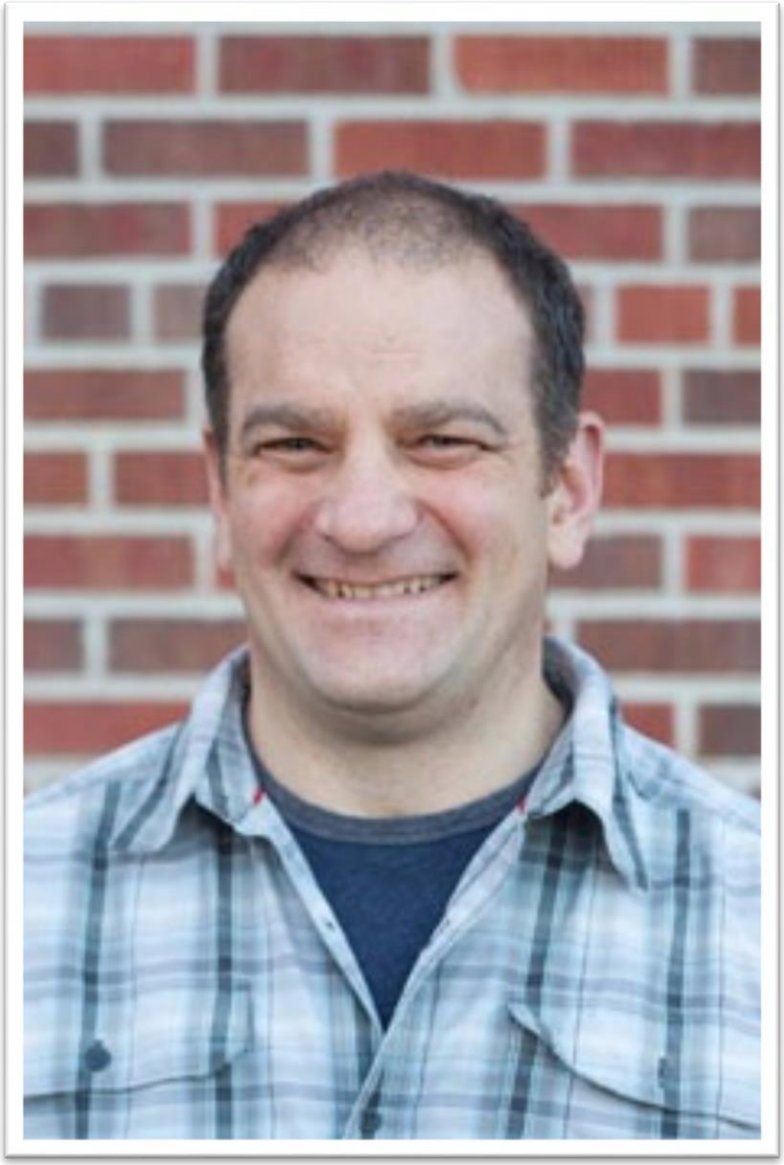
Steve Katsaros



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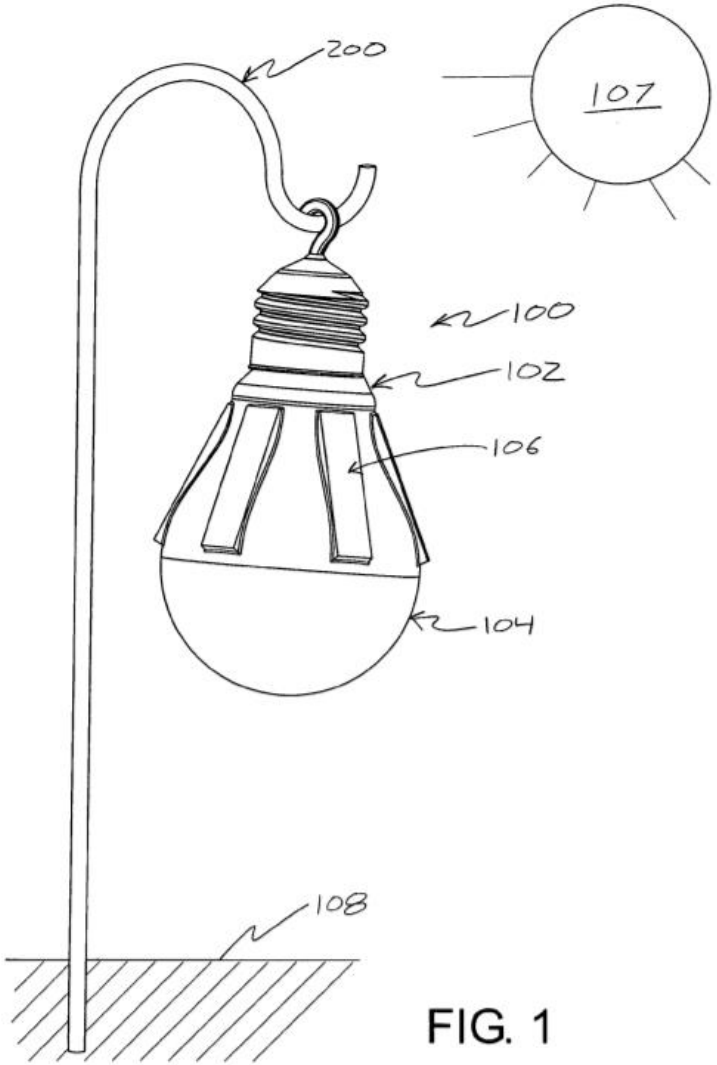
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FIG. 1

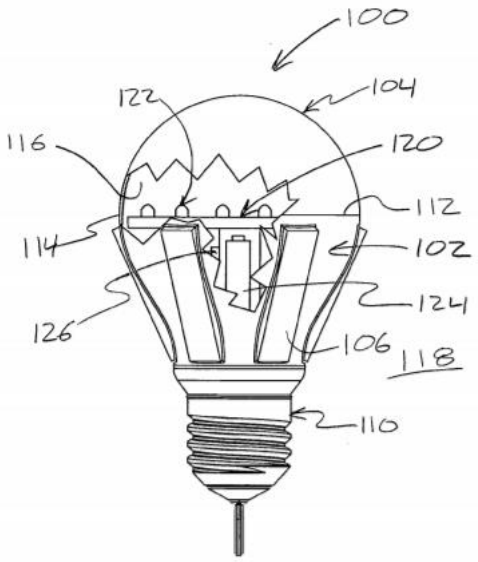
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FIG. 2

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

February 03, 2011

THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM THE RECORDS OF THE UNITED STATES PATENT AND TRADEMARK OFFICE OF THOSE PAPERS OF THE BELOW IDENTIFIED PATENT APPLICATION THAT MET THE REQUIREMENTS TO BE GRANTED A FILING DATE.

APPLICATION NUMBER: *61/337,005*
FILING DATE: *January 28, 2010*
RELATED PCT APPLICATION NUMBER: *PCT/US11/22772*

THE COUNTRY CODE AND NUMBER OF YOUR PRIORITY APPLICATION, TO BE USED FOR FILING ABROAD UNDER THE PARIS CONVENTION, IS *US61/337,005*

Certified by

David J. Kappos

Under Secretary of Commerce
for Intellectual Property
and Director of the United States
Patent and Trademark Office

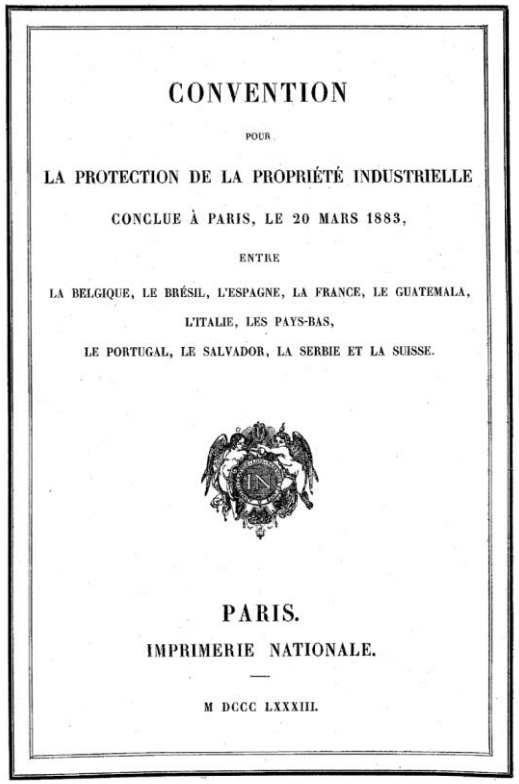
PATENT APPLICATION

Solar Charged Lamp

Inventor: Stephen B. Katsaros a citizen of the USA residing at:
2540 Forest Street, Denver, CO 80207

Two routes for seeking multinational patent protection

Paris Convention



CONVENTION

POUR

LA PROTECTION DE LA PROPRIÉTÉ INDUSTRIELLE

CONCLUE À PARIS, LE 20 MARS 1883,

ENTRE

LA BELGIQUE, LE BRÉSIL, L'ESPAGNE, LA FRANCE, LE GUATEMALA,
L'ITALIE, LES PAYS-BAS,
LE PORTUGAL, LE SALVADOR, LA SERBIE ET LA SUISSE.

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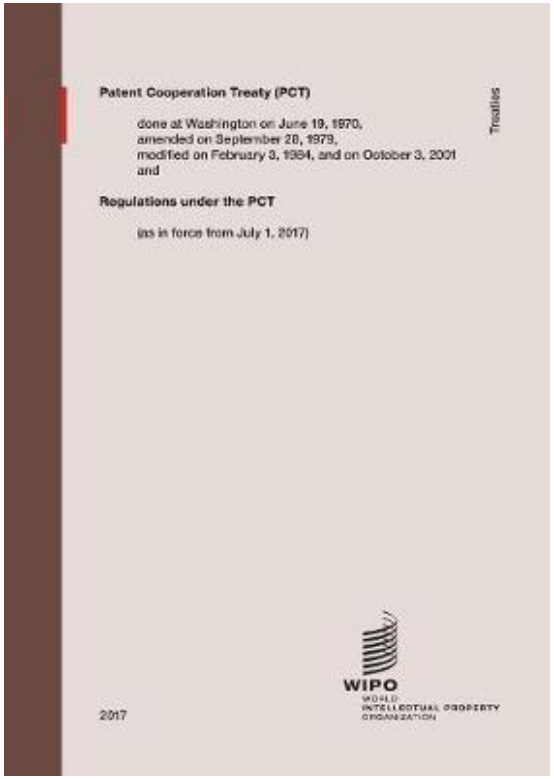
Patent Cooperation Treaty (PCT)



Treaties

Patent Cooperation Treaty (PCT)

done at Washington on June 19, 1970,
amended on September 28, 1979,
modified on February 3, 1984, and on October 3, 2001
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Regulations under the PCT

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Introduction to the Patent Cooperation Treaty (PCT)

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Two routes for seeking multinational patent protection

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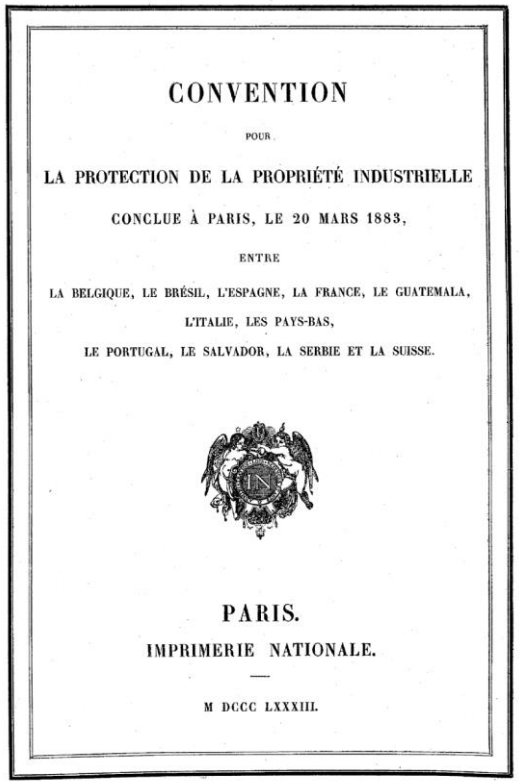

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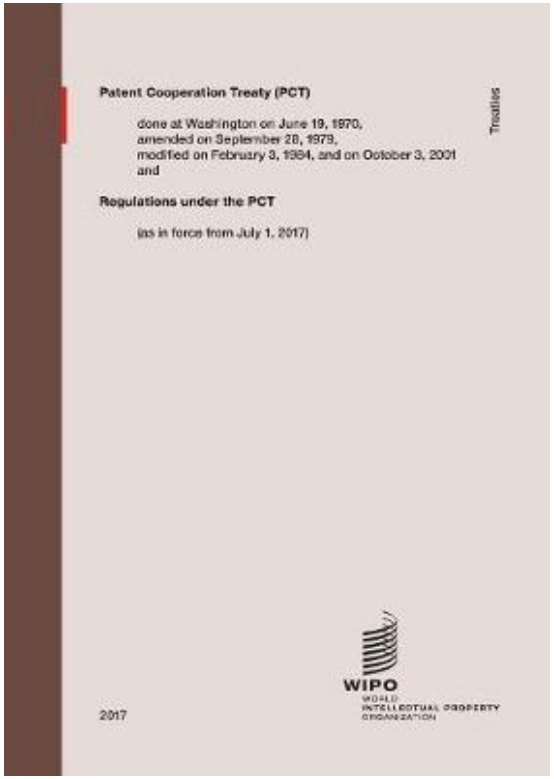

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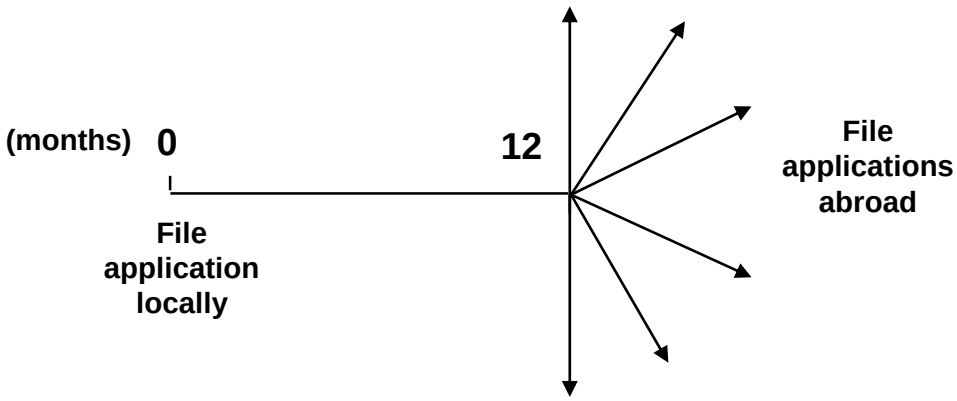

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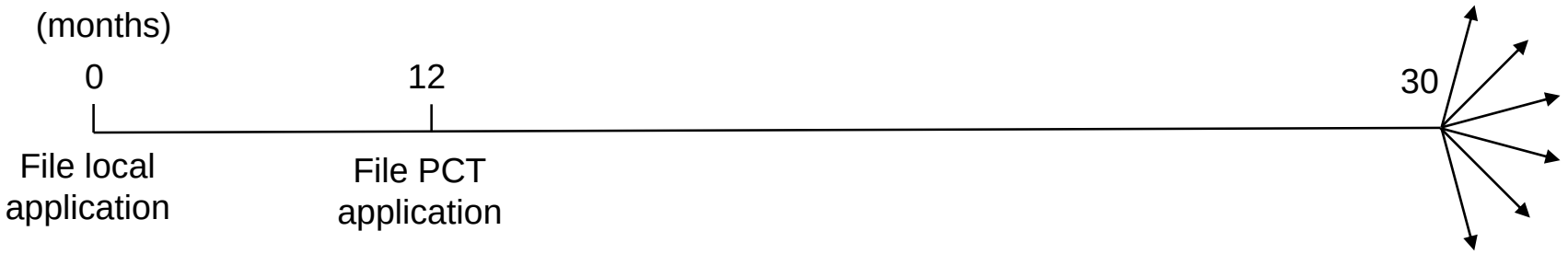

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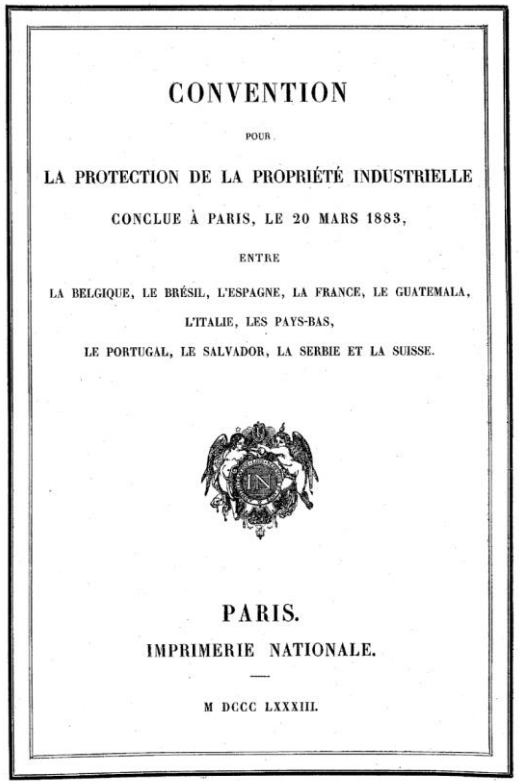
Paris Convention



CONVENTION

POUR

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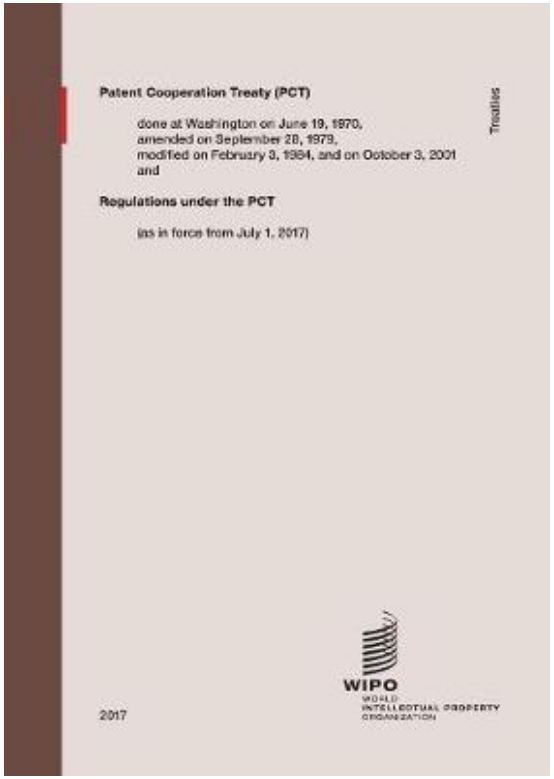

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Treaties

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(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
4 August 2011 (04.08.2011)

PCT

(10) International Publication Number
WO 2011/094444 A2

(51) International Patent Classification:
F21S 9/03 (2006.01) *F21Y 101/02* (2006.01)
F21V 23/00 (2006.01)

(21) International Application Number:
PCT/US2011/022772

(22) International Filing Date:
27 January 2011 (27.01.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/337,005 28 January 2010 (28.01.2010) US

(72) Inventor; and
(71) Applicant : KATSAROS, S [US/US]; 2540 Forest Street, Denver, Colorado 80207 (US).

(74) Agent: CROSSLEY, M; Crossley Patent Law, 236 South Third Street #287, Montrose, Colorado 81401 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD,

[Continued on next page]

(54) Title: SOLAR CHARGED LIGHT BULB

(57) Abstract: Disclosed herein are various versions of a solar-powered light bulb for repeatedly illuminating a dark location with a light emitting device powered by an electrical storage device that is repeatedly charged by at least one solar collector positioned on the solar-powered light bulb.

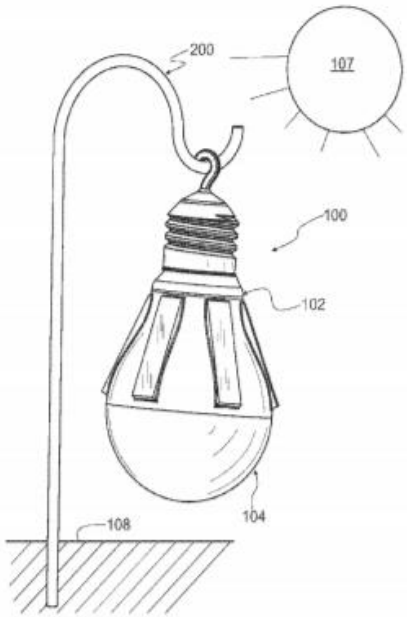
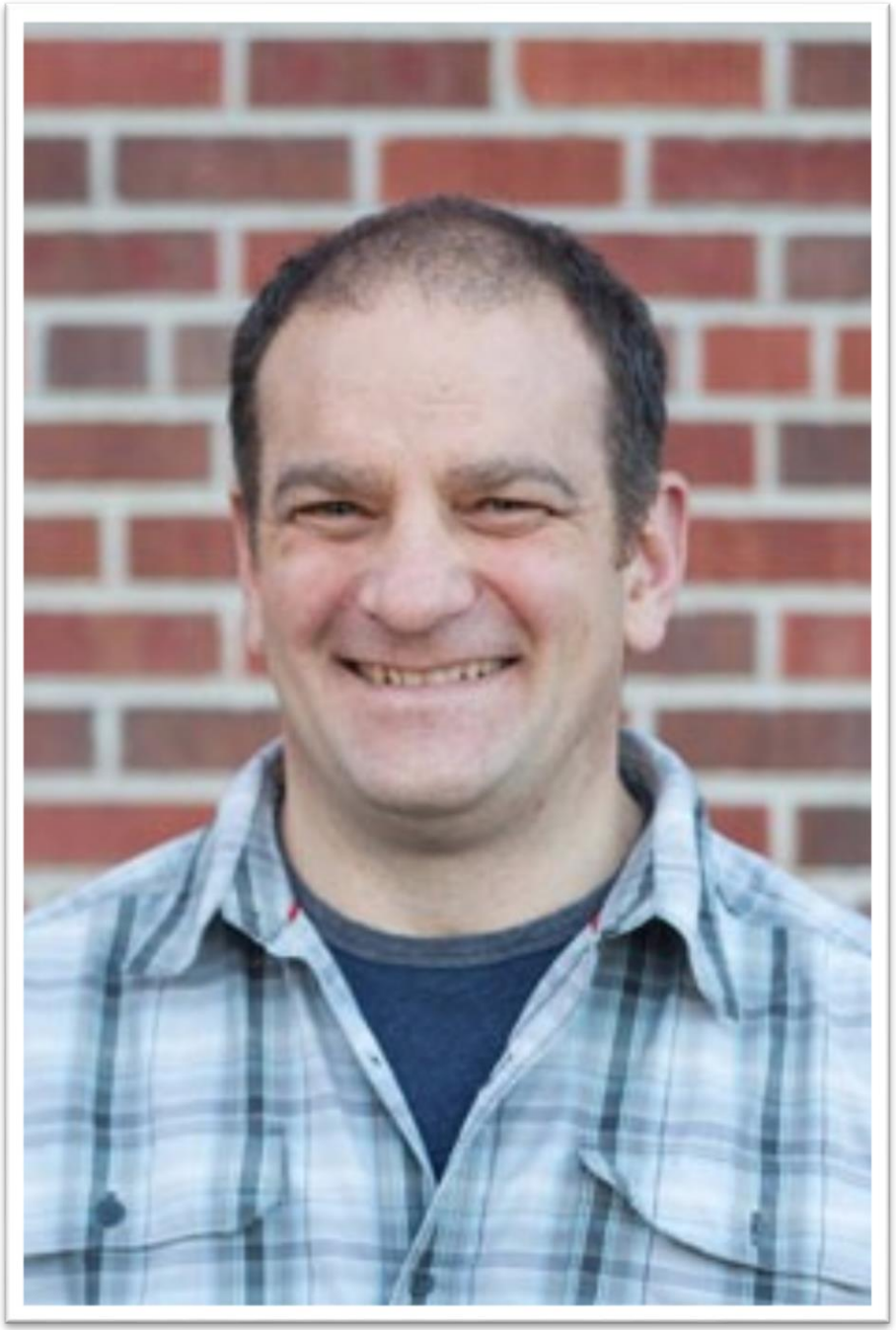


FIG. 1

WO 2011/094444 A2



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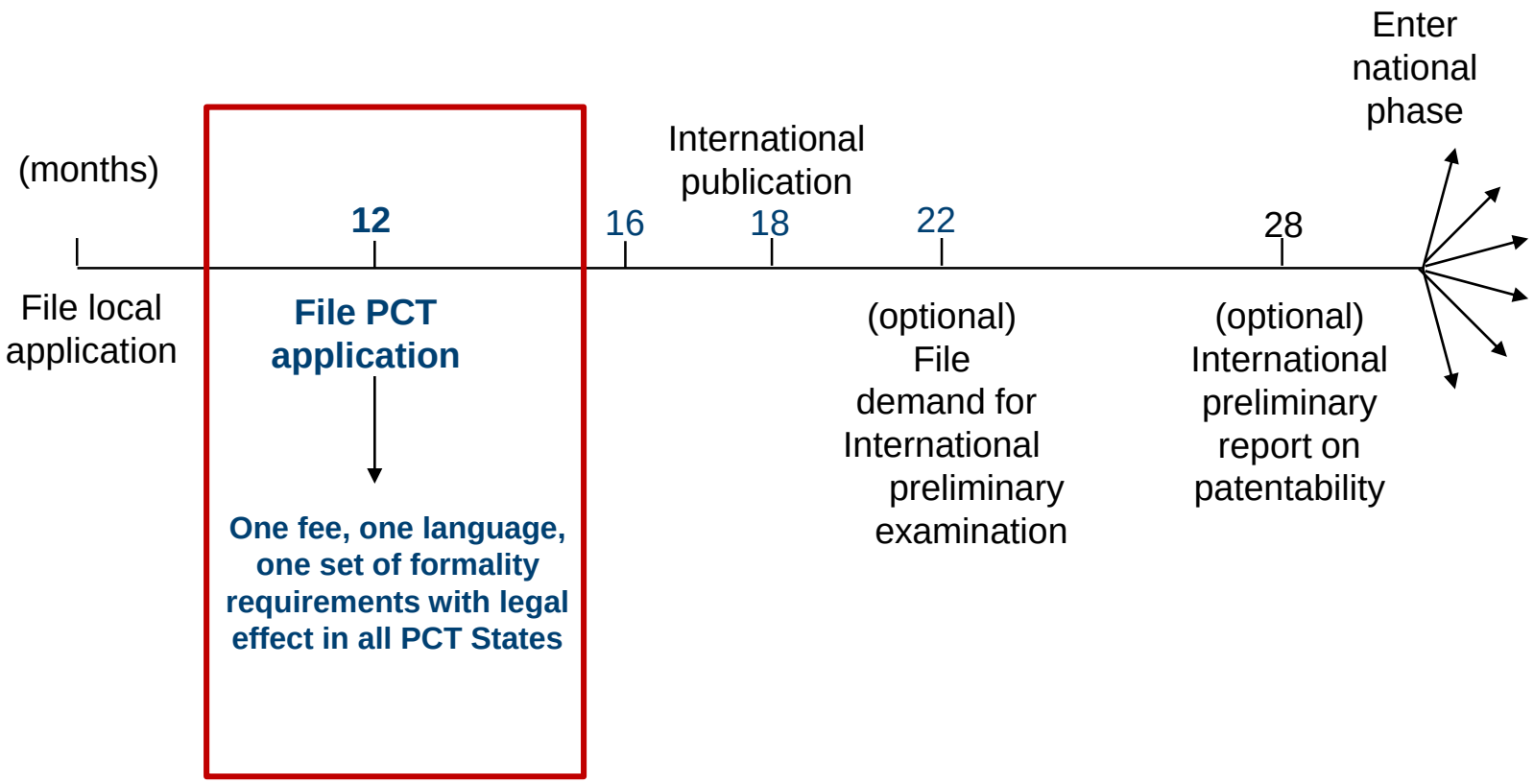
Why did Steve choose the PCT?

1. A single patent application has effect in all PCT countries

Why did Steve choose the PCT?



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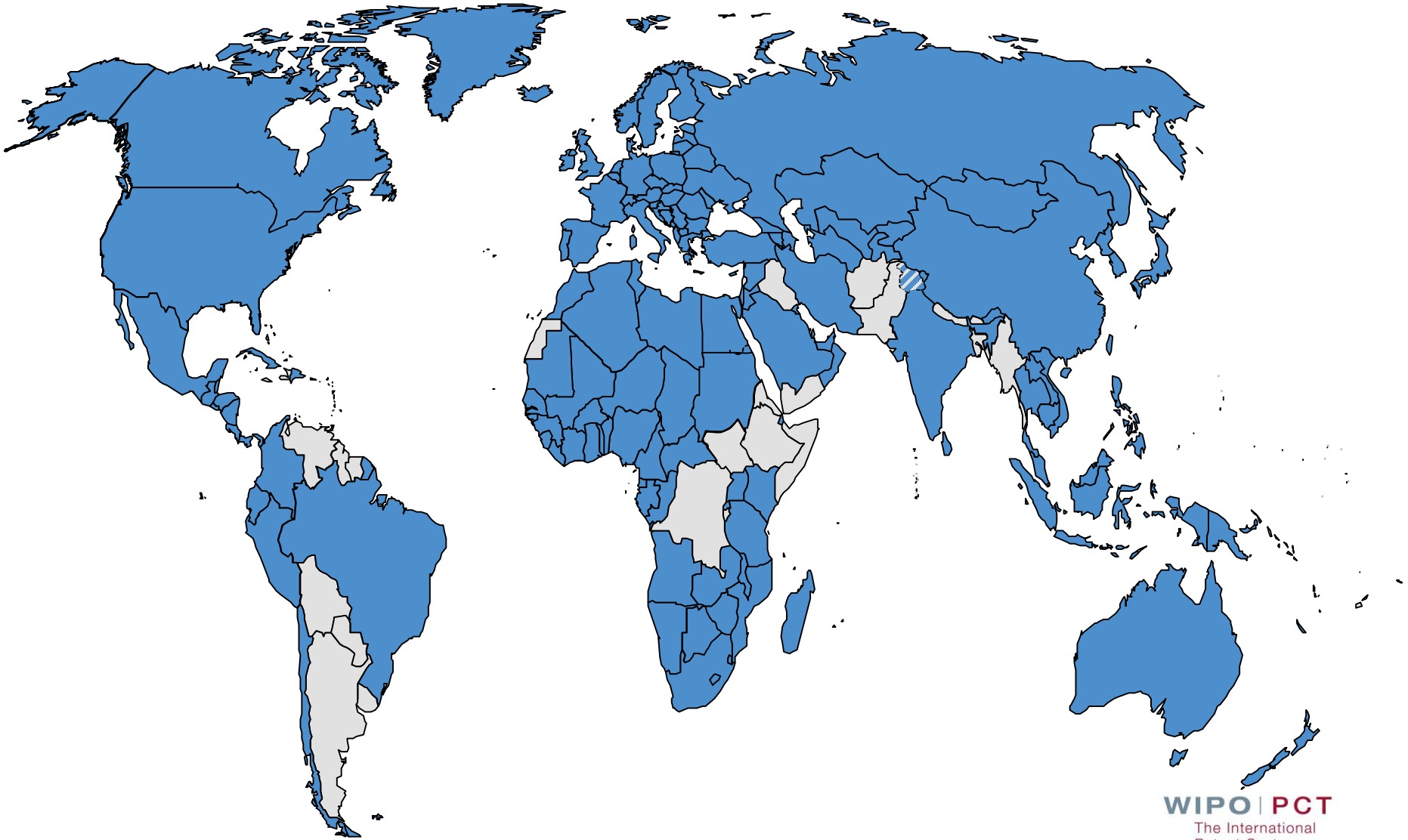
152 PCT Countries



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Shuji Nakamura: A PCT Testimonial

- 2014 Nobel Prize for Physics
- Blue LED technology

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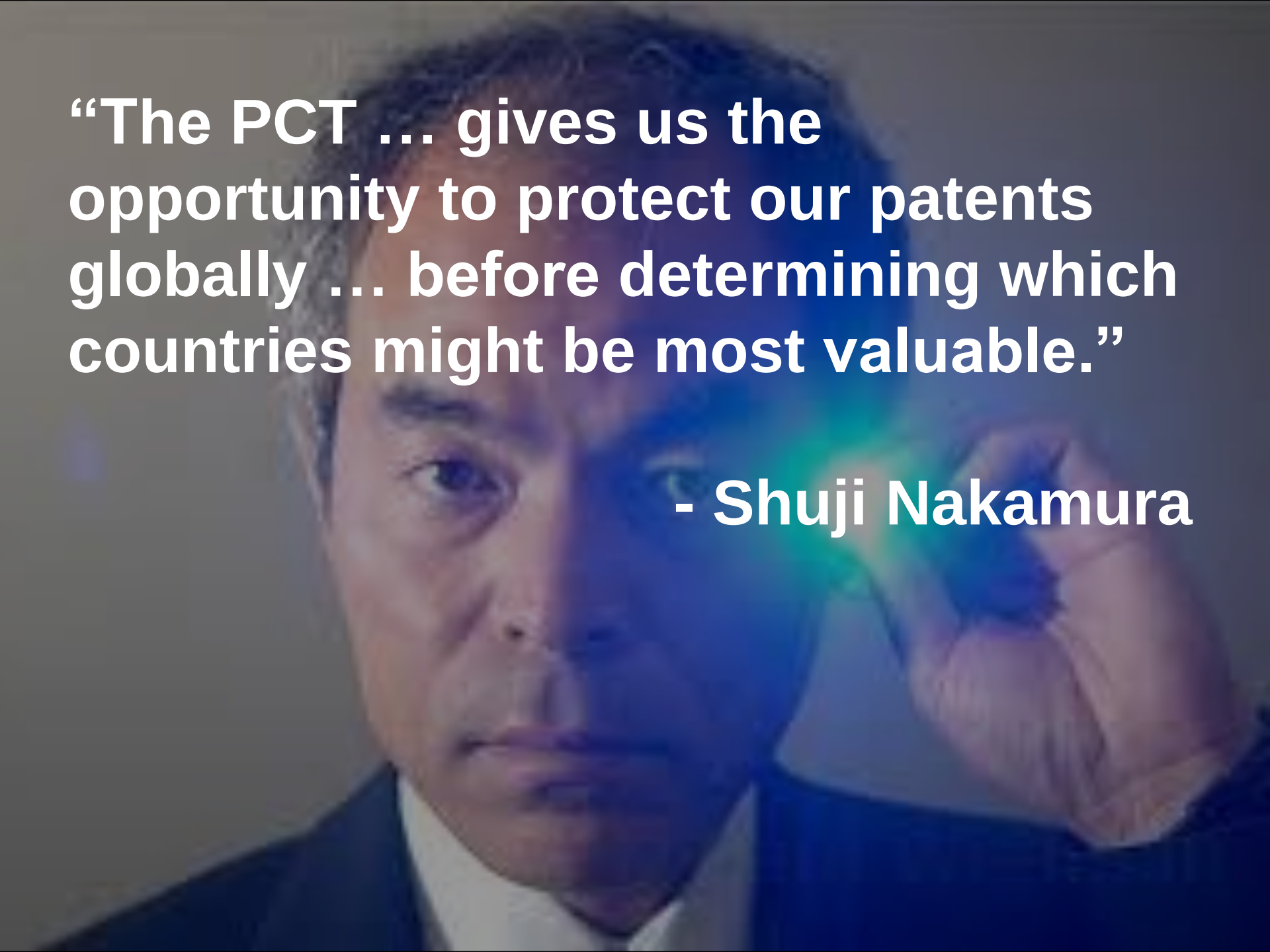
“The PCT … gives us the opportunity to protect our patents globally … before determining which countries might be most valuable.”
- Shuji Nakamura

Why did Steve choose the PCT?

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2. Major costs associated with internationalizing a patent application are postponed

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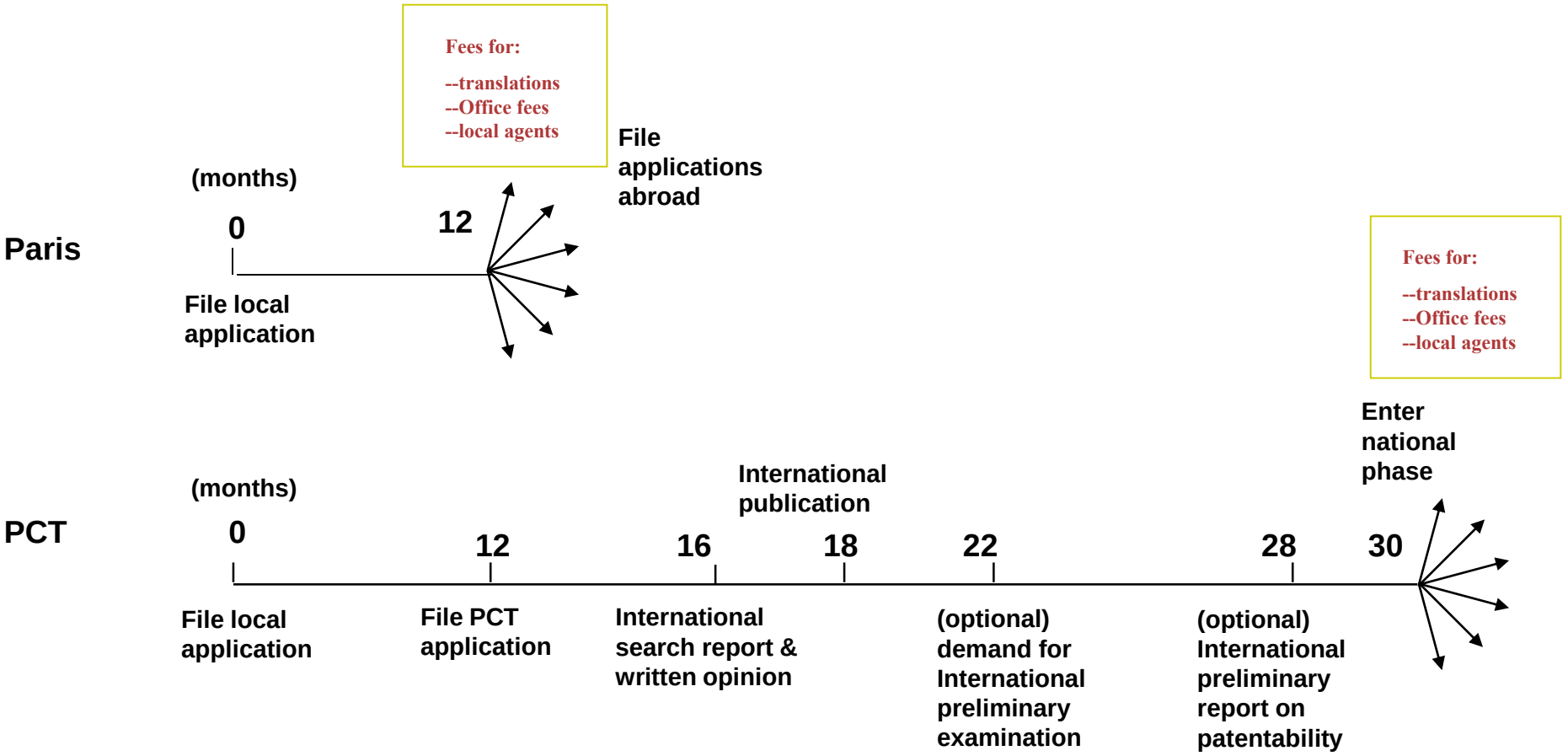
Paris Convention vs PCT



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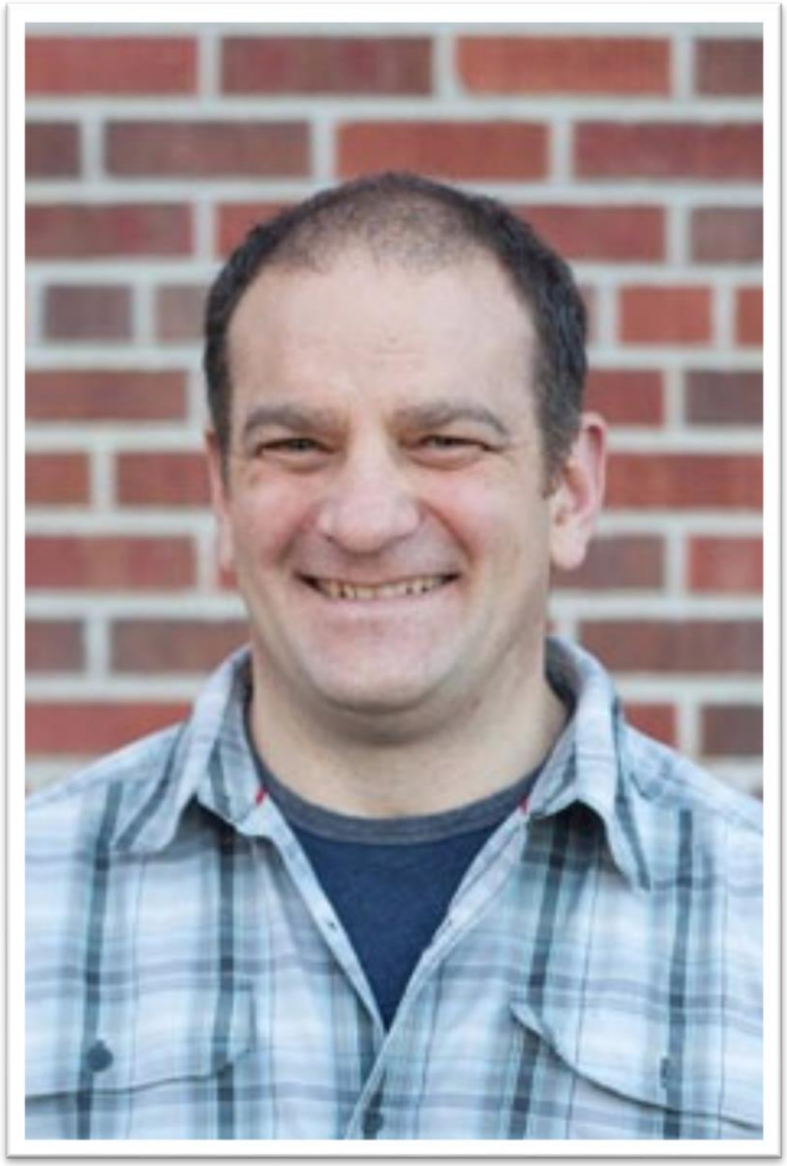
Steve Katsaros: A PCT Testimonial



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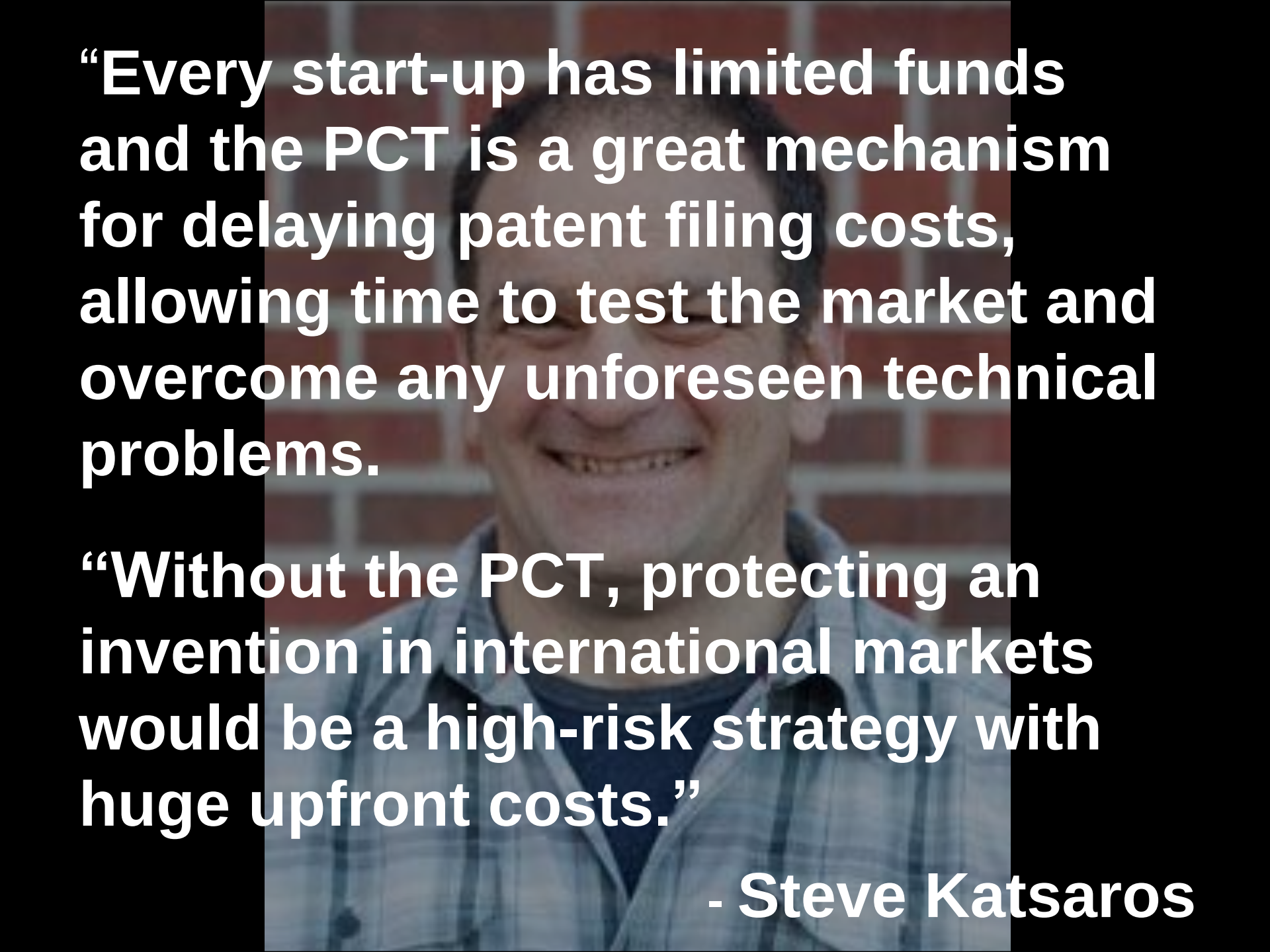

“Every start-up has limited funds and the PCT is a great mechanism for delaying patent filing costs, allowing time to test the market and overcome any unforeseen technical problems.

“Without the PCT, protecting an invention in international markets would be a high-risk strategy with huge upfront costs.”

- Steve Katsaros

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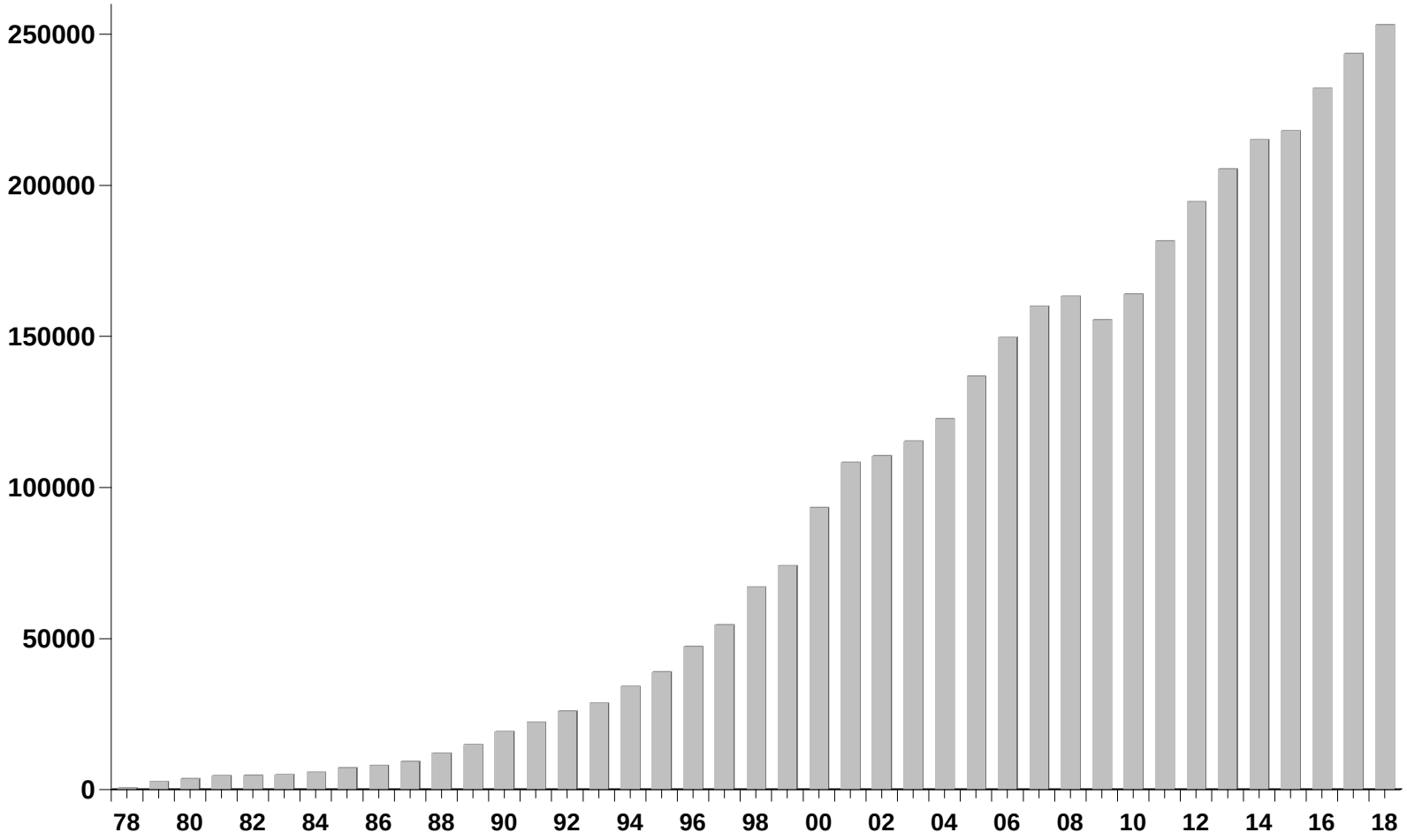
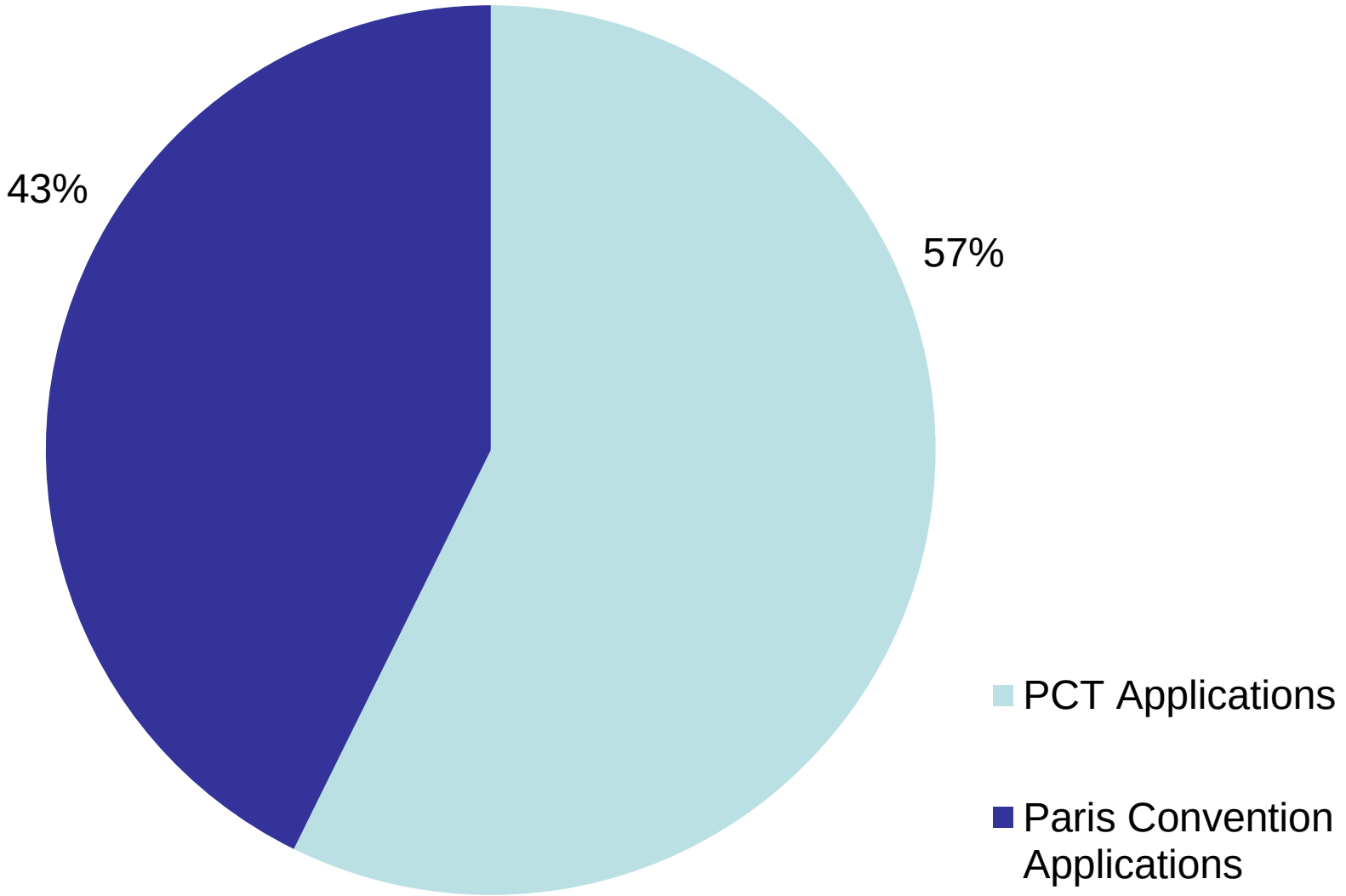
3. PCT users receive valuable information for patenting decisions

Tremendous growth in PCT applications since 1978



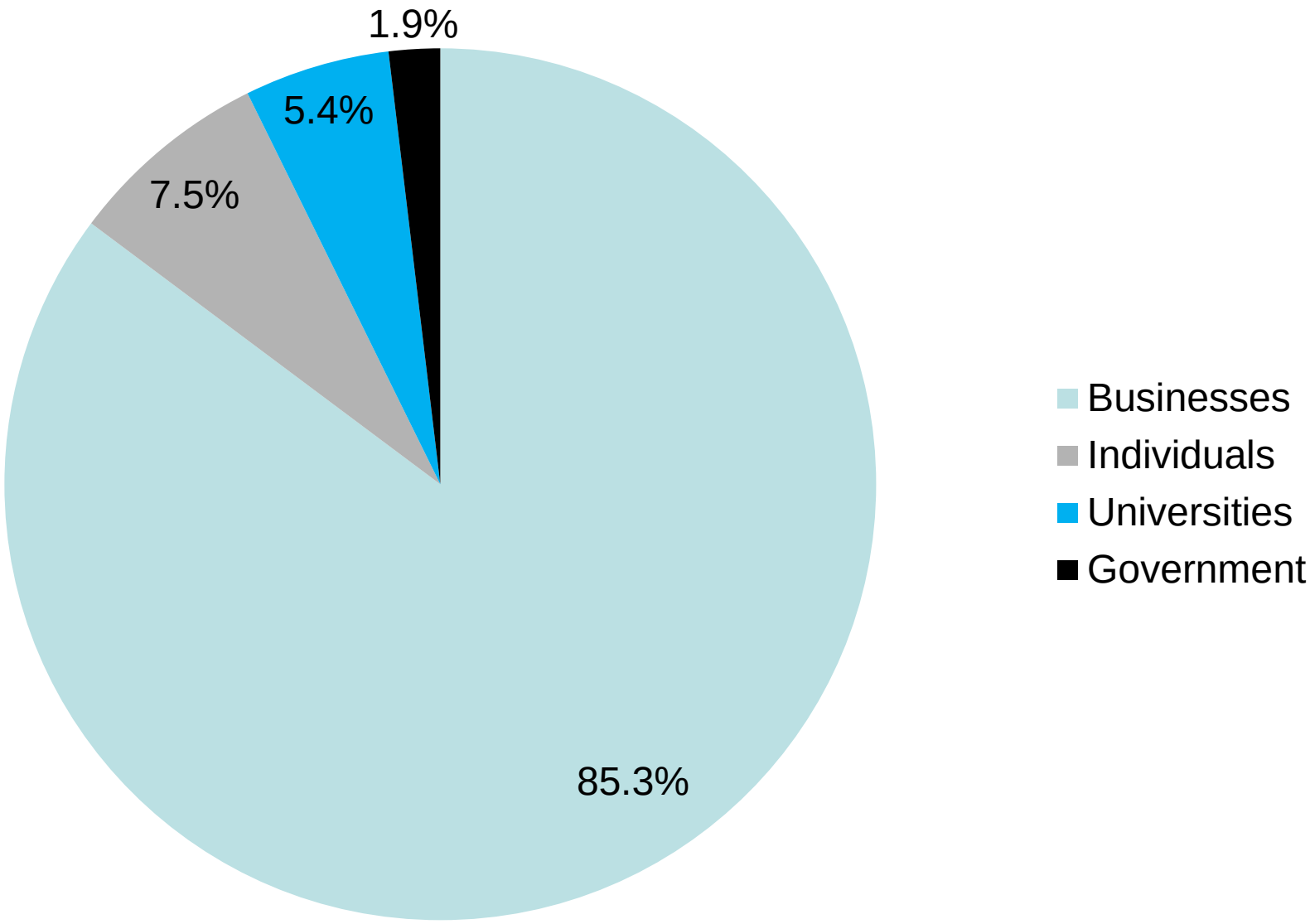
2018: +3.9%

The PCT has overtaken the Paris Convention



Who else uses the PCT?

PCT Applicants in 2018



Top PCT Applicants in 2018

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2. Mitsubishi Electric—JP (2,812)
3. Intel—US (2,499)
4. Qualcomm—US (2,404)
5. ZTE—CN (2,080)
6. Samsung—KR (1,997)
7. BOE Technology Group—CN (1,813)
8. LG Electronics—KR (1,697)
9. Ericsson—SE (1,645)
10. Bosch—DE (1,524)
11. Microsoft—US (1,476)
12. Panasonic—JP (1,465)
13. Sony—JP (1,342)
14. Siemens—DE (1,211)
15. Hewlett-Packard—US (1,170)

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14. Siemens—DE (1,211)
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Qualcomm: A PCT Testimonial

- 1985: 7 employees
- 2019: 34,000 employees in 40+ countries
- $22 billion in revenue (2018)

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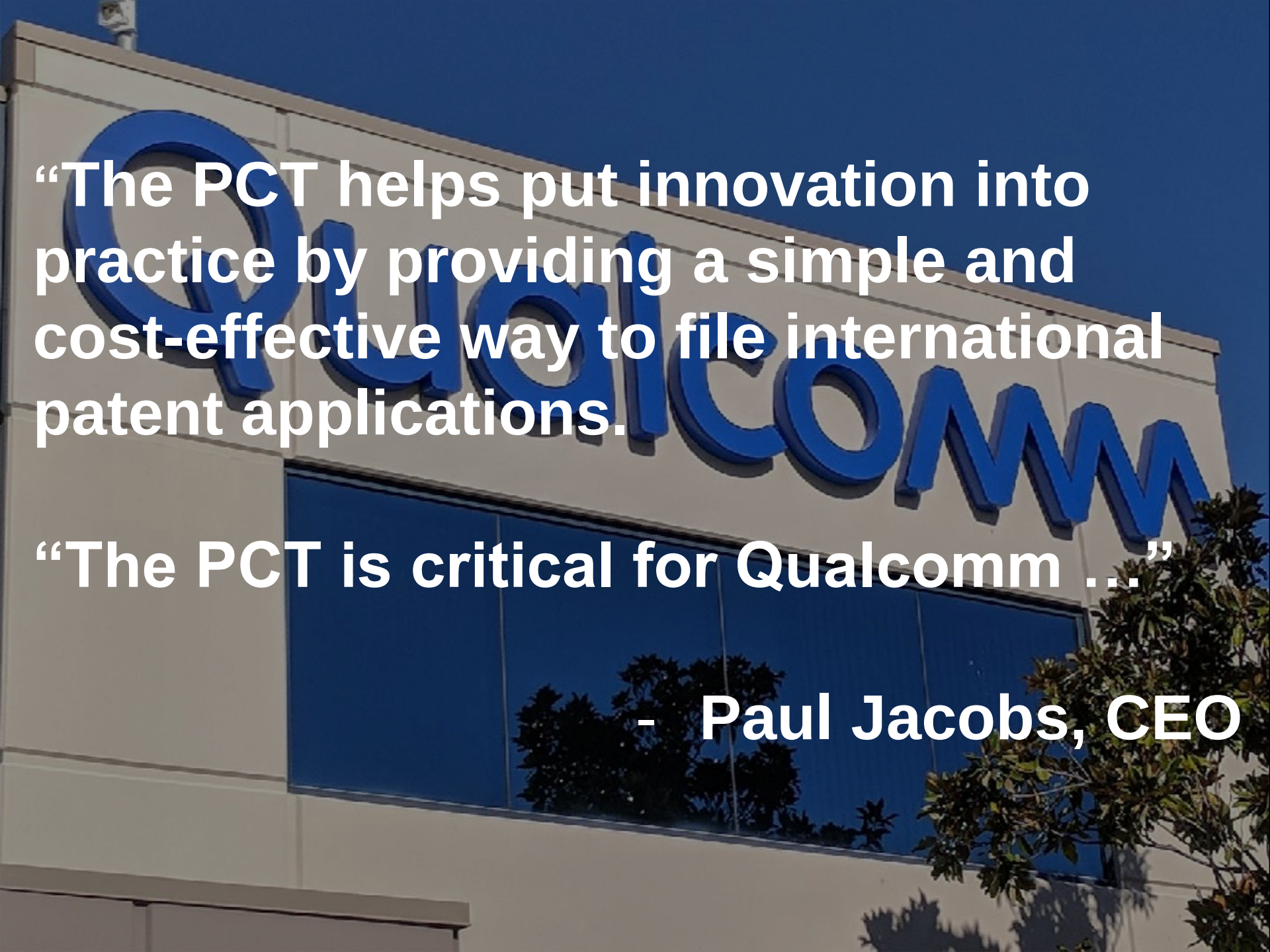

“The PCT helps put innovation into practice by providing a simple and cost-effective way to file international patent applications.

“The PCT is critical for Qualcomm …”

- Paul Jacobs, CEO

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7. Tsinghua University (CN)
8. Seoul National University (KR)
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10. China University of Mining and Technology (CN)
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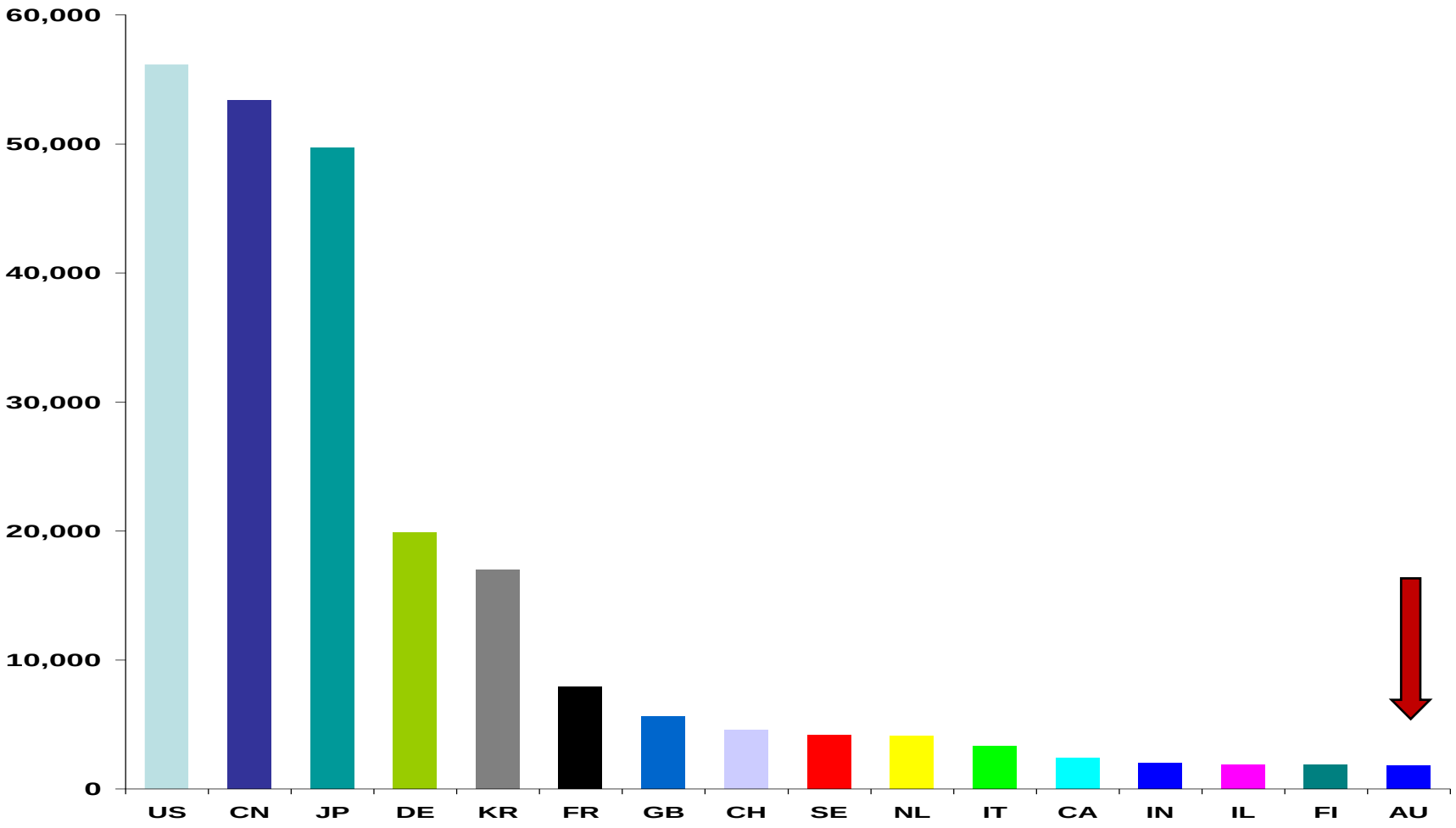
4. Institut National de la Sante et de la Recherche Médicale (FR)
5. National Institute of Advanced Industrial Science and Technology (JP)
6. Centre National de la Recherche Scientifique (FR)
7. Agency of Science, Technology and Research (SG)
8. Shenzhen Institute of Advanced Technology (CN)
9. United States of America, Secretary of Health and Human Services (US)
10. Mayo Foundation for Medical Education and Research (US)
11. Korea Electronics and Technology Institute (KR)
12. Riken (Institute of Physical and Chemical Research (JP)
13. Sloan-Kettering Institute for Cancer Research (US)
14. Electronics and Telecommunications Research Institute of Korea (KR)
15. Korea Institute of Industrial Technology (KR)

International Patent Applications by Country (2018)



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- Xard Group Pty Ltd
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- Weir Minerals Australia Ltd

Australians are using the PCT

Universities

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- Monash University
- University of Melbourne
- Australian National University
- Macquarie University
- Deakin University

Australians are using the PCT

- **Government Research Centres**
  - Commonwealth Scientific and Industrial Research Organization

Australian PCT Success Stories

Bishop Steering Pty Ltd (rack and pinion)

ITL Limited (needle protection solutions in healthcare)

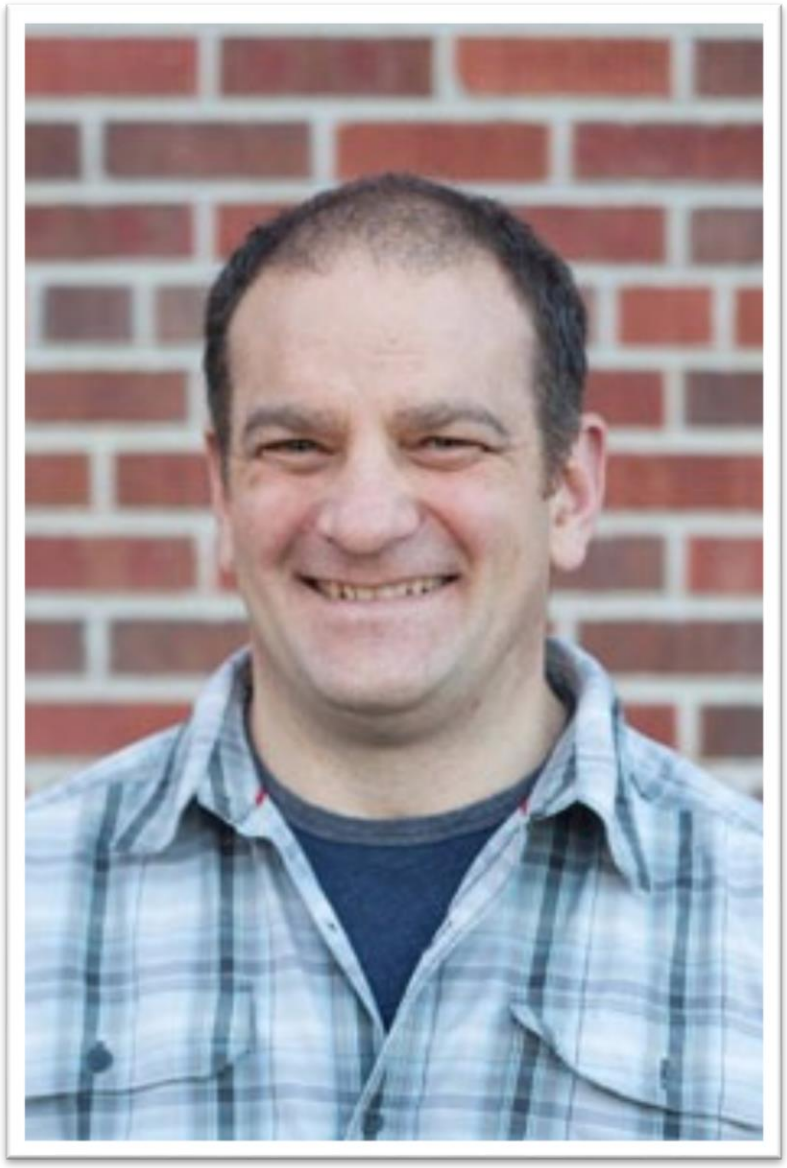
Hartman and Yap (bushfire water bombs)

Frazier lens (special camera lens)

Shark Shield Pty Ltd (personal electronic device deterring shark attacks)

https://www.wipo.int/pct/en/inventions/case_studies.html

So what did Steve do with his idea?



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1. WO/2017/055992 SOLAR CHARGE CIRCUIT AND METHOD WO 06.04.2017

H02J 7/35 PCT/IB2016/055764 KATSAROS, Stephen KATSAROS, Stephen

One embodiment is a solar charged device. The solar charged device includes a housing defining an interior and an exterior; a solar panel, defining a solar panel voltage, for generating power connected to the housing exterior, the solar panel comprising a pair of terminals; a switch located in the housing interior attached to one of the solar panel terminals; a battery, defining a battery voltage, for storing the power, the battery comprising a pair of leads, one of the battery leads attached to the solar panel and one of the battery leads attached to the switch; an active charge circuit located in the housing interior operatively connected to the switch and selectively connecting the battery to the solar panel in response to the battery voltage and the solar panel voltage; and an electronic device connected to the battery for utilizing the power.

2. WO/2015/175808 SOLAR UTILITY LIGHT WO 19.11.2015

A01K 97/00 PCT/US2015/030835 STEPHEN BASIL KATSAROS, Stephen STEPHEN BASIL KATSAROS, Stephen

A solar utility light, and associated fishing method, may include a solar panel assembly hermetically sealed a housing in which a battery and circuit assembly are supported. The solar panel assembly collects energy from the sun and converts it to light emitted from a light emitting diode. During operation, the light can be supported on the surface of a body of water to emit light into the body of water.

3. WO/2012/170609 WINDOW-MOUNTED SOLAR LIGHT WO 13.12.2012

F21S 9/03 PCT/US2012/041222 KATSAROS, Stephen KATSAROS, Stephen

A window-mounted solar light having: a housing defining a front surface and an opposite back surface; a solar panel disposed on the front surface; a suction cup disposed on the front surface for readily removably attaching the housing to the window; a rechargeable battery disposed inside the housing, the rechargeable battery being electrically coupled with the solar panel; a light emitter disposed on the housing, the light emitter being electrically coupled to the solar panel via the rechargeable battery; wherein during daytime, the solar panel converts sunlight traveling through the window into energy that is stored in the rechargeable battery; and, wherein the energy stored in the rechargeable battery is selectively supplied to the light emitter to produce light.

4. WO/2012/170649 BACKUP LIGHTING ACCESSORY WO 13.12.2012

F21V 23/00 PCT/US2012/041280 KATSAROS, Stephen KATSAROS, Stephen

A backup lighting accessory 100 interfaced with grid power 14, the backup lighting accessory 100 is capable of emitting light from LEDs 112 via a battery 130 located inside the backup lighting accessory 100.

5. WO/2012/065150 ADJUSTABLE SOLAR CHARGED LAMP WO 18.05.2012

F21S 9/03 PCT/US2011/060503 KATSAROS, Stephen KATSAROS, Stephen

An adjustable solar-charged lamp configured to collect and store energy from the sun and to illuminate the lamp with the stored energy, the lamp including a housing, a lens engaged with the housing; a solar collector attached to the housing; a battery and a light emitting device disposed within an interior of the housing and in communication with the solar collector; and a hanger assembly pivotally attached to the housing, wherein the solar collector is repositionable to the hanger assembly to provide maximum exposure to a light source, such as the sun.

6. WO/2011/094444 SOLAR CHARGED LIGHT BULB WO 04.08.2011

F21S 9/03 PCT/US2011/022772 KATSAROS, S KATSAROS, S

Disclosed herein are various versions of a solar-powered light bulb for repeatedly illuminating a dark location with a light emitting device powered by an electrical storage device that is repeatedly charged by at least one solar collector positioned on the solar-powered light bulb.

Nokero N233 Solar Light

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Qualcomm