LES AMIS DE l'École de Paris

http://www.ecole.org

Guest Speaker
Discussion Series

Organised thanks to the patronage of the following companies :
Accenture
Air Liquide*
Algoé**
ANRT
AtoFina
Caisse des Dépôts et Consignations
Caisse Nationale des Caisses d'Épargne et de Prévoyance
CEA
Centre de Recherche en gestion de l'École polytechnique
Chambre de Commerce et d'Industrie de Paris
Chambre e Commerce et d'industrie de Reims et d'Épernay***
CNRS
Cogema
Conseil Supérieur de l'Ordre des Experts Comptables
Danone
Deloitte & Touche
École des mines de Paris
EDF & GDF
Entreprise et Personnel
Fondation Charles Léopold Mayer pour le Progrès de l'Homme
France Télécom
FVA Management
IBM
IDRH
IdVectoR*
Lafarge
PSA Peugeot Citroën
Reims Management School
Renault
Royal Canin
Saint-Gobain
SNCF
Socomine*
THALES
TotalFinaElf
Usinor

* For the "Tchenical ressources and innovation" seminar
** For the "Business life" seminar
***For the "Entrepreneurs, Towns and Regions" seminar
(liste at March 1, 2002)

DO SOFTWARE PATENTS ENCOURAGE INNOVATION ?

by

Jacques VINCENT-CARREFOUR
Leader of the working group concerned with the suitability of patenting of software at the *Académie des technologies*
Former Director, CNET Lannion centre
(*Centre National d'Étude des Télécommunications*)

Laurent COHEN-TANUGI
Lawyer, Paris and New York
Member of the *Académie des technologies* working group
Author of *Nouvel ordre numérique*

Youenn DUPUIS and **Olivier TARDIEU**
Engineering students, *Ecole des Mines*, Paris
Authors of *La brevetabilité des logiciels*

October 24th, 2001
Résumé by Élisabeth Bourguinat
Translation by Rachel Marlin

Overview

In Europe, software programmes are, as a rule, formally excluded from the right to have patents and are protected solely by copyright. However, in practice the European Patent Office (EPO) tends to align itself with the United States, where software patents and even patents on commercial techniques have been the norm for the past ten years or so. Are software patents the most suitable means of protecting an innovation with the original aim of granting patents being to increase the spread of knowledge and innovations ? The study launched by the European Commission, with a view to a Community directive, stirred up an already lively discussion on this question.

TALK : Jacques VINCENT-CARREFOUR

Within the framework of the study launched by the Brussels Commission in 1999, the Prime Minister asked the *Académie des technologies* to put forward a recommendation on the extent to which software could be patented. I was in charge of the working group which prepared this recommendation, which was approved by the *Académie.*

The history of software patents

In the 1960's, at the start of the computer boom, software was thought to have no value. Only computers were sold, and the accompanying software was free.

When people started talking about software in the 1970's, IBM, the biggest software manufacturer at the time, was opposed to the granting of patents. The absurd solution, which was finally adopted, consisted of resorting to copyright to protect the software, as if it were a work of art. The life span of the copyright, originally fifty years, was increased to seventy-five years by the Brussels Commission.

In 1973, the Munich Convention was signed, stipulating that software *per se* was not 'patentable'. This was nothing if not ambiguous.

From the 1990's onwards, the workings of American law in practical terms changed to such an extent that today, in the United States, one can patent software extremely easily, and this has led to the emergence of so-called predators. Law companies, armed with patents which are more or less suspect, threaten to take small and medium enterprises or even large groups to court for breaching such patents. In view of the cost of court cases in the United States, companies prefer to come to an amicable agreement to pay these predators considerable sums of money.

In Europe, the same sort of movement has been apparent for a while. The European Patent Office (EPO) has already granted thirty thousand patents, based on the ambiguity of the clause according to which software *per se* is not patentable. Given such a definition, it becomes patentable once it is part of an invention comprising other components.

This situation is not satisfactory and industrialists have asked the Brussels Commission to give a ruling on this matter.

The theoretical problems posed

A patent is a contract between a person and society. In return for a person enriching our knowledge, he is granted a temporary monopoly on his innovation. This monopoly lasts theoretically twenty years but is only total for five years : if the patent has not been used at the end of five years, the patent holder has to grant a licence to whomever asks for one.

The granting of a patent is based on four principles. The invention has to be new ; it should be based on a real, innovative activity ; it should have an industrial use (in the United States, the invention just has to be "useful") ; and finally, it should be part of a publication, since the patent is granted in return for the enhancement of knowledge.

However, these rules are often badly applied as far as software is concerned.

The novelty of an invention is not easy to establish since the state of the art is poorly established. Most of what is known about software can be found in scientific and technical books, and not in the bulk of patents taken out previously, since the registering of patents in this area is relatively recent.

The inventive character of an innovation does not imply, as a rule, that the innovation represents a standard in the relevant area. Yet, in the United States, for example, a patent was registered in computing for a dark pointer on a light background, and vice-versa, which is completely elementary and self-evident for any computer scientist.

The nature of the industrial use of an invention is also difficult to define. In certain cases, the fact that the software was saved onto a diskette was sufficient for it to be classified as an "industrial use".

Arguments in favour of suitability for patenting

The fundamental principle justifying the granting of patents is that patents help the weak defend themselves against the strong. If you register a patent, the law will protect you whatever the size of your company.

As far as patents on software are concerned, industrialists point out that investments are increasingly made on software and if they do not protect themselves in this area, they put their ability to compete at risk.

In addition, in so far as software patents already exist in the United States and Japan, it is not easy to stay on the sidelines. In particular, agreement on patent rights is one of three conditions necessary in order to be a member of the WTO (World Trade Organisation). However, in these two countries this agreement includes patents on software.

Arguments against suitability for patents

Many small and medium enterprises deplore the loose situation found in the United States and predict that the granting of patents, which makes the publication of innovations compulsory, will lead to an increase in the number of lawsuits for counterfeiting.

Furthermore, some people emphasise the specificity of software programmes and think that the patent system is not adapted to protect them, anymore than is copyright.

Finally, there is very strong opposition from supporters of " freeware " who would like to be able to use any sort of software, even disregarding patent rights sometimes.

Should a patent specific to software be created ?

One of the special features of software and the basis of the debate, is that unlike other innovations, they can be reproduced and distributed at virtually no cost.

This is why some people are calling for the creation of a specific patent, a demand which is not new. All new-comers to the patent system claim that their area is specific, that it existed in chemistry fifty years ago, or in pharmacy thirty years ago. After all is said and done, in both cases it was decided to apply a common rule.

In addition, apart from the extreme ease with which it can be copied, (common to all software), what else makes it special ? What is the relationship between software used by Airbus, which represents a colossal investment and whose life span is as long as that of the equipment, and a word-processing package whose life span is often shorter than the length of time taken to obtain a patent ?

The *Académie's* recommendation

In view of all these difficulties, the *Académie* put forward the following three recommendations. The *Académie* is in favour of the principle of 'patentabillity' for " *inventions implemented by computer*"and not for software (a term which we do not know how to define). Secondly, the terms of this patentability should nevertheless be clarified : in particular, one should define as far as software is concerned, what is meant by *novelty*, *inventive activity* and *industrial use*. Thirdly, it is imperative to produce a quality patent, in other words, containing measures which keep close to the original idea. If this condition cannot be satisfied, for example because of financial or legal reasons, then the very principle of suitability for patenting should be called into question.

This last point of the *Académie's* recommendation is based on the observation that in the United States, most of the abuses come from the fact that anything and everything was patented in software, even if the invention was not new and even if it did not represent a single inventive activity. It is this extreme facility of registering patents which has led to the increase in the number of predators, whereas there are not as many in other industrial sectors where patents are of a better quality.

Provisional measures

In order to establish a quality patent, the *Académie* suggested provisional measures : improving the expertise of patent-granting organisations ; informing small and medium enterprises to encourage them to register patents not only in France, but also abroad, in order to protect their software innovations ; helping research into previous findings by creating a European database which is easy to access whether it is used by patent offices themselves or by industrialists ; and lastly, creating a guarantee fund to compensate for abusive litigation which would be free of charge or payable according to the size and the financial capacity of the enterprise concerned.

The *Académie* also recommends at the same time keeping the system of copyright but adapting its life span to that of the software concerned.

Lastly, the *Académie* considers that the existence of software patents does not in any case threaten the existence of freeware. It is not at all compulsory to register a patent on a software programme. However, on the other hand, the supporters of freeware should comply with the patents taken out by creators of commercial, paying software.

TALK : Laurent COHEN-TANUGI

It is not at all surprising that the development of the application of law regarding software patentability began in the United States, since there is a constitutional law there which protects intellectual property. This is also the case in other areas, such as biotechnology. Thanks to U-turns and shifts in successive judicial proceedings, the protection of intellectual property has increasingly come to cover not only innovations in the area of software, but also in intellectual methods and even in commercial techniques, notably in the framework of business methods developed by start-ups.

In France, applications for patents for software are quite strictly refused. Software is primarily protected by copyright which is nevertheless unsuitable since it protects the nature of the programme but not its function. Although the copyright in terms of the software is reinforced with regard to standard copyright, it remains possible to compile software programmes, and to repeat their functionality without infringing copyright. Software can be further protected by laws regarding databases or even regarding competition. Companies can also choose to apply protection using commercial secrets and confidentiality.

In Europe, the legal situation is not very clear. It is based on the Munich Convention which is applied more or less strictly by the patent offices of each country and more and more liberally by the EPO.

As far as the economic side is concerned, companies which are in competition with American or Japanese companies, (in which the registration of patents makes up a considerable part of their assets in terms of value, in particular regarding start-ups), can be put to one side. Holding a patent is an indisputable plus in the framework of international negotiations or co-operation agreements. More generally speaking, it is clear that today software has become one of the main sources of wealth of our economy and this consideration should be taken into account.

The *Académie des technologies* has tried hard to draw up a reasonable proposal which accepts the principle of software patentability while at the same time setting it within strict criteria. There is hope that the introduction of new legislation in Europe will have a progressive influence on international case law, and thereby manage to restrict the current trends.

Having said that, we should not forget that the measures put forward by the *Académie* will probably be difficult to put into practice. They will certainly necessitate significant financial input and the creation of a legal and regulatory body on a European level.

TALK : Youenn DUPUIS and Olivier TARDIEU

Patents are not at the service of companies

The financial results for the year 2000 for Thomson Multimédia come to five hundred and seventy-five million Euros. Of this, the 'patents and licences' sector accounts for three hundred and nineteen Euros, and includes software patents. Of course, we can contest the interpretation of these results, but their relative importance and even the choice of presentation on the balance sheet clearly show that the question of patents and licences is dominant today in industry.

Having said that, this considerable economic weight should not overshadow the fundamental objective of patents, which is not at the service of companies but at the service of society. Encouraging companies which innovate and encouraging innovation and progress within society are not synonymous.

What is at stake : the criteria concerning the innovation

Another important conclusion of our study is the crucial importance of compliance to the criteria of the innovation, in other words, its novelty, its inventiveness, and application in an industrial setting. It is only once the criteria are strictly observed that society can profit from the patent system.

For example, in the case of an innovation which is not new, the benefit for the inventor is clear since he has exclusive rights to exploit the innovation. On the other hand, society does not gain anything and even would lose out, since the patent, by creating a monopoly, would introduce distortions such as excessive price-setting and insufficient diffusion, aspects which have been discussed considerably in economic literature.

As far as software is concerned, the criteria of patentability are very difficult to apply. For example, a software programme is often a new way of assembling elementary and pre-existing components. Is that enough to classify it as an innovation ? In computer terms, the innovation is often incremental and continuous and it is difficult to define the moment at which it really becomes an innovation. It is also very difficult to know where the state of the art is at a given moment, or even where it was at the moment when the patent request was drawn up.

In the knowledge that compliance with the criteria of the innovation plays a crucial role in the operation of the patent, these technical difficulties in the application of the patent throw doubt on the validity of the patentability project regarding software. The benefit or loss which the patent brings to the common good depends on the criteria of the innovation.

The institutions are badly equipped

This doubt is even more present since institutions do not currently seem to be able to cope with these difficulties. The patent offices register an increase of 10 % in patent requests per year in all areas. Since the process of granting patents is very long and since an office such as the INPI (*Institut National de la Propriété Industrielle* ; National Institute for Patent Rights) makes a profit of three thousand Euros whenever it awards a patent and a loss of one thousand five hundred Euros whenever a patent is refused, it is indeed worrying that there is no great

incentive to apply strictly the criteria of patentability.

As for the law courts, whose rulings one hopes would invalidate 'bad' patents, they are already saturated with all sorts of other litigation. Moreover, the high cost of the proceedings (generally about fifty thousand Euros in France and more than one million dollars in the United States) discourages this type of appeal, as well as the phenomenon of the 'stowaway'. Let us suppose that Microsoft possesses a clearly invalid patent : which one of its rivals would take on Microsoft in an American court of law in the knowledge that this will cost them a great deal of money, that they might well suffer the reprisals of the group and that, in the event of winning the case, the invalidation of the patent will also possibly benefit all their rivals ? Everyone wants a bad patent to be invalidated but nobody wants to take legal action. The result is that in reality bad patents are virtually never contested.

Conclusion

Agreeing to the patentability of software brings with it a positive effect (the inventors are encouraged) and a negative effect (patents which are granted because of a lack of sufficient monitoring). Excluding excessive claims from the possibility of having a patent has a positive effect (no unwarranted privilege is granted) but also has a negative effect (the inventors are not sufficiently rewarded). Therefore, one has to choose, as is often the case, between two solutions which are both far from perfect. Our belief is that the solution which is the least harmful is the one where the software is excluded from the possibility of being granted a patent.

However, this solution comes up against practical difficulties : the EPO grants an increasing number of software patents and it seems difficult to envisage that the twenty countries which make up this body would all agree to call it into order. Another solution would be the creation of a specific law for software but it is also unlikely that this would have a consensus. The only possibility, therefore, in our opinion is to improve the ability of the offices to grant 'good' patents by applying the criteria of patentability very strictly. This presupposes the existence of financial and human resources and also positive incentives to make meticulous selections.

DISCUSSION

What do we want to protect ?

Question : *We know that copyright on software only protects the source code. What exactly do we want to protect with the patent ? Its function ? The way in which software solves a given problem ?*

Jacques Vincent-Carrefour : I think it is completely unrealistic to protect software totally, in the knowledge that the software can have an enormous number of instructions of which perhaps only a thousand are really innovative. Each patent should therefore explain explicitly what it protects and in no case should it concern its function, either in the area of software or in other areas. For example, Moulinex patented a certain number of vegetable mills, but each time the patent was granted according to the implementation of the function and not the function itself.

Certain scenarios, however, remain difficult to analyse. For example, let us suppose that a patent was registered on a given machine. If the machine in question becomes computerised, does the patent also protect the accompanying software ? At present, I do not have an answer

to this question.

A specific law for software ?

Q. : *There is already a specific law concerning databases ; why is there not one for software ?*

Laurent Cohen-Tanugi : It is already too late. Even if we could manage to reach a consensus on a solution in Europe, it would not carry enough weight in America.

Q. : *A specific law would nevertheless have the advantage of being able to adapt the length of the validity of the patents to the life span of the software.*

J. V.-C. : Companies like Alcatel or Dassault are probably in favour of extending the validity of the patent, since their products have life spans which are greater than twenty years. This question depends closely on the type of software involved, but it could easily be resolved by the specific details of the application. In all areas, patent offices should conform to the specific directives. This does not require creating a specific law.

The reports are only partly put into practice

Q. : *I have some experience with official reports. In general, they tend to be only partially applied, even when the authorities agree with all the recommendations. This is the consequence of having subjects which are politically complicated and because there is no time to monitor everything. We prefer the matter to be dealt with quickly. In this case, Jacques Vincent-Carrefour explained to us that if certain conditions were not fulfilled, it would be better to abandon the attempt to patent software. One can legitimately worry that these conditions, which are very complicated to put into practice, do not precisely make up the part of the report which will not be applied…*

L. C.-T. : The *Académie des technologies* working group is still considering the necessary adaptation of the criteria for the patentability in the particular case of software and is looking for answers to the difficulties which this presents. However, it was judged impossible, in view of the time given, to wait for the conclusions of this work before putting forward the *Académie's* view to the Prime Minister.

How does one measure the performance of the system ?

Q. : *How can one measure the respective performances, in terms of innovation from which society really benefits, in terms of the system of freeware and of the system of software under patent?*

J. V.-C. : In my opinion, freeware comes under the same heading as the products which are loss leaders which department stores put on sale in order to attract customers. Companies which live from them, use them to sell other products or services. As for the others, there is nothing to stop universities, for example, making their software freely available to the public. It will never be compulsory to take out patents on software. Having said that, in the past, the State recognised the importance of certain inventions for the common good and bought the patents so as to put them in the public domain. This was the case, for example, of photography : the patent for sound amplification, registered in the 1920's, was never honoured since its uses were so widespread.

Olivier Tardieu : Asking whether it is freeware systems or software patents which encourage innovation is a bit like asking whether public or private research is preferable. The question is not put correctly, especially since there is nothing to stop the two methods existing side by side. On the other hand, there would be a danger in adopting the principle of software patents and thinking that there will always be time to adjust possible dysfunctions later. It is imperative that we begin by creating a climate which makes patentability accessible to

software.

Should the granting of compulsory licences be encouraged ?

Q. : *Why is it not possible to put a compulsory purchase order on these patent holders in the defence of public interest for certain software, in the same way as occurred for the invention of photography, for sound amplification or even, more recently, for patents concerning medicine to combat AIDS in South Africa ?*

Youenn Dupuis : Public authorities can improve the fluidity of the licence market. Article L613-11 of the code of patent rights stipulates that anybody can obtain a compulsory licence if the patent holder has not commercialised the relevant product in sufficient quantity to satisfy market demands. If this article were interpreted by the courts in a broader way than is currently the case, it would be possible to encourage the granting of compulsory licences, at a moderate price, which would prevent some of the distortions linked to the monopoly[1].

The small companies' viewpoint

Q. : *In the talk, it was mentioned that it was the industrialists who appealed to the Brussels Commission to give a ruling on this question of software patentability. Perhaps big companies are in favour of software patents, but not small and medium enterprises which know that they are likely to be heavily penalised. And yet, it is these enterprises which are the most innovative in terms of software and not the big companies.*

Q. : *The patent is supposed to guarantee the defence of the weak against the strong, but what happens to this principle when a company like Microsoft holds one thousand five hundred different patents and has reciprocal agreements for licences with the other large performers in the computer world such as IBM or Thomson Multimédia ? Such groups of patents held by a handful of companies dissuade small enterprises from creating innovations because they are concerned that they will be attacked as pirates for each piece of software already patented. For example, it is practically inconceivable for a small or medium enterprise to launch itself in the conception of an operating system.*

J. V.-C. : This sort of anxiety is totally understandable. However, it is a fact that Microsoft has often been attacked but has never attacked others.

Q. : *In reality, most law suits never go to court. They come to an amicable agreement and it is therefore difficult to judge whether or not Microsoft uses its dominant position to prevail in a situation which avoids the courts.*

Q. : *One has to distinguish between different types of small companies. Many European start-ups make highly specialised inventions and register the patents in the United States, in order to protect themselves against predators. On the other hand, small service companies are generally opposed to patents on software since they give their clients 'tailor-made' service and run the risk of being heavily penalised if patents become standard practice.*

Q. *It is obvious that the existence of software patents in the United States has encouraged a very high concentration of the software industry. Of the top twenty international groups, only one is European. The process is always the same : small, innovative entrepreneurs are compensated for their work by selling their company to a group like CISCO, which is capable of making more efficient use of the network effect. This is more than enough to compensate the entrepreneur/inventor – the proof is that they still exist - but unfortunately the greatest*

[1] The code of patent rights (article L 613-15) also allows an inventor who has greatly improved an invention and patented it, to be granted a compulsory licence on the initial patent (in the financial conditions fixed by the court in reference to the common conditions of licences in this area). Therefore, one cannot prevent him from commercialising the improved invention, even if he has to pay the patent holder for the initial invention.

part of the value created benefits the groups which regroup the innovations and not the inventors themselves. If we are happy to transpose the American patent system to a European setting (and improving it slightly at the same time),we could win numerous battles (the start-up success stories), while at the same time losing the war (the control of part of the global industrial software system which is approximately the same size as Europe). Should we not therefore consider the question in the wider setting of complementary measures of the software industry ? Several ideas feature in a report from the DiGITIP (http://www.industrie.gouv.fr) and discussions of the different viewpoints are planned with the Americans. Finally, we tend to come down far too much on the side of the participants directly concerned, whereas we should also take into account the value of the use of software for individuals and 'ordinary' companies. However, we do not measure what is free (freeware) and judgement of the impact on productivity in the service industry remains in the early stages.

Innovation is no longer an isolated act

Q. : *I have the feeling that during all this discussion we tend to be preoccupied with the patent and forget the original objective which is to spread knowledge and innovations. It seems to me that this "preoccupation" comes from an archaic concept about innovation, which is considered to be an isolated act. Today, we know that innovation is a cumulative process based on generations of previous innovations. It is particularly obvious in the case of software. We can extend the question and ask whether or not the patent represents today a stranglehold on innovation rather than an encouragement.*

In the semi-conductor industry, for example, there is a paradoxical phenomenon. The number of patents registered is constantly increasing but once one asks the companies, one realises that they do not resort to patents to protect their inventions : they increasingly rely on a strategy of secrecy or even on their technological progress. In reality, patents are frequently no longer a means of commercial negotiation, but one is therefore getting even further away from the initial objective. It is therefore perhaps time to come back to the fundamental question, namely do patents encourage innovation or not ?

Keeping competition open

Q. : *We could perhaps think about a better system of co-ordination between intellectual law and other forms of law, such as competition law. In certain cases, their confrontation brings out convergence ; in other cases, conflicts. One should analyse such conflict and act as referee.*

The example of software is typical of conflict between intellectual law and competition law, bearing in mind that one of the characteristics of the software industry is that it is based on the components outside the network. The value of the asset, in this case the software, is all the greater since there is a large number of people using it or others, which are compatible with this one. This notion of the outside of the network tends to encourage the emergence of standards, and consequently of monopolies. The law of patent rights, by grafting itself onto this process of standardisation, only serves to reinforce this drift towards a monopoly since it creates additional barriers to the entry of third parties into the market.

Q. : *I would add that when one talks about patenting software to protect the innovation, one often thinks of software of the sort associated with Airbus which required colossal investment. However, this is not the real economic issue with regard to the software patent. What is really at stake concerns the most ordinary software which equips 95% of computers throughout the World. The cost of Microsoft licences for the French industry should be roughly several tens of billions of Francs per year. Can we support the idea that such sums are necessary to pay the salaries of the development team which is working on a word-processing package which is already fifteen years old and which is not at all concerned with the R&D department ? This appears more like a perfectly arbitrary tax.*

But the paradox is that if the industrialists who pay this tax wanted to put an end to this

situation which is open to abuse, they would have to get along with each other, otherwise they would not be within the confines of competition law… We can see how, in this case, there is a contradiction between competition law and intellectual law, or rather how the two laws join together to create the opposite of what is desirable, namely the spread of knowledge and the development of the innovation.

Q. : *In the end, competition law has to resolve the issue of whether the refusal of a licence is against competition or if it is guaranteed by the exclusive right of operation which the patent bestows. In fact, it is on this very question that the Supreme Court will make its decision.*

Can we change the World ?

J. V.-C. : The various remarks made here cast doubt not only on the patentability of software but the very principle of patents. Carrying out such a study to the end would take a great deal of time. And yet, I fear that we cannot allow ourselves to let the current situation continue as it is, a situation which can only get worse. We should therefore find a solution urgently to patent software while at the same time studying the patent in general.

L. C.-T. : The problem is that we are not starting from scratch but from a situation which already exists and which we have to try to improve. The objective is to put the law and the knowledge which we have in accordance with the changing practice of law. This joint effort would clarify the situation by trying to make the EPO backtrack over certain mistakes so that, in the long run, it can have some weight on international case law.

Q. : *If it transpires that those who have developed this case law are in the process of changing their opinions and trying to backtrack, we could perhaps benefit from their example and no longer make the mistakes which they have made ! However, there is currently a big protest movement in the United States. This movement is not only supported by companies but also by researchers and intellectuals who are taking positions based on the simple observation of the results of software patentability.*

J. V.-C. : The protest which exists in the United States is more about the predators of the system than the system itself. It does not seem to me that the principle of patent rights itself is being questioned.

The tyranny of the *fait accompli* ?

Q. : *From what I have heard about the different arguments in favour of the patentability of software, I get the feeling that the main justification for it is simply that "the others did it, so we should do it". Is this enough ?*

Q. : *Europe could very easily decide not to accept software patentability in order, for example, to encourage service industries which would benefit more from this system than the patent system. This could be a strategic choice.*

J. V.-C. : The question in the end is the place which Europe wants to take within the climate of globalisation : this is indeed a political question and not just a technical one. Yet, in order for Europe to find its place, it is perhaps not essential that it copies the United States nor that it is constantly trying to set itself apart from that country. An intermediary solution has certainly got to be found.

Translation by Rachel Marlin (marlin@wanadoo.fr)