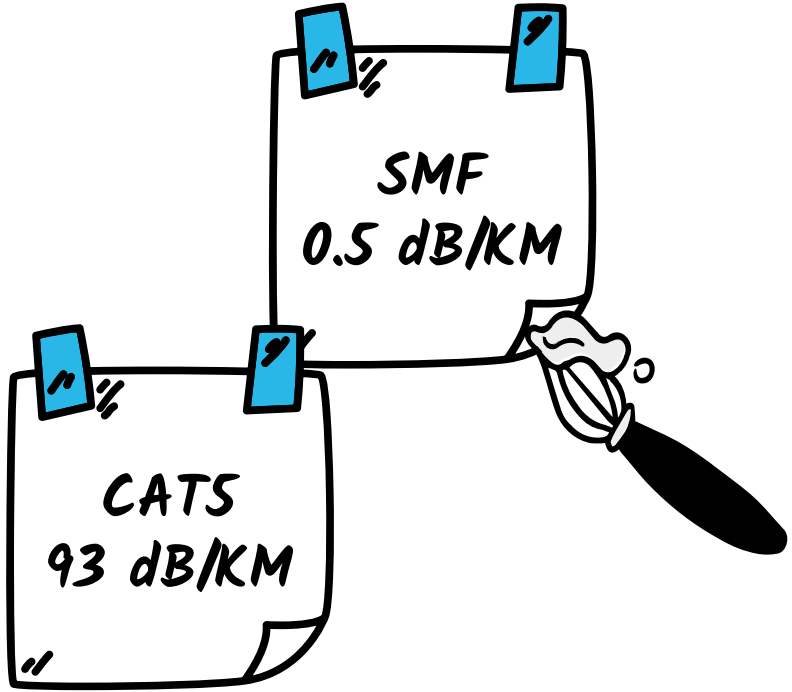
156,250,000,000



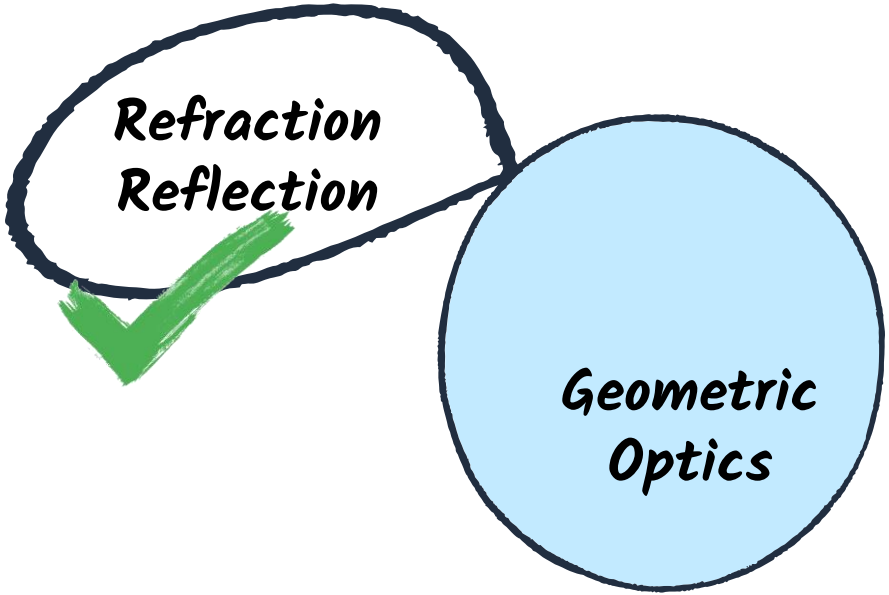


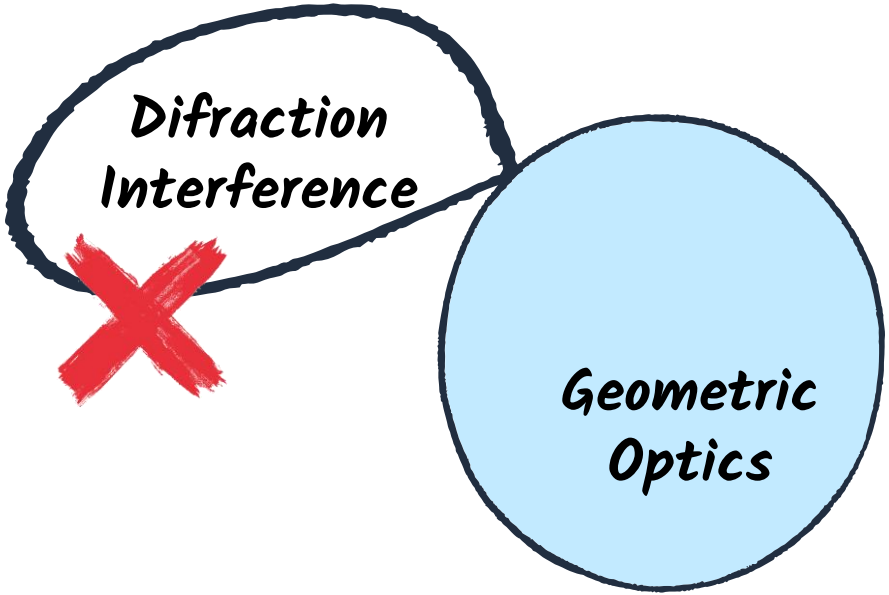

2020
OFC
10 Pb/s
1137 H.D.Ds
Per second!!!
1 TB
1 TB
1 TB
1 TB
1 TB

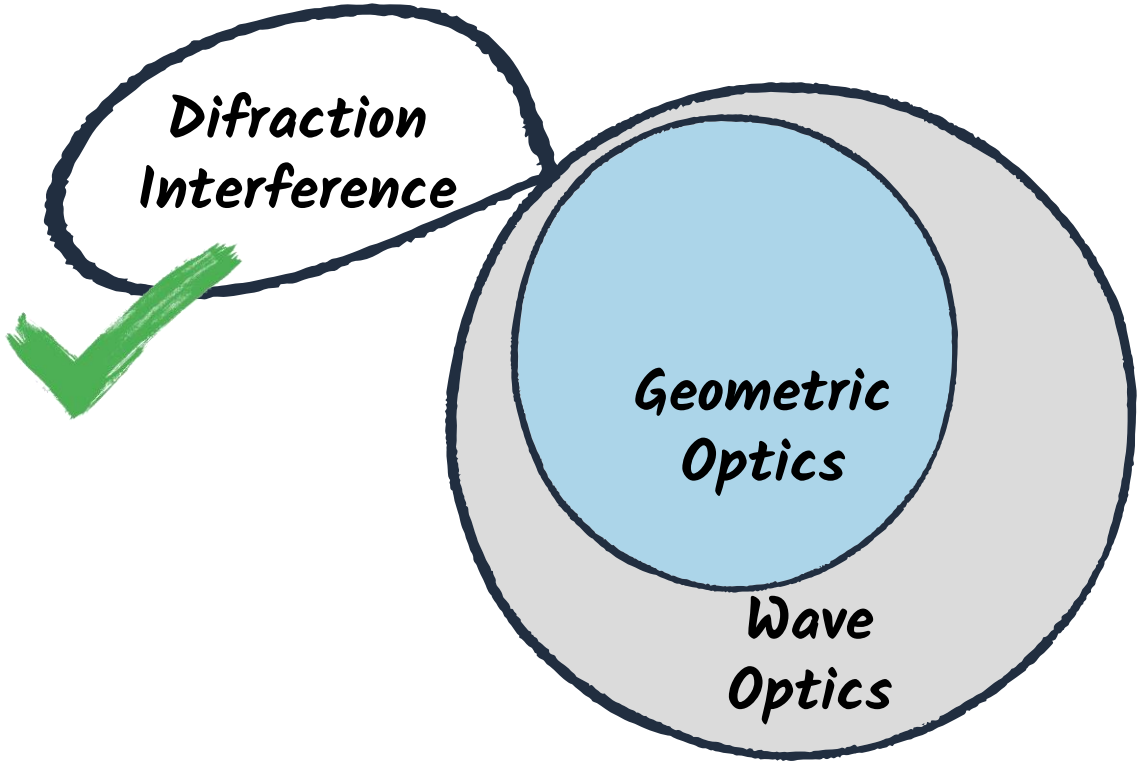

Sharif 20 Km
Moon 4x10^5 Km

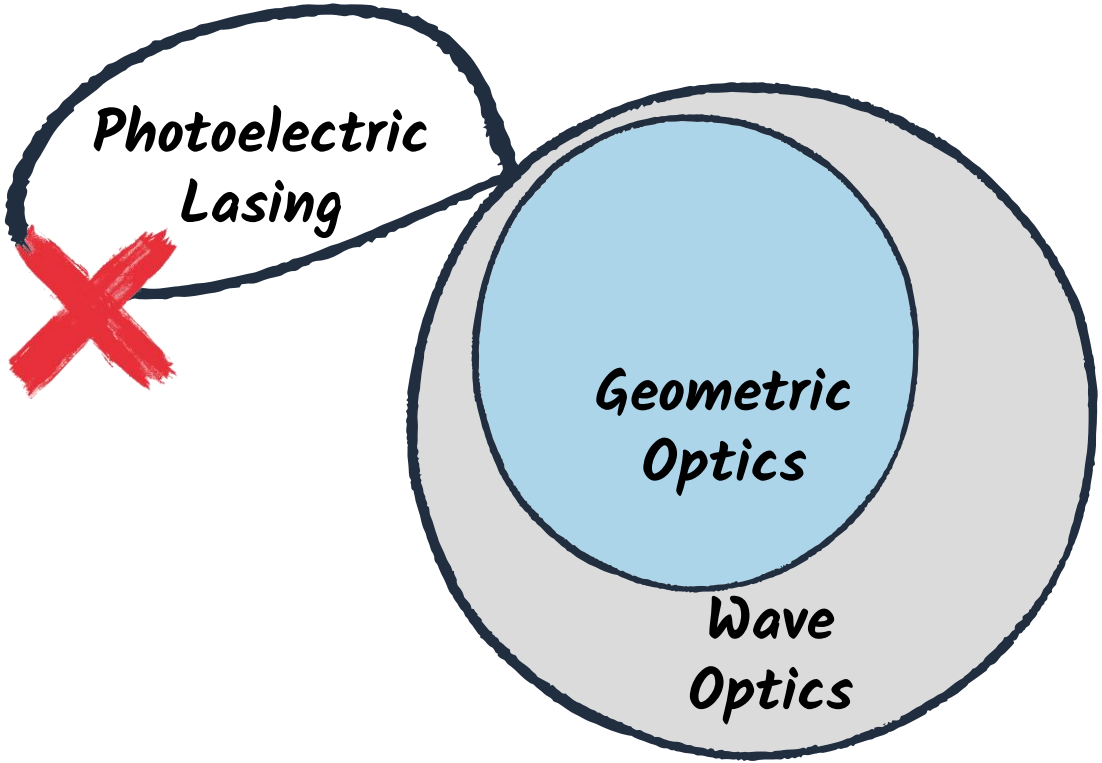

SMF
0.5 dB/KM
CAT5
93 dB/KM

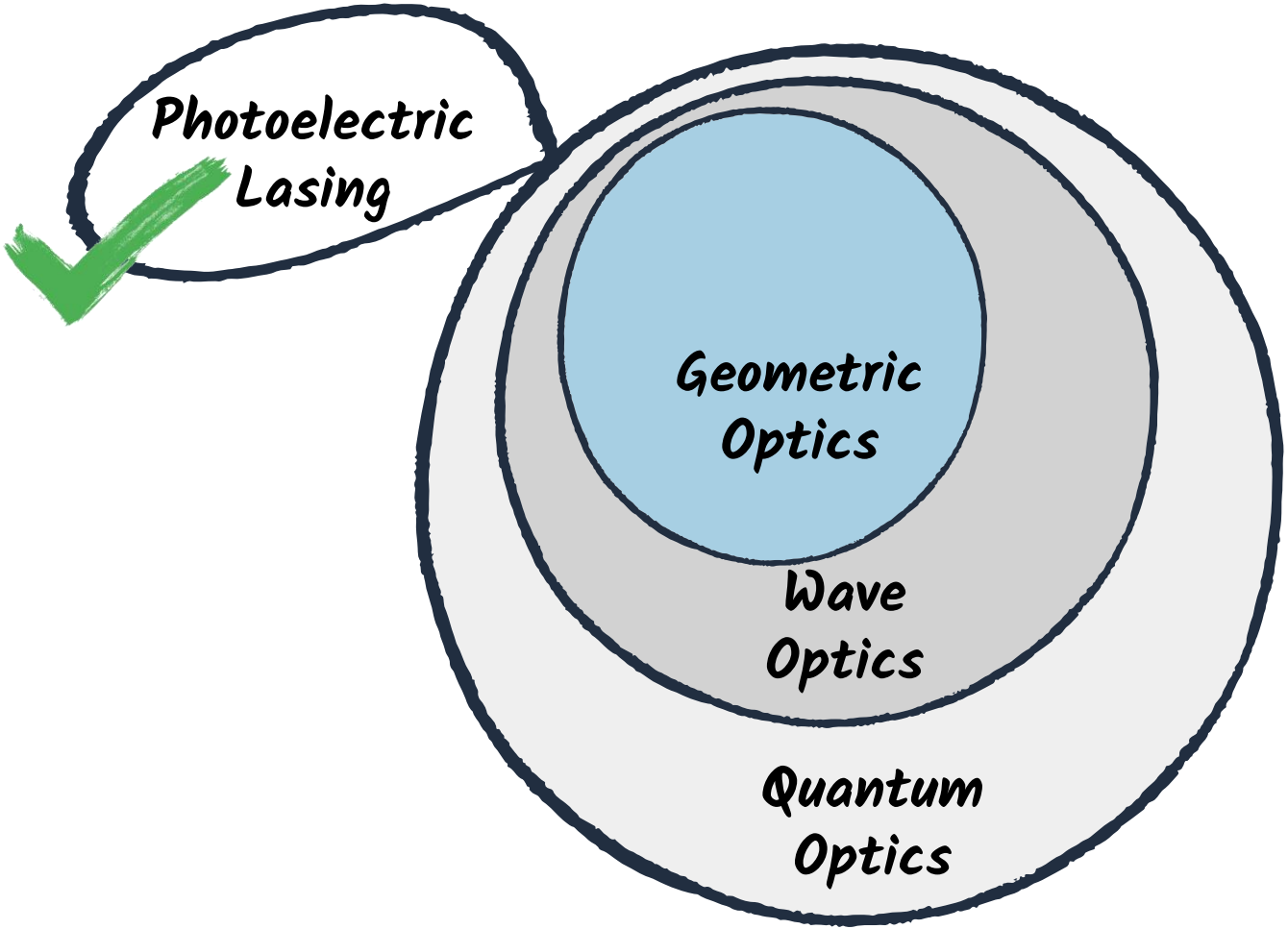
Physics and Math

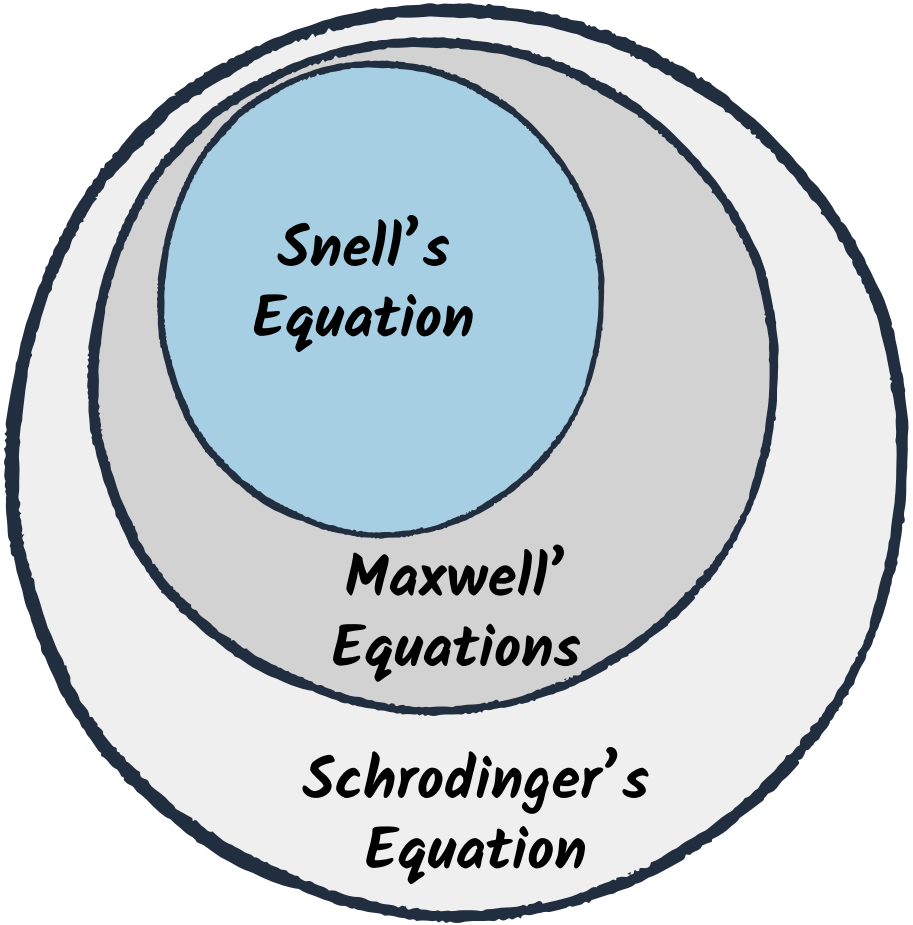

Refraction
Reflection
Geometric
Optics

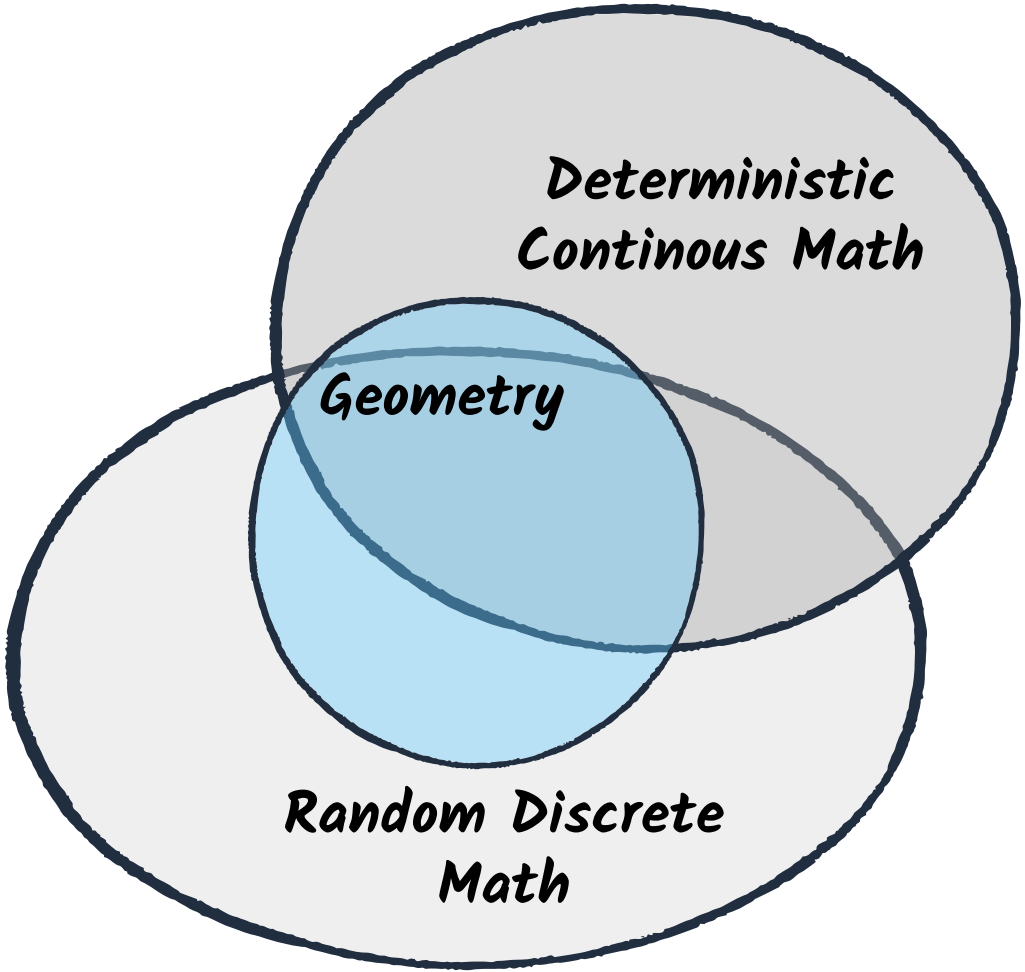

Difraction
Interference
Geometric
Optics


Difraction
Interference
Geometric
Optics
Wave
Optics


Photoelectric
Lasing
Geometric
Optics
Wave
Optics


Photoelectric
Lasing
Geometric
Optics
Wave
Optics
Quantum
Optics


Snell's
Equation
Maxwell'
Equations
Schrodinger's
Equation


Deterministic
Continous Math
Geometry
Random Discrete
Math

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