



***USE OF IP VALUATION SOFTWARE IN THE BUSINESS***  
***Biotech and Pharma industries***



**Alain KAISER**

# Speaker's resume: Alain KAISER

## Professional Specialities:

**Financial evaluations of intellectual property rights**

**Judicial expert - Court of Appeal of PARIS – damages estimations in counterfeiting and passing off expertise**

**Strategy and financial evaluations of IP in different contexts :negociations taxes audits...**

**Consultant for industriels, lawyers or patent attorneys**

**Author of « L'évaluation de la PI » chez Lextenso**

**Articles : Les Nouvelles LES, DECIDEURS JURIDIQUES, La Tribune, Les Echos, Economie et Comptabilité, Echanges, Option Finance, La Revue des Marques, Les Echos HEC INPI « Les Entretiens de Paris »,« Securitization », « Patent valuations : methods and issues », working paper CEPN**

**Book : Financial valuation of technology assets (L'évaluation financière des actifs technologiques) lextenso-editions.fr ; lgdj.fr ; fnac.com et amazon.fr - code ISBN 978-2-297-06044-8**

## Professional career :

**Partner founder of IP TRUST patent attorney law firm**



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**ISSUE I : USUAL SOFTWARE VALUATION APPROACHES**

**ISSUE II : SPECIFIC SOFTWARE VALUATIONS FOR BIOTECHS**

# SOFTWARE VALUATIONS FOR A STANDARD BUSINESS :

The most common approaches for software valuations:

- Sales Multiple. A quick and easy way to estimate the value of a software company is by applying a multiple to your annual revenue
- Price Earnings Ratio
- **Internal Rate of Return Method**
- Free Cash Flow Model
- **Replacement Value**
- Book Value Method
- **Benchmarks or Similar Company Transactions**
- **Licensing revenues**

# SOFTWARE VALUATIONS FOR A STANDARD BUSINESS :

- Internal Rate of Return Method

## HISTORICAL COST

k€	Years	Legal costs	Internal Development costs	External dev costs	Infrastructure hardware	License fees on the platform	Total costs	trend	trended
historical investments or Development costs	2016	0			5	1	6	1,170	7
	2017	0	13	25	15	1	54	1,125	61
	2018	1	35	25	15	1	77	1,082	83
	2019	1	48	28	16	1	94	1,040	98
		total					231		249
<b>VALEUR ESTIMEE :</b>		<b>249</b>	<b>keuros</b>						

# SOFTWARE VALUATIONS FOR A STANDARD BUSINESS :

- Internal Rate of Return Method

		k€
A	Present value of the Software	249
B	ROI on software	13%
$C = A * B$	Minimum annual return	32
D	<i>Licensee turnover</i>	<i>1 000</i>
$E = C / D$	Licensing Royalty Rate	3%

# SOFTWARE VALUATIONS FOR A STANDARD BUSINESS :

- **Replacement Value**

**Best solution : obtain from Software service cies quotations**

# SOFTWARE VALUATIONS FOR A STANDARD BUSINESS :

## Benchmarks or Similar Software Transactions

### TECHNOLOGY DESCRIPTION : ROBOT CONTROLLING THE DIFFUSION OF ANAESTHETIC DRUG DURING SURGERY

#### Benchmark search with key words

*« medical and surgery field :*

- System for controlling injection*
- System for controlling anaesthetic*
- System for controlling sedative*
- drug delivery system «*



# SOFTWARE VALUATIONS FOR A STANDARD BUSINESS : sources SEC RoyaltyStats

Technology	Technology scope	Therapeutic indications	Licensor	Licensee	Royalty upfront	Royalty %
Drug delivery		Diabetes management	Sanofi	Cygnus Inc.		6,50% to 8,50%
Drug delivery		self administrations of drug	Aradigm Corp.	Novo Nordisk		4,00% to 6,00%
Drug delivery	transdermal	non invasive delivery of large molecules drug	International Remote Imaging Systems	Dermisonocs Inc	\$ 2 500 000	2,50%
Drug delivery	transdermal	delivery wo needles	Becton Dickinson	Vyteris Holdings Inc	na	5,00%
Monitoring		non invasive therapetic vibrator computer assisted diagnostic & monitoring device to detect abnormal respiratory, cardiac & other medical conditions sensors placed on the body surface	Non Invasive Monitoring Systems Inc	Vivometrics Inc		3,00%
Neuromodulation		Vagus nerve stimulation system	Jacob Zabara PhD	Cyberonics Inc		3,00%

# SOFTWARE VALUATIONS FOR A STANDARD BUSINESS :

Source of information :

- **Agreements from SEC**
- **ktMINE**
- **RoyaltyStats**
- **RoyaltyRates...**
- **Benchmarks on financial data bases : Stern University ratios  
EBIDA/Turnover, P/E, volatility, Beta...**

# SOFTWARE VALUATIONS FOR A STANDARD BUSINESS :

- Licensing revenues

## ROYALTY RATE ANALYSIS

	Variable	Average year
A	Turnover	2 600
B	Royalty rate	15%
$C=A*B$	Royalties	390
D	cost of capital or discount rate	10%
$V=C/D$	Software value	3 900

# **SOFTWARE VALUATIONS FOR TECHNOLOGIES IN THE BUSINESS :**

## **THE BIOTECH SOFTWARE SITUATION :**

- **Rarely alone, with data bases and may use many data bases from different sources**
- **Software usually part of the technology only**
- **Algorithms encapsulated within the software**
- **Software used for different objectives :**
  - **Providing info/intel to doctors and practitioners**
  - **Gathering info to develop analysis through algorithms and develop new treatments**
  - **Assisting surgery or monitoring**

# SOFTWARE VALUATIONS FOR TECHNOLOGIES IN THE BUSINESS :

## THE BIOTECH SOFTWARE SITUATION : example 1

- **Q biotech :**
  - **Process algorithms with images data issued from research labs and hospitals from patients related to the analysis of cancerous tumors**
  - **Modify the images with its own technology, treat these images for analysing it and develop its own data base**
  - **Provide images analysis services to surgeons and oncologists for better understanding of the specific cancer cells and diagnosis**

# SOFTWARE VALUATIONS FOR TECHNOLOGIES IN THE BUSINESS :

## THE BIOTECH SOFTWARE SITUATION : example 1

- **Q biotech :**
  - **Complex legal situation since using images data bases coming from many different sources and some of them not appropriated data = sharing the revenues**
  - **Algorythm developed with an academic = sharing the revenues**
  - **Who will pay the service for a better diagnosis of cancer cells = national health care administration; patients ? Surgeons or hospitals ? What is the economic model ?**

# SOFTWARE VALUATIONS FOR TECHNOLOGIES IN THE BUSINESS :

## THE BIOTECH SOFTWARE SITUATION : example 2

- **Wheez biotech :**
  - Offers a digital solution for education and follow up children to support asthma professional healthcare
  - Info is gathered through a toy the child carry on the toy gathering and sending info related to the child conditions and environmental conditions
  - A mathematical model analyses all data inputs and send analysis to practitioner who send in return info on the diagnostic and improvement of the treatment which is sent to the toy which recommend to parent to modify the treatment

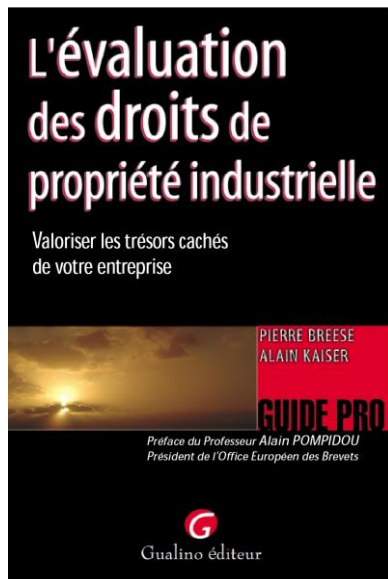
# SOFTWARE VALUATIONS FOR TECHNOLOGIES IN THE BUSINESS :

## THE BIOTECH SOFTWARE SITUATION : example 2

- Such a software has no comparable and can only be evaluated by the understanding of its economic model and probably a profit sharing valuation model



# Thank you for your attention



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« L'évaluation des droits de propriété industrielle »

Chez LEXTENSO- 2014

« L'évaluation financière des actifs technologiques »

Chez LGDJ- 2019