

Evolution of the Pervasive Internet

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Software company based in Ottawa, Ontario

Founded in 1997 by 3 Carleton students

Espial is driving a vision of the Pervasive Internet

Espial develops and markets an universal end-to-end service delivery platform for the Pervasive Internet

Global sales offices: US, UK, Japan

Customer base: smart device manufacturers

Future: smart device manufacturers & service providers

Investors are guiding the Pervasive Internet vision

Investor backgrounds in:

Communications equipment

Service provider

Infrastructure software

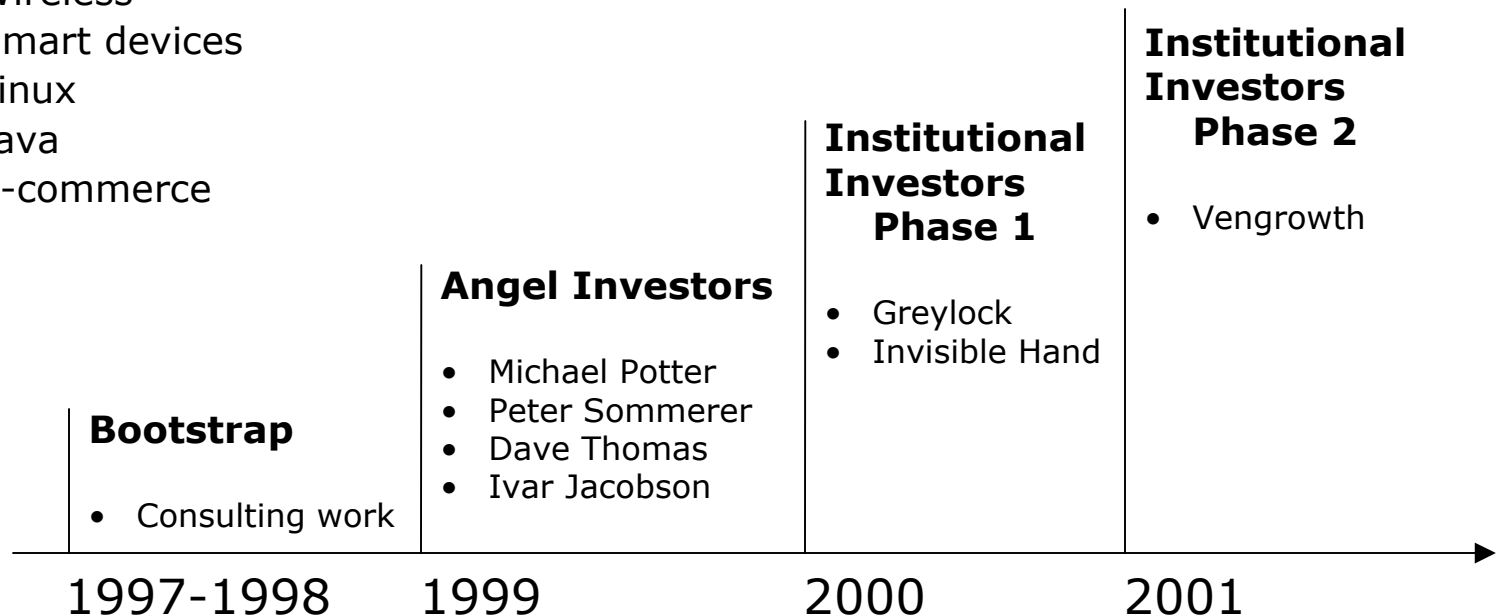
Wireless

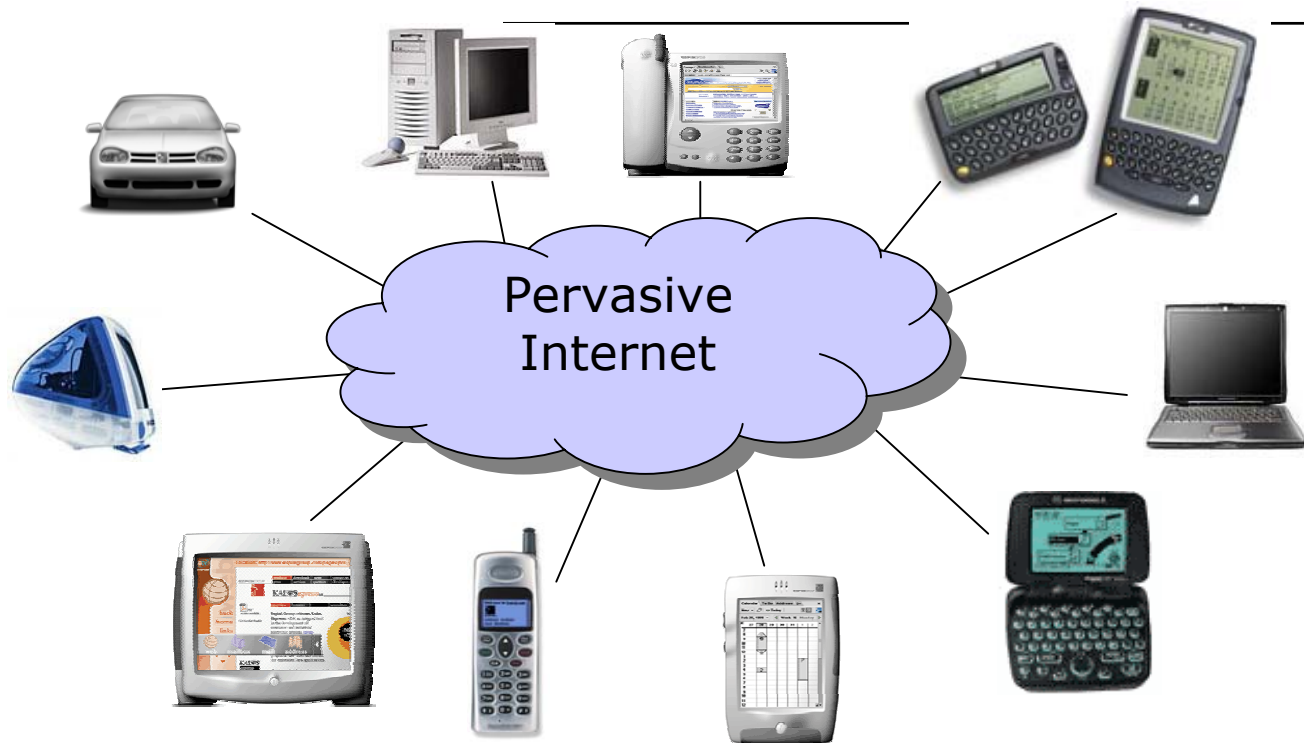
Smart devices

Linux

Java

E-commerce





Challenge:

How to get billions of users on-line?

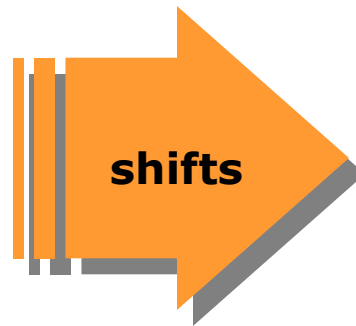
What do users perceive as value and how to deliver?

How to create a single user across multiple devices?

Current Generation Internet

Characteristics Today

- Infrastructure for connectivity / bandwidth
- Browser-based computing
- Vertical developer standards

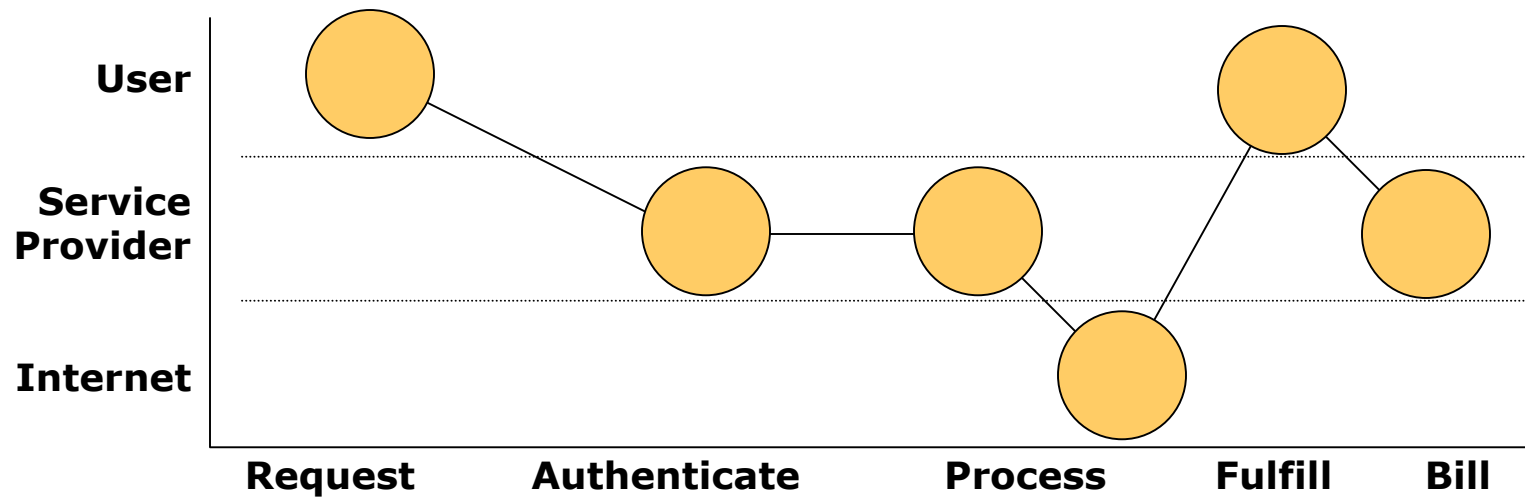


Criteria for Next Generation

- Speed of Service Deliver
- Simplify user experience
- Customized service level
- "My data, my way" personalization

- Bandwidth issue diminished
- Network Intelligence for Personalization
- Wide variety of Access Devices
 - Smart & Simple devices
 - Portable devices, portable code
- More bundling across service providers
- Application services

Transaction Processing



Simplification

Network Evolution

Integration of Systems

Applications, Applications, Applications

Reliable, Robust, Timely Software

Simplification

- **Devices characteristics**
 - narrow purpose, ease of use
- **Performance & Footprint at low cost**
 - Full functionality, minimal code complexity
- **Foolproof upgrade of Device Software**

Network Evolution

Integration of Systems

Applications, Applications, Applications

Reliable, Robust, Timely

Simplification

Network Evolution

- **Cost effective bandwidth improvements**
- **Infrastructure for**
 - **Personalization**
 - **Collaboration**
 - **Security**

Integration of Systems

Applications, Applications, Applications

Reliable, Robust, Timely

Simplification

Network Evolution

Integration of Systems

- **Embedded Systems: Single Device Stacks & Applications**
- **Enterprise Systems integration**
- **Service Providers end to end**
- **Between Service Providers**

Applications, Applications, Applications

Reliable, Robust, Timely

Simplification

Network Evolution

Integration of Systems

Applications, Applications, Applications

- **Video connectivity**
- **Communication - IM, e-mail etc.**
- **Information at Fingertips... work to home**
- **Entertainment**
- **Applications for everything!**

Reliable, Robust, Timely

Simplification

Network Evolution

Integration of Systems

Applications, Applications, Applications

Reliable, Robust, Timely

- **Products do what they say they will**
- **Zero tolerance for Quality issues**
- **Fierce Time to market challenges**

Large & Complex System Architecture

Integration Point based software

Internet Standards

Telecommunications Infrastructure

Database leveraging technology

Development Discipline

Commercial Skills and Knowledge Base



Partnership & Channels Management

Technical Marketing

Communication Skills

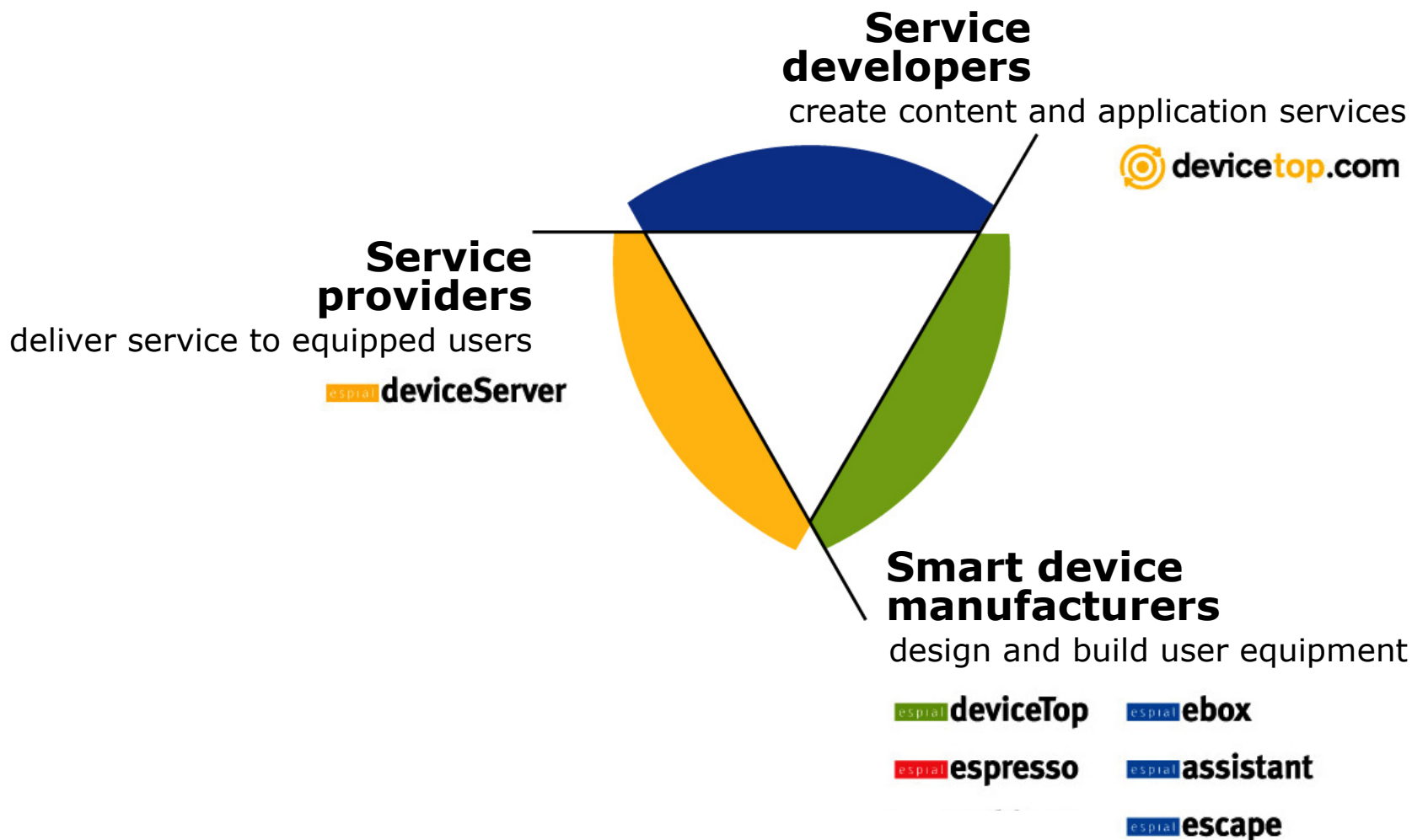
Team work

Project Management

Espial's Investment in the Future



Pervasive Internet Ecosystem



Products

DeviceTop – client side of the service delivery platform

Tools and components - **Espresso**

Application suite – **Escape, Ebox, Assistant**

Capabilities

Embedded systems experience

Java technology

Standards based

Successes

OnCommand/Lodgenet – Hospitality set top boxes

Sony – PVR TV

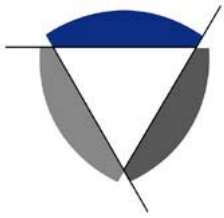
Samsung – Screen phone & Home Device

Philips – Commercial remote control

MotionMedia – Video phone



Service Developer Element



Products

Devicetop.com portal for developers

Capabilities

Open solutions, published APIs

Tools for free

Catalyst to market

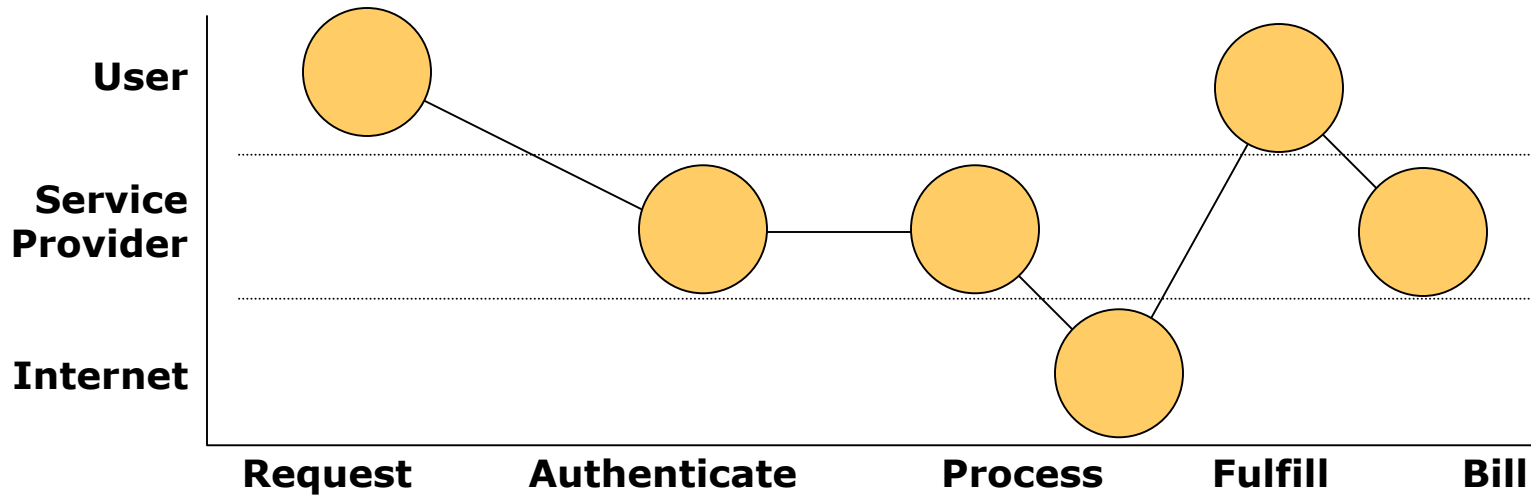
Partners

Amiga, IAN, Intel, Motorola, Pointbase, Sun, Tao

Successes

> 5000 registered





User request application or content

DeviceServer authenticates the request

DeviceServer verifies the user device capability

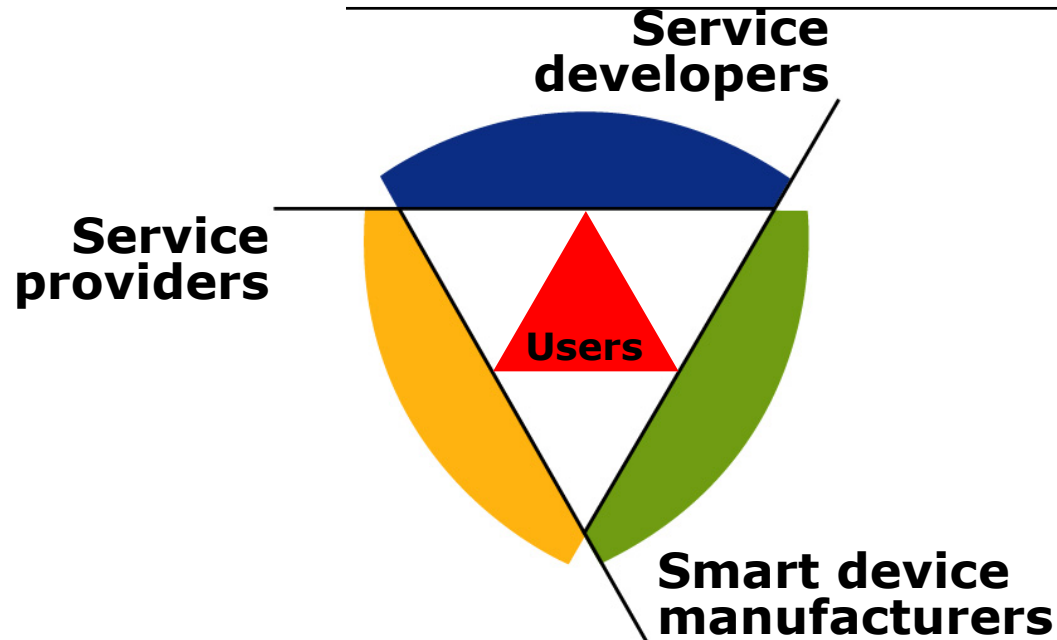
DeviceServer processes the content or application request

Application or content is delivered to user to fulfill the request

DeviceServer maintains record of the transaction as needed for billing



Driving the Pervasive Internet



Make technology work for the user

The Pervasive Internet must have standards and open solutions – Espial is committed

The vision is bigger than just one company, Espial is a catalyst for the industry