

# COPYRIGHT, COMPUTER PROGRAMS AND THE COURT OF JUSTICE

**Franck MACREZ**  
Lecturer, CEIPI  
(Centre for International Intellectual Property Studies)  
University of Strasbourg

## INTRODUCTION

More than twenty years after they were introduced in Europe into “Wonderland”<sup>1</sup> or the “Land of the Muses”<sup>2</sup>, computer programs are now to be found in the Land of the Court of Justice! Indeed, in the last few years, the Court of Justice of the European Union (CJEU) has been very involved in the construction of copyright law in Europe, particularly since its famous *Infopaq* decision<sup>3</sup>. This is a significant trend<sup>4</sup>, in terms of numbers firstly: in less than one year, the Court delivered as many judgments in the field of copyright as it did throughout the previous eight years<sup>5</sup>. Moreover, the pace increased in the first six months of 2012, with an average of two decisions a month<sup>6</sup>. The proliferation of references for preliminary rulings means that this increase is destined to continue. The trend is also significant in terms of the scope of the intellectual constructions involved: there is growing interventionism on the part of the Court which is discovering “autonomous concepts” of European Union law and clarifying questions which were not submitted to it or which it was not obliged to answer. This intrusion is all the more noteworthy as the seven directives dealing with the subject have by no means introduced complete harmonisation, the *acquis communautaire* being limited to specific questions. The space left by the gaps in the body of law<sup>7</sup> thus gives the Court significant room to manoeuvre. Moreover, this harmonisation – through what should be described as judge-made law<sup>8</sup> – may raise the question of the Court’s legitimacy and jurisdiction to engage in it<sup>9</sup>.

In a period of less than eighteen months, the Court of Justice has issued two judgments concerning the protection of computer programs<sup>10</sup>, in response to preliminary questions concerning the interpretation of the “Computer Programs” Directive of 14 May 1991<sup>11</sup> and the “Information Society” Directive of 22 May 2001<sup>12</sup>. The Court’s contribution to the interpretation of the specific copyright stemming from the 1991 directive is noteworthy in that no decision of this kind had been rendered in almost twenty years of the Directive’s application. As we shall see, the questions concerning the protection of computer programs and the extent of that protection have led the Court of Justice to take stands impacting on copyright as a whole. Indeed, the preliminary questions raised in the *BSA*<sup>13</sup> and *SAS*<sup>14</sup> cases cover all the different aspects of a computer program, which may bring into play not only the specific protection introduced by Directive 91/250 but also copyright in the more traditional sense.

The first judgment, handed down by the Third Chamber on 22 December 2010, concerned the protection of a graphic user interface: a Czech association, “*Bezpečnostní softwarová asociace*” (hereinafter “BSA”), wished to carry out collective management of the economic rights in computer programs. Following the refusal by the Czech national authorities, which considered that the graphic user interface did not enjoy copyright protection, the appeal submitted to the Czech Supreme Court led the latter to refer two preliminary questions to the CJEU. The first concerned the possible inclusion of the graphic user interface in the category of computer programs within the meaning of Directive 91/250, while the second raised the following problem: could television broadcasting of such a graphic user interface be considered to constitute communication to the public within the meaning of Directive 2001/29?

The second judgment, delivered by the Grand Chamber, supplements the first one in that it relates to the other aspects of a computer program: not only the source code and object code (more widely called the compiled code or binary code) of course, but also the functionality

itself, the logical interface through the question of the protection of the format of data files, programming languages and the program's user manual. The nine detailed questions cover the whole range of issues that can be raised concerning the scope of the protection conferred by the "Computer Programs" Directive, or even the "Information Society" Directive. The dispute that gave rise to the preliminary questions referred by the High Court of Justice (Chancery Division) stemmed from the development of a "clone" program. The company World Programming Ltd ("WPL") developed and marketed a program with the same functionalities as the one belonging to SAS Institute with which it sought to compete, namely data analysis and in particular statistical analysis. In addition to the policy issue of the protection of the program's functionality, there were questions relating to the lawfulness of the possibilities offered by WPL's software: the reproduction of the programming language developed by SAS so that users could continue to use the personal scripts that they had written, the identical format of data files and the user manual describing the various commands and their operation. The British court thus decided to consult the Court of Justice on the object and scope of the protection of a computer program by considering it in its complexity, that is to say in the variety of forms that it may take.

The question of the protection of programming language is of crucial practical importance: in the IT world, a program is inconceivable without a programming language. Yet in spite of the investment that the creation of a language requires, the question of its protection by the specific legislation on computer programs had, as far as we know, never been raised in France or at the European level. The problem in this case stemmed from the fact that WPL's program allowed users to keep their "scripts", i.e. small personal programs written in the language initially created by SAS. Instructions written in the SAS language could thus be interpreted and executed by WPL's program, meaning that it "included" understanding of the alphabet, the vocabulary, the grammatical rules, the semantics and so on.

The question of the protection of formats of data files is also fundamental: they are at the heart of the question of interoperability because they constitute a central element of the logical interface between computer programs. And let us not forget that the issue of decompilation for purposes of interoperability was the focus of controversy when Directive 91/250 was drafted<sup>15</sup>. Indeed, WPL offered software capable of reading, understanding and interpreting files in the format created by SAS so that customers could easily migrate from one system to the other while retaining their personal files.

With regard to these various questions, the critical analysis that can be conducted in relation to the Court of Justice's decisions seems aporetic to say the least. At first sight, the solutions provided by it appear consistent with the letter and spirit of the European legislation. Indeed, in the *BSA* case, the graphic user interface was viewed as a graphic work and not as a program, thus coming under the "traditional" rules of copyright rather than the specific system for software<sup>16</sup>. In the *SAS* judgment, the Court decided that the functionality of a program, programming languages and formats of data files are not protected as such<sup>17</sup>, that the licensee is entitled to observe, study and test the functioning of the program<sup>18</sup> and that the user manual must be regarded as a literary work, subject as such to the provisions of Directive 2001/29, provided that it satisfies the requirement of being its author's "own intellectual creation"<sup>19</sup>.

However, the devil is in the details. A close reading reveals that matters are not quite so clear and that the analyses conducted by the Court may be open to criticism. The tricky question of the relationship between the two directives is also problematic. For example, the Court was asked to clarify the extent of the protection granted to computer programs, to define what is covered by the "expression in any form" of a program and to determine to what extent traditional copyright may be applied. To that end, the Court's primary contribution lies in the method used to differentiate between the specific law on computer programs and what it has referred to in this connection as the "ordinary law" of copyright (I). Determining that method was a necessary precondition for delimiting what can be covered by copyright, through the

special law or the “ordinary law”, and thus for distinguishing between copyrightable and non-copyrightable forms (II).

## I – THE CLASSIFICATION METHOD

The method adopted by the Court of Justice took the form of a distributive application of the legal regimes: Directive 91/250 constitutes a specific law for computer programs which should be coordinated with the “ordinary law” discovered at the time by the Court of Justice. The Court thus establishes a distributive method (A) the implementation of which seems to be arduous at times (B).

### A – The Distributive Method Established by the Court

The distributive method is established in two stages, firstly, by linking the foundations, namely the specific computer programs directive and the “ordinary law” (1), before turning to the classification as such by dividing the program up into its various aspects (2).

#### 1 – The Foundations: Special Law and “Ordinary Law”

The reference to Directive 91/250 led the Court to affirm explicitly what it had been possible to sense in other cases, concerning the “Cable” Directive<sup>20</sup>. In the *BSA* judgment, Directive 2001/29 was expressly described as the “ordinary law of copyright”<sup>21</sup>. The Court of Justice’s present involvement in the construction of European copyright doubtless obliges it to give itself a general basis to shore up the whole edifice. The same intention already existed in the unification of the concept of originality carried out in the *Infopaq* decision. Moreover, it is arguable whether the approach is in fact coherent. On the one hand, while concepts of European law must be given a uniform interpretation, on the other, the legal foundations need to be differentiated in the light of their field of coverage<sup>22</sup>... Whatever the event, it seems settled: Europe has a *general law of copyright* with Directive 2001/29. It was possible to view the expression used in the *BSA* judgment as a clumsy one with little import. However, the decision in the *SAS* case confirms the method of interpretation and the respective general law and special law statuses of Directives 2001/29 and 91/250. This is particularly noteworthy because the question was not submitted to the Court and so the method is fixed on the basis of the useful interpretation principle. Even more recently, in its *UsedSoft* decision, which rightly attracted attention because of its significant implications<sup>23</sup>, the Court stated very explicitly that “Directive 2009/24 [the codified version of Directive 91/250], which concerns specifically the legal protection of computer programs, constitutes a *lex specialis in relation to Directive 2001/29*”<sup>24</sup>.

Accordingly, when the Court of Justice precludes protection based on the special law for computer programs, it expressly instructs national courts to examine the possibility of protection as a traditional work under Directive 2001/29.

In the *BSA* judgment, while the graphic interface is not viewed as a “form of expression of a computer program” based on Directive 91/250, the courts must ascertain whether the interface meets the criteria for the default copyright protection<sup>25</sup>. Adopting a similar phrase, the *SAS* judgment states that the programming language’s exclusion from the category of “forms of expression” of a program under Article 1(2) of Directive 91/250 “cannot affect the possibility that the SAS language [...] might be protected, as works, by copyright under Directive 2001/29 if they are their author’s own intellectual creation”<sup>26</sup>. Although the expression is not used again in the *SAS* judgment, the intention of the Court of Justice’s Grand Chamber to establish the status of “ordinary law” of general application is confirmed. Indeed, the Advocate General had considered, for his part, that the programming language was not eligible for any protection<sup>27</sup> and the Court could have confined itself to following his opinion. Likewise, in connection with formats of data files, the Court was not required to refer them back to Directive 2001/29<sup>28</sup>.

Taking advantage of the innocuousness of the observation in view of the lack of originality in this case, the Court wished to seize the opportunity to reaffirm the “ordinary law” nature of Directive 2001/29 discovered in the *BSA* judgment. It will offer litigants new ground on which to argue their cases. This commentator would have preferred to have been spared such a detour which seems doomed to failure from the outset, because, ultimately, it is likely that no protection can be granted to formats of data files or programming languages on any basis, but that the possibility of discussion under the “ordinary law” may pointlessly add to the complexity of the proceedings.

The relationship between the “ordinary law” and the special law naturally leads to an analysis of the protected subject matter within a computer program based on a distributive classification method.

## **2 – Distributive Classification**

Through the judgments in question, the Court of Justice establishes a distributive classification method, known in France in connection with multimedia works<sup>29</sup>. The hybridisation of copyright by the special law on computer programs creates a complex situation which seems to impose such a method. It would of course have been possible to adopt a holistic approach, by considering that the elements orbiting around a computer program should follow its regime, based on the maxim *accessorium sequitur principale*. But that is not the approach adopted by the Court which prefers to split the program up by analysing its various aspects separately. Moreover, this is not surprising if one considers the rationale of the *Infopaq* decision and its assessment of the method of implementing the reproduction right: the Court adopted a “fragmented approach”<sup>30</sup> to the effect that the parts of a work “are protected by copyright since, as such, they share the originality of the whole work”, i.e. “provided that they contain elements which are the expression of the intellectual creation of the author of the work”<sup>31</sup>. In other words, each reproduced element must contain its share of originality<sup>32</sup>.

The language used in the *SAS* judgment seems to clearly suggest a fragmented analysis. Whereas, in the *BSA* case, the Court decided that the graphic user interface “is not a form of expression” of a program<sup>33</sup>, in the *SAS* judgment, it decided that a computer program’s functionality, programming language and format of data files do not “constitute a form of expression of that program and, as such,”<sup>34</sup> are not protected by the specific copyright in programs. The reasoning process that national courts are invited to conduct thus consists of analysing separately, in an autonomous manner, the various elements forming the program or orbiting around it. In other words, they are not accessories to the program, even though it is a question of “elements of that program by means of which users exploit certain functions of that program”<sup>35</sup>. Therefore, it seems to us that the Court has not excluded these elements from protection on the ground that they do not amount to copyrightable forms *in abstracto*. The express referral to the “ordinary law” appears to confirm this. Nevertheless, an extrapolation is possible, in our view, in relation to what is explicitly stated by the Court. The remand court might perfectly well consider that such and such an element constitutes a form of expression of a computer program, viewed autonomously. It seems to us that in spite of the Court’s apparent exclusion of Article 1(2) of Directive 91/250, the important thing is to conduct a differentiated analysis. In other words, the source code and object code, as the program’s central forms, do not absorb the other forms produced in connection with it, as far as their classification is concerned: it may be a case of forms of expression of an autonomous program (but not of that initial program) or of any other form that could be seen as a work understood in the more traditional sense.

However, on close analysis, the classification’s distribution between the “ordinary law” and the special law proves to be tricky to say the least.

## **B – Difficult Distributive Method**

The implementation of the distribution of the rules raises a fundamental issue of confusion in the foundations (1) and this is a difficulty which re-emerges in the implementation of the classification itself (2).

### **1 – The Porosity between the “Ordinary Law” and the Special Law**

In our view, the seeds of the confusion appeared in the *Infopaq* decision<sup>36</sup> where the phrase used in three specific European directives concerning computer programs<sup>37</sup>, databases<sup>38</sup> and photographs<sup>39</sup> was extended to the whole of copyright, namely a work is original if it constitutes “its author’s own intellectual creation”. Whatever critical analysis may be conducted with regard to the end result, it must be noted that the classic concept of the stamp of the author’s personality is destined to disappear in favour of a new European standard reflecting an objective conception of originality<sup>40</sup>. Moreover, this was predictable<sup>41</sup>. However, it is difficult for us, as a matter of principle, to endorse reasoning which generalises to all works a criterion introduced for very specific creations. As to the implementation of the criterion, it is clarified by the Court in laconic terms. We know that in the *Infopaq* decision, the Court noted that “[i]t is only through the choice, sequence and combination of [...] words that the author may express his creativity in an original manner”<sup>42</sup>. In the field of computer programs, originality is generally found, to quote a famous French ruling, in the composition and the expression, as well as in the fact that the latter is not “the simple application of automatic and compelling logic”<sup>43</sup>. But while the Court refers to the “choice, sequence and combination”<sup>44</sup> in connection with user manuals, for other elements of the program it merely refers back to the protection under Directive 2001/29 and the foregoing analysis in the *BSA* judgment, citing the *Infopaq* judgment with its key concept of “own intellectual creation”<sup>45</sup>.

The problem is that, concomitantly, the Court must carry out a distributive application of the *acquis*: it is necessary both to distinguish between the general law and the special law and to accept that the sole protection criterion is the result of induction from the special to the general. At the same time, there is a displayed autonomy and an undeniable porosity. That is the reason why – and it is understandable – the Court is obliged to look to existing rules, namely the specific directives, in the absence of a solid textual basis to establish its competence in the construction of a general law of copyright. But confusion is then almost inevitable: the special law acts as a conceptual ferment for the law of general application even though it is supposed to derogate from it<sup>46</sup>... In such a situation, utmost caution, if not rigour, is required when it is a question of differentiating between the legal regimes. And it has to be noted that the Court did not resist confusion, notably when it came to applying the new general law, which it took it upon itself to develop, to legal subject matter close to computer programs.

In the *BSA* case, the confusion is such as to be almost absurd. The user interface was classified as a work under the “ordinary law”. This is a debatable characterisation in itself as we shall see. Logically, the answer to the question whether broadcasting of that “work” constitutes communication to the public ought to be affirmative. The Court says so itself: “in principle, television broadcasting of a work is a communication to the public which its author has the exclusive right to authorise or prohibit”<sup>47</sup>. Yet it denies the possibility of accepting such communication to the public within the meaning of Directive 2001/29 on the ground that “television viewers receive a communication of that graphic user interface solely in a passive manner, without the possibility of intervening”<sup>48</sup>. According to the Court, “the essential element characterising the interface, that is to say, interaction with the user,” is lacking, so there can be no communication to the public of the interface. Such a solution is incomprehensible, in our view: if we are dealing with a work under the “ordinary law”, there is no reason to require the application of a condition stemming from the special law – the functional character – to implement the general law! Although one author has tried to find coherence in the analysis of the *BSA* decision<sup>49</sup>, we continue to think that the decision represents an “error of judgment”<sup>50</sup>. The decision in the *SAS* case appeared to wish to return to a degree of orthodoxy. However,

when the discussion is conducted on the basis of the “ordinary law”, the pitfall of confusion with the specific law re-emerges.

In the light of the European norms, it is clear that a user manual cannot be assimilated to a computer program. Moreover, the question of the category involved was not submitted to the Grand Chamber by the British court in the SAS case. It is based on Directive 2001/29, as the user manual is a “literary work”. Yet the French legislator, when implementing the Directive, chose to protect the “software” and not just the “program”<sup>51</sup>, which seemed to include the “documentation” concerning its operation<sup>52</sup>. In actual fact, neither the Directive nor the French law are explicit on the position of the documentation. Therefore, it seems logical – unless one were to question the relevance of the choice of the term “software” (*logiciel*) in the French law<sup>53</sup> – not to include it in the special law and to reason by reference to the “ordinary law”. The documentation’s expression is not dependent on that of the program itself<sup>54</sup>. And, in this case, the SAS manuals “do not contain information on the [program’s] internal behaviour”. Unless it is considered that the French law may not be consistent with the Court of Justice’s case law, the program’s manual does indeed seem to constitute a work eligible for protection under the “ordinary law”, provided that it satisfies the condition of originality.

Accordingly, the question raised in fact asks what acts are prohibited by Directive 2001/29 protecting a program’s user manual. The Court considers that there is infringement if there is reproduction in a second manual, but also if there is reproduction of elements of the first manual in the second program<sup>55</sup>. There is no doubt that the author’s “own intellectual creation” reproduced in another “literary work” formed by a second manual could be characterised as copyright infringement. On the other hand, the position in the second hypothesis seems less certain. Does use of elements of a manual in a program’s source code amount to communication to the public within the meaning of Directive 2001/29 when that source code is not published? We know that, in itself, the protection of an undisclosed source code is not coherent with the basic mechanisms of literary and artistic property<sup>56</sup>. But, in this case, it is a question of reasoning by reference to the “ordinary law” of Directive 2001/29! Recognising that a program’s source code may infringe the rights in a literary work if it reproduces that work (without being disclosed, therefore, in most cases) implies that the right of disclosure is totally denied: at no time can the reproduced form be perceived by the human mind<sup>57</sup>. Accordingly, if words have a meaning, it is hard to see how a concept of communication to the public, without any public, even an indirect one, could be accepted<sup>58</sup>. The logic of the special law, which derogates from copyright law in that it accepts protection for a non-perceptible form, is imported into the general law when the principle of the distribution of the rules would require them to be impervious. As a result, the Court of Justice relapses in its absurd analysis of the right of disclosure, which already received a very rough handling in the *BSA* decision. It stems from the same phenomenon of induction that led the Court to invent an “ordinary law” by borrowing a classification criterion contained in special laws and then attempting a distribution of the implementing rules.

As we have just seen, the great legal divide between the imperviousness and the porosity of the “ordinary law” and the special law is bold to say the least, if not untenable, but confusion is also apparent in the method of classification itself.

## **2 – Confusion between the Object and the Criterion**

The classification<sup>59</sup> requires by nature the identification of an object (or subject) of law and a status, as the classification criterion. In the field of copyright, confusion between the object of protection – the intellectual work – and its criterion of originality is common. It is true that the distinction is not easy to make. Yet it is necessary<sup>60</sup>, particularly when the reasoning process is conducted on the fringe of the natural field of coverage of copyright<sup>61</sup>. Precisely because the emergence of information technology generates new questions, rigour requires that the object and its characteristics be identified. The legal reasoning process should

determine whether there is a form eligible for protection and then analyse it to look for its originality which is the only protection criterion, whatever the definition adopted. This conceptual framework is necessary not only in the “ordinary law” but also based on the *lex specialis* because the very terms of Directive 91/250 require it.

As to protection under the “ordinary law”, the Court of Justice’s case law is uncertain in its consideration of the object (subject matter) of protection insofar as it is distinct from its criterion. The *Infopaq* decision has been criticised in that it “completely evades the concept of work”<sup>62</sup>. Yet it took care to point out that “the protection of certain subject matters as artistic or literary works presupposes that they are intellectual creations”<sup>63</sup> before going on to state that “works [...] are protected by copyright only if they are original in the sense that they are their author’s own intellectual creation”<sup>64</sup>. It is true that the wording adopted in the end refers to either “subject matter”<sup>65</sup> or “elements”<sup>66</sup>.

The confusion is confirmed in relation to graphic interfaces. To assess originality, the Court of Justice rightly indicates that it is necessary to take account of “the specific arrangement or configuration of all the components which form part of” the interface, adding that this “criterion cannot be met by components of the graphic user interface which are differentiated only by their technical function”<sup>67</sup>. But, in our view, it did not need to take up the Advocate General’s argument that, in the latter case, “the idea and the expression become indissociable”<sup>68</sup>: the absence of originality is sufficient to exclude the form which does not leave room for any choice<sup>69</sup>. All the more so because the Advocate General, further clarifying the method of case-by-case assessment to be followed by national courts, considered that they should “ascertain whether, by the choices of its author, by the combinations which he creates and the production of the graphic user interface, it is an expression of the author’s own intellectual creation, excluding from that assessment the elements whose expression is dictated by their technical function”<sup>70</sup>. Apart from noting the inescapable truth of the tautology which excludes what is not deemed to be original from the assessment of originality, we consider the method strange, even absurd if taken literally: a combination of unoriginal elements may itself be original and such elements must not be excluded at the risk of having nothing left to analyse<sup>71</sup>. Whatever the case, when the Court states that “the graphic user interface can, as a work, be protected by copyright if it is its author’s own intellectual creation”<sup>72</sup>, it is difficult not to wonder whether the work’s classification stage has not been bypassed<sup>73</sup>: the copyrightable form and originality are confused<sup>74</sup>.

The Court’s analysis of the graphic interfaces thus led it to adopt the “merger doctrine” known in American copyright law. But it did so “ineptly”<sup>75</sup>: here the merger is effected between the subject matter and the criterion, whereas the principle of the merger doctrine is to deny protection when the expression and the idea are inextricable. This approach is taken up in connection with the special law for computer programs.

As to the specific protection conferred by Directive 91/250, the distinction between the object (subject matter) and its character must be even clearer because the very terms of the Directive expressly require its identification. Accordingly, it is necessary to check that we are dealing with “the expression in any form of a computer program” (Article 1(2)) before assessing its originality, defined as its author’s “own intellectual creation” (Article 1(3)). This involves two separate intellectual operations and differentiated textual provisions. Yet matters are not always clear in the analyses of the Court and its Advocate General.

With regard to the definition of the object of protection, we know that while Directive 91/250 protects “the expression in any form of a computer program”<sup>76</sup>, it does not define what this expression covers<sup>77</sup>. There is no doubt that the source code and object code, as elementary and necessary forms of a computer program, are protected<sup>78</sup>. The Court bases itself in particular on Article 10(1) of the TRIPs Agreement, already referred to in the *Infopaq* decision, in which they are expressly cited<sup>79</sup>. As to the other forms that may orbit around a

program, the key is to view the program as a functional form and, consequently, to consider that there is a form of expression of the program from the moment that it enables the computer to perform its function: “any form of expression of a computer program must be protected from the moment when its reproduction would engender the reproduction of the computer program itself, thus enabling the computer to perform its task”<sup>80</sup>. In other words, there is a “form of expression of a computer program” when there is a program and it is functional by nature. That seems to be in the scheme of things because a program is defined by the function that it performs<sup>81</sup>. But, at the end of the day, if the Court’s only contribution is to confirm that there is a computer program when there is form of expression which makes a computer function, it is almost disappointing. However, this guideline must enable it to reply to the questions referred to it and to separate out what is protected by Directive 91/250 and what is not<sup>82</sup>.

The confusion with the criterion of originality appears again concerning the protection of the functionality: the first preliminary question referred to the Court in the SAS case was whether the functionality could be considered to be a “form of expression of the program” for the purposes of Directive 91/250<sup>83</sup>. To reply to this question of the definition of the subject matter of the monopoly, the Advocate General referred to the criterion of originality<sup>84</sup>, i.e. the characteristic of that subject matter, which is something else. According to his approach, the starting point of protection – the existence of a copyrightable form – lies in the originality that may be detected in it: there does not seem to be any room for a commonplace form, ineligible for protection not for lack of sufficient formalisation but because it does not reflect any personal stamp. One could raise the objection that the result is the same: protection is granted to an original form of expression; it is not granted to one that is not, regardless of whether it is the subject matter to be covered or its original character that is lacking. However, the fact remains that, in our view, the true reason should be either that the functionality as such is not sufficiently formalised to enjoy protection or that the functional form does not leave room for the choice characterising originality<sup>85</sup>. Moreover, when it came to replying to the second preliminary question, the Advocate General appeared to leave out the reasoning centred on the single criterion by reaffirming that the functionality is not protected because it is “comparable to an idea”. He inferred from this that the nature and/or extent of the functionality and the level of skill of the author are irrelevant for the analysis to be conducted. This is logical because the Directive expressly states that the only criterion to be considered is originality, or the “author’s own intellectual creation” in the language of the European Union. By contrast, the assimilation of the program’s structure to the functionality<sup>86</sup> is surprising: if there is a structure, it is because there is a form, an expression, and the courts should not exclude it from protection on the pretext that it is an idea but rather examine whether it is original<sup>87</sup>.

Finally, the Court’s logic suggests recognition of the American merger doctrine. The detours taken in the field of originality perhaps make it a European-style merger doctrine. However, the end result, notably through the affirmation of the exclusion of ideas, leads to convergence with the solutions developed on the other side of the Atlantic<sup>88</sup>.

## **II – THE RESULTS OF THE CLASSIFICATION**

The distributive approach sets a methodological line for the analysis of what can be protected within a computer program. The boundaries of the protection are thus determined by rejecting certain non-copyrightable forms (A) and by granting the possibility of protection to other types of elements of a computer program (B).

### **A – Non-Copyrightable Forms**

The fact of affirming the principle of the exclusion of ideas in the SAS judgment is, in our view, a major assertion (1). Nevertheless, its application seems intended only to exclude functionalities (2).

## **1 – Affirmation of the Principle: The Exclusion of Ideas**

The second sentence of Article 1(2) of Directive 91/250 provides: “Ideas and principles which underlie any element of a computer program, including those which underlie its interfaces, are not protected by copyright under this Directive.” In the Directive’s recitals, the non-protection of ideas explicitly derives from the fact that copyright protects only the program’s form or expression<sup>89</sup>. Over and above the specific protection, it should be recalled here that the non-protection of ideas is a standard principle. In legal literature, the maxim coined by Desbois, “ideas are free fare” has remained famous<sup>90</sup>. The WIPO Copyright Treaty is also explicit on the subject: “Copyright protection extends to expressions and not to ideas, procedures, methods of operation or mathematical concepts as such.”<sup>91</sup>

Hence there is nothing surprising at first sight about the Court of Justice’s much reported phrase that “to accept that the functionality of a computer program can be protected by copyright would amount to making it possible to monopolise ideas, to the detriment of technological progress and industrial development”.<sup>92</sup>

The fact that it is confirmed by the Court is still noteworthy because its confirmation was not necessary in such general terms and the Court makes a point of recalling what the legislator’s intention was, while allowing itself to go further. Indeed, referring to the explanatory memorandum to the proposal for Directive 91/250, the Court indicates that the legislator’s objective was to limit protection to the program’s expression alone in order to leave “other authors the desired latitude to create similar or even identical programs provided that they refrain from copying”<sup>93</sup>. Above all, the Court pursues its disclosure of the *ratio legis* by stating that protection too far upstream would be “to the detriment of technological progress and industrial development”<sup>94</sup>. It would have been possible to substitute these for other grounds: creative freedom possibly and free competition undoubtedly... The chosen basis leads to two remarks. Firstly, it is clear that the “copyright” referred to here is the special law protecting computer programs and not the “ordinary law”. The industrial nature of this (very) specific copyright is thus clearly affirmed. This seems logical because, in our view, the specific law is an industrial law closer to patent law than to copyright law as traditionally understood. But, as a result, the areas of porosity and confusion between the special law and the “ordinary law” that we identified earlier are even more criticisable. Secondly, the question must be raised as to whether, in doing so, the Court does not run over into the field of patents where industrial progress is the traditional goal<sup>95</sup>. In addition, it is not impossible that this posture is a sign of the anticipation of the reform of the European patent system currently under discussion<sup>96</sup> and on which the Court of Justice itself has expressed an opinion<sup>97</sup>.

Be that as it may, the phrase applies very well to the first preliminary question concerning the possibility of protection of a program’s functionality.

## **2 – Application of the Principle: the Exclusion of Functionalities**

The Court very clearly excludes the possibility of protecting the functionality forming the subject of the first preliminary question in the SAS case<sup>98</sup>. Unlike the questions concerning programming languages and formats of data files, there is no referral here to the “ordinary law” of copyright. Therefore, no protection is conceivable under copyright law, whether the “software” version or the “ordinary law” version. Moreover, in its replies to the seventh and eighth preliminary questions concerning the interpretation of Article 5(3) of Directive 91/250, the Court was able to stress the fact that contractual provisions must respect the principle of the non-appropriation of ideas: the Directive’s purpose is to “ensure that the ideas and principles which underlie any element of a computer program are not protected by the owner of the copyright by means of a licensing agreement”.<sup>99</sup>

This decision not to extend protection to the functionality seems consistent, moreover, with US case law<sup>100</sup> and the merger doctrine referred to earlier. However, while the principle is clearly stated<sup>101</sup>, its application is trickier. Ideas are excluded, so be it. But what is an idea? What is a functionality? The difficulty in identifying the boundary between idea and expression remains intact<sup>102</sup>.

So the question then is what exactly does the concept of a computer program's "functionality" cover? The judgment itself does not answer the question. The Advocate General's Opinion is more precise, even if the conception of the excluded functionality is diffuse: it involves the "service" that the user expects from the computer program, in other words the result expected by the program's user<sup>103</sup>. This "service" is non-copyrightable *per se* because copyright cannot encompass a non-formalised object. But however laudable it may seem as such, the *petitio principii* is not enough if one wishes to address matters in a more concrete manner. Indeed, it remains very tricky to distinguish between the protected form and the non-protectable function.

Indeed, the Court's decision does not present any method to follow in order to distinguish between a protectable form and a non-protectable function/idea, but merely endorses the Advocate General's Opinion which, in our view, seems to maintain the confusion criticised earlier between the form of expression and originality and between the subject matter of the protection and the criterion adopted to be eligible for it. Taking up the criterion of the author's "own intellectual creation" in Article 1(3) of the Directive, the Advocate General considered that "creativity, skill and inventiveness manifest themselves in the way in which the program is drawn up, in its writing. [...]. However, the way in which all of these elements are arranged, like the style in which the computer program is written, will be likely to reflect the author's own intellectual creation and therefore be eligible for protection"<sup>104</sup>. The confusion is perceptible, in our view, in the Advocate General's analysis, between the programmer's approach and his "style" of writing. To repeat the terminology used, the "way in which the program is drawn up" does not seem to us to be the "writing", and the "way in which [the] elements are arranged" does not correspond to the "style of writing". In concrete terms, we are not at the same stage of the program's creation: the drawing up and arrangement correspond to the analysis (the "preparatory design material" expressly mentioned in the Directive), while the "writing" corresponds to the subsequent "coding" in computer language. The structure defined at the preliminary stage may be found again in the structure written in the form of sets of instructions, but not necessarily<sup>105</sup>, unless the Advocate General contemplates the fact that part of the structuring of the writing of the source code exists as and when the writing is carried out, independently of the predetermined architecture. But it would still be a question of two separate things, depending on the level of "granularity" involved. In even more concrete terms, the items placed on file which the judge, assisted by an expert, will have to analyse in order to find evidence of the author's "own intellectual creation" are not the same. Not to mention the fact that it is not always the same person who was involved in the creation of this or that element: the analysts involved before the writing stage often leave the actual writing of the source code to programmers, particularly for large-scale projects. In addition, the "combination of several functionalities" was excluded by the Advocate General both because it must be treated as comparable to an idea and because "the very function of the program [...] will dictate that combination"<sup>106</sup>, meaning that it cannot be original. Nevertheless, we would argue that the combination of functions, even if they are commonplace in themselves, may stem from structuring that leaves room for choice. While it seems possible to state that the writing structure is dictated by the function, even though this may be rather simplistic given the complexity of the technical context<sup>107</sup>, we do not consider that the analysis of a functionality comprising a set of elementary functions can be compared to the analysis of a "non-decomposable" function.

In fact, the concept of the "functionality" of a program may assume two separate meanings, namely the expected result and the process followed to obtain it. Notwithstanding

certain considerations of the Advocate General, the Court of Justice appears to exclude the former. With regard to the analysis of the second meaning, however, it is necessary to consider the form describing the process to the machine: structure, arrangement, combination... We fail to see why this should be classified as an excluded "idea" because a form is actually present. Insofar as this process comes before the writing, namely at the level of the structure of the writing, its originality should be carefully examined.

Protection continues to be possible from the moment that the requirement of form is satisfied and subject to the condition of originality. Moreover, the SAS judgment explicitly leaves the door open to certain elements of the program.

## **B – Copyrightable Forms**

The acceptance of forms that could be protected by copyright, thanks to a "fallback" protection (2) means, to begin with, that the scope of the principle of the exclusion of ideas needs to be treated as relative to a certain extent (1).

### **1 – The Relative Scope of the Exclusion of Ideas**

The principle of the exclusion of ideas was affirmed by the Advocate General not only for functionalities but also for programming languages, as the two questions were considered together<sup>108</sup>, separately from that of the protection of formats of data files. The Court does not adopt the same presentation and appears to deal with the three subject matters as a group. Yet, in the judgment, only the question of the functionality is explicitly targeted by the refusal to allow the monopolisation of ideas. Accordingly, some uncertainty can be felt as to whether the Grand Chamber follows the Advocate General concerning the justification for the non-protection of programming languages. The judgment itself is very elliptical in this regard and it is possible to hesitate about the role to be given to the Advocate General's arguments in order to clarify its meaning. Although legal literature says little on the subject, it supports the basis for the exclusion of ideas. Indeed, a programming language is regarded as being too abstract to be analysed as a copyrightable form: it is "a scientific work, a theoretical construction" or a set of methods<sup>109</sup>. In the words of the Advocate General, programming language is "the means which permits expression to be given, not the expression itself"<sup>110</sup>. Being an "essential step"<sup>111</sup>, it must, as such, remain free<sup>112</sup>. The Court's reasoning with regard to formats of data files is similar to the one adopted for programming languages, despite their separate treatment by the Advocate General. The problem is similar in that file formats may be seen as ideas that are not sufficiently formalised to qualify for protection: they are a method of organising information.

Yet, in both cases, the express referral to the "ordinary law" invalidates the non-protection of ideas as the justification for their exclusion from protection under the special law. This is because the principle of the exclusion of ideas also exists in the "ordinary law" of copyright: the reference to possible protection based on Directive 2001/29 implies that the Court did not wish to consider them as ideas, as a matter of principle. Nevertheless, national courts will be perfectly free to deny protection on a case-by-case basis on grounds of insufficient formalisation or lack of originality.

Moreover, the internal logic of Directive 91/250 may suggest that its framers did not mean to treat programming languages and formats of data files as being free fare. With regard to languages, SAS Institute's argument was not without merit: according to the Directive, "to the extent that logic, algorithms and programming languages *comprise* ideas and principles, those ideas and principles are not protected"<sup>113</sup>, so it can be claimed that the exclusion is limited to what comes before the language and, by negative inference, that it does not extend to the language itself, analysed as a whole. And it is true that to reason in terms of formalisation, the latter may be considered sufficient to give rise to copyright and to determine that there is a "form of expression". It would then be necessary to inquire into its originality<sup>114</sup>.

The Court does not follow that argument but confines itself to stating that the programming language and the format of data files<sup>115</sup> “used in a computer program in order to exploit certain of its functions [do not] constitute a form of expression of that program for the purposes of Article 1(2) of Directive 91/250”<sup>116</sup>. The exclusion may thus seem to be based on the fact that, as in the *BSA* judgment concerning graphic user interfaces<sup>117</sup>, the analysed elements are not programs because they do not directly enable the computer to perform its function: they are forms to enable the program to work but they cannot be assimilated to the program itself.

The possibility of “fallback” protection confirms this analysis.

## **2 – Existing Protection Possibilities: “Ordinary Law” and Special Law**

Protection possibilities outside the sphere of copyright (such as the protection offered by a patent or indeed by contract or unfair competition law) are beyond the scope of this study. In the field of copyright, the Court of Justice expressly refers back to the “ordinary law”. However, in spite of appearances, it seems to us that there is still room for the special law.

Fallback protection under the “ordinary law” of copyright is expressly recognised by the Court of Justice for programming languages and formats of data files. Accordingly, the courts will have to examine them from the viewpoint of the existence of a form which will have to be characterised as original. Even though the criterion of the author’s “own intellectual creation” seems to weaken the traditional threshold of continental European copyright, we think it highly improbable that either of them could actually qualify for protection. As to graphic interfaces, the Court of Justice’s decision should not be construed, in our view, as applying to the graphic user interface as a whole: a distinction should be made between the external form, namely *the graphic effects* of the user interface which may show originality in the expression in some cases, and the internal form corresponding to the source code, i.e. the program, described moreover as such by the Advocate General<sup>118</sup>, which is thus covered by the *lex specialis*<sup>119</sup>.

As far as the special law is concerned, we would argue that it is possible, even necessary, to deviate from the Court’s statements. Indeed, when it denies user interfaces the possibility of being classified as programs as a matter of principle, we believe that it is wrong: an interface is a program as such, being made up of forms unquestionably classified as programs, namely the source code and object code<sup>120</sup>. The interface is a “layer” of software whose function is to allow or facilitate interaction with the program onto which it is grafted. In this respect, as we have seen, the terms of the *SAS* judgment concerning programming languages and formats of data files are precise as regards the method adopted: the “element” of the program in question does not constitute “a form of expression of *that program*”<sup>121</sup>. In other words, it is not an accessory to the program which must follow the program’s legal regime<sup>122</sup>. Therefore, it should be analysed independently, for what it is – and that may be a program... This is because there is no reason to deny the classification as “forms of expression” of a program in the light of the aim to be achieved: an interface is a computer program dedicated to allowing interaction with the user. In other words, the solution in the *SAS* judgment should be applied to graphic interfaces: these are not accessories to programs but may be classified independently as programs.

Similar reasoning can be adopted for programming languages. Although the Court of Justice seems to deny them the possibility of being classified as computer programs and refers them back to the “ordinary law”, the important thing to consider is that the language is not an accessory to the program. It is not impossible, in our view, for an analysis to reveal that the use of certain programming languages may include reproduction of software libraries, compilers or interpreters. The language’s creator is not totally deprived of protection then because the latter programs must continue to be protected as programs<sup>123</sup>. The source codes or object codes would necessarily be copied by the third-party “cloner” and, as the Court of

Justice notes itself moreover, we would then be dealing with a case of “partial reproduction” for the purposes of Article 4(a) of Directive 91/250<sup>124</sup>.

To sum up, it should be possible therefore, in our view, to classify programming languages and graphic interfaces as independent programs provided that they satisfy the functional definition of a computer program.

## CONCLUSION

The Court of Justice’s basic contribution towards delimiting the protection of computer programs by copyright concerns the method adopted by it. Its distributive classification highlights the complex character of software creations: its adoption seems natural in that it leads to things being analysed for what they are. Yet the method’s implementation proves to be tricky, mainly because, in addition to the complexity of the subject matter, there is a legislative gap: the “ordinary law” that the Court of Justice endeavours to construct has no textual basis. Not only the Court’s legitimacy and competence to discover an “ordinary law of [European] copyright” may be questioned, but also the conceptual apparatus is being constructed as it goes along. The definition of the object of protection – the original work – is the result of induction, based on specific directives, which is criticisable in itself. And when a distinction has to be made between the newly discovered “ordinary law” and the specific law which served as its conceptual basis, by structuring them around a complex subject matter, the ground is unstable and some wavering is inevitable. The Court will doubtless have the opportunity to clarify or rectify certain classifications. Moreover, this is the current trend: in our view, the *BSA* judgment was a “first attempt” and, notwithstanding some uncertainty, the more recent decision in the *SAS* case is one that fixes a line of approach.

Indeed, the statement of principle concerning the non-appropriation of ideas in the *SAS* decision testifies to the Court’s intention to show a true vision, because, although the Court has been reproached for the “absence of a clear direction” and “lack of a policy approach”<sup>125</sup> in the field of copyright, it is clear that, in the principle’s implementation, while criticism can be expressed, the Grand Chamber wished to establish the starting point of a line of conduct through which to map out the protection’s limits. We consider that the policy stated by it is destined to extend beyond the strict framework of copyright: the non-appropriation of ideas should be seen as a *general principle of law*<sup>126</sup>.

Indeed, beyond the Court’s decisions, it seems to us that the principle must be respected in the other branches of law. The theory of parasitic conduct or “free riding” must not interfere, in our view<sup>127</sup>, with the principle stated by the special law that *generalia specialibus non derogant*. Patent law is also designed to respect the non-appropriation of the result as such and not to extend to overly abstract elements. Through its references to “technological progress” and “industrial development”, the Court of Justice seems to anticipate its competence in this field. Therefore, it is not certain that, if competence is granted to the Court by the proposal for a European Patent Court, the vision expressed in Luxembourg will converge with the doctrine developed over the last twenty-five years at the European Patent Office in Munich concerning “computer-implemented inventions”... Yet such competence is essential, in our view, because it would be good for the unity and coherence<sup>128</sup> of the protection of computer software in Europe and for the legal certainty of the players in the sector to have a single interpreter of last resort in areas that tend to overlap.

(English translation by  
Margaret Platt-Hommel)

## NOTES

1. M. Vivant, "Le logiciel au pays des Merveilles", *JCP* 1985, II, 3208.
2. M. Vivant, "Le programme d'ordinateur au Pays des Muses - Observations sur la directive du 14 mai 1991", *JCP E* 1991, 47, Study, 94.
3. CJEU, 16 July 2009, case C-5/08, *Infopaq International*, [2009] ECR I-6569, *Com. com. électr.* 2009, comm. 97, note C. Caron; *JCP G* 2009, 272, note L. Marino; *Propr. intell.* 2009, no. 33, p. 379, note V.-L. Benabou; *WIPO Journal* 2010, 1(2), p. 197, S. Vousden; *EIPR* 2010, 32(5), p. 247.
4. For an in-depth analysis, see S. Carre, "Le rôle de la Cour de justice dans la construction du droit d'auteur de l'Union européenne", in *La contribution de la jurisprudence européenne à la construction de la propriété intellectuelle en Europe*, LexisNexis-Litec, to be published in the CEIPI collection.
5. V.-L. Benabou, "Retour sur dix ans de jurisprudence de la Cour de justice de l'Union européenne en matière de propriété littéraire et artistique: les méthodes", *Propr. intell.* 2012, 43, p. 140.
6. The newsletter published by the Gilles Vercken law office, "Six mois de jurisprudence de la CJUE – Droit d'auteur – Droits voisins", Jan.-June 2012, lists eleven decisions in six months.
7. V.-L. Benabou, "Retour sur dix ans de jurisprudence de la Cour de justice de l'Union européenne en matière de propriété littéraire et artistique: les méthodes", article *supra*, p. 143 *et seq.*
8. *Ibid*, at p. 146.
9. S. Carre, "Le rôle de la Cour de justice dans la construction du droit d'auteur de l'Union européenne", article *supra*. However, it is true that the argument drawn from the twentieth recital in the preamble to Directive 2001/29/EC may be persuasive: "This Directive is based on principles and rules already laid down in the Directives currently in force in this area, in particular Directives 91/250/EEC(5), 92/100/EEC(6), 93/83/EEC(7), 93/98/EEC(8) and 96/9/EC(9), and it develops those principles and rules and places them in the context of the information society." (Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society, *OJEC*, 22 June 2001).
10. CJEU, 22 Dec. 2010, case C-393/09, *Bezpečnostní softwarová asociace*, *Propr. intell.*, 2011, 39, p. 205, note V.-L. Benabou; *Com. com. électr.* 2011, 5, comm. 42, comm. C. Caron; *RLDI* 2011, 70, Éclairage 2294, note H. Bitan; *Prop. ind.* 2011, 4, comm. 37, note J. Larrieu; *RDTI* 2011, no. 43, p. 51, note E. Derclaye; *RIDA* 2011, no. 227, chron. P. Sirinelli; *Computer and Telecommunications Law Review* 2011, 17(3), p. 70, L.J. Smith; CJEU, 2 May 2012, case C-406/10, *SAS Institute Inc. v. World Programming Ltd*, *RLDI*, 2012, 83, p. 6, note C. Castets-Renard; *Prop. ind.* 2012, 7-8, comm. 61, note N. Bouche; *EDPI* no. 7, 108, obs. C. Bernault; *JCP E* 2012 no. 31, 1489, chron. by M. Vivant, N. Mallet-Poujol and J.-M. Bruguière; *Gaz. Pal.* 215, p. 11, chron. L. Marino; *EIPR* 2012, 34(8), p. 565, note D. Gervais and E. Derclaye; *Expertises* July 2012, p. 260, note M. Razavi.
11. Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs, codified by Directive 2009/24/EC of 23 April 2009, *OJEC*, 17 May 1991.

12. Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society, cited *supra*.

13. CJEU, 22 Dec. 2010, case C-393/09, *BSA*, cited *supra*.

14. CJEU, 2 May 2012, case C-406/10, *SAS*, cited *supra*.

15. See, for example, J. Berr-Gabel and R. Chemain, "La décompilation des logiciels: l'industrie européenne face au droit d'auteur", *RTD Eur.* 1991, p. 364.

16. CJEU, 22 Dec. 2010, case C-393/09, *BSA*, *supra*, paragraph 51: "... a graphic user interface is not a form of expression of that program within the meaning of Article 1(2) of Directive 91/250 and thus is not protected by copyright as a computer program under that directive. Nevertheless, such an interface can be protected by copyright as a work by Directive 2001/29 if that interface is its author's own intellectual creation."

17. CJEU, 2 May 2012, case C-406/10, *SAS*, *supra*, paragraph 46: "... Article 1(2) of Directive 91/250 must be interpreted as meaning that neither the functionality of a computer program nor the programming language and the format of data files used in a computer program in order to exploit certain of its functions constitute a form of expression of that program and, as such, are not protected by copyright in computer programs for the purposes of that directive."

18. *Ibid*, paragraph 62. We shall not specifically address this question in this study, preferring to focus on the subject matter protected by copyright within computer software.

19. *Ibid*, paragraph 70. It can be noted that, for the most part, the British court which referred the question for a preliminary ruling had taken a stand along the lines adopted by the Court of Justice: High Court of Justice (Chancery Division), 23 July 2010, *SAS Institute Inc. vs. World Programming Limited*, 2010, EWHC 1829 (Ch), §332.

20. CJEU, 4 Oct. 2011, *Premier League, Propr. intell.*, 2012, 42, p. 51, note V.-L. Benabou, *Com. com. électr.* 2011, 12, com. 111 by C. Caron; *Gaz. Pal.* 2012, no. 47, p. 14, note L. Marino, paragraph 209, giving general scope to Directive 2001/29: "It should be recalled that the directive on satellite broadcasting introduces only minimal harmonisation of certain aspects of the protection of copyright and related rights in the event of communication to the public by satellite or cable retransmission of broadcasts originating from other Member States. Unlike the copyright directive, these minimal harmonisation rules do not provide elements to determine the lawfulness of acts of reproduction performed in the memory of a satellite decoder and on a television screen".

21. CJEU, 22 Dec. 2010, case C-393/09, *BSA*, *supra*, paragraph 44.

22. V.-L. Benabou, "Retour sur dix ans de jurisprudence de la Cour de justice de l'Union européenne en matière de propriété littéraire et artistique: les méthodes", article *supra*, at p. 152: "While it is very understandable that the Court should wish to give copyright a spine based on that directive, not least in order to be able to evolve general solutions which would hold as principles, the fact nevertheless remains that this approach is liable to run counter to the logic of the convergent interpretation of concepts of the *acquis* developed elsewhere."

23. CJEU, case C-128/11, 3 July 2012, *UsedSoft GmbH v. Oracle International Corp.*, *EDPI*, 2012, 8, p. 1, note A. Lucas. The judgment concerns the contractual use and exhaustion of rights in a computer program and while that is not the direct subject of our study, it should

nevertheless be observed that the decision is, at least potentially, quite revolutionary in this field.

24. *Ibid*, paragraph 56 (emphasis added).

25. CJEU, 22 Dec. 2010, case C-393/09, *BSA*, *supra*, paragraphs 44-46.

26. CJEU, 2 May 2012, case C-406/10, *SAS*, *supra*, paragraph 45.

27. Advocate General's Opinion, case C-406/10, 29 Nov. 2011, *SAS Institute Inc. v. World Programming Ltd*, paragraphs 68 *et seq.*, at paragraphs 75-76.

28. The Advocate General's Opinion was more satisfactory, in particular because the reasoning sought to relate the question to the provisions of Article 6 of Directive 91/250 dealing with decompilation (*ibid*, paragraph 77 *et seq.*). Based on copyright as traditionally understood, it is true that the way in which data are organised could reveal the author's own intellectual creation, by analogy with the approach concerning databases. Moreover, it becomes tricky to implement the exception, which appears in the special law, if the possibility of protecting the format of data files under Directive 2001/29 is considered. The Court evades these questions because it notes in this case that WPL "did not carry out any decompilation of the object code of that program" (paragraph 44).

29. "A video game is a complex work which cannot be reduced to its sole computer program dimension, whatever the latter's significance, with the result that each of its components is subject to the regime that is applicable to it based on its nature": Cass. 1<sup>st</sup> Civ., 25 June 2009, *Cryo and Jean-Martial L. v. SESAM, SACEM and SDRM, RLDI*, 2009, 52, special issue "jeu vidéo et multimédia", p. 87 *et seq.*, *RTD Com.* 2010, p. 319, note P. Gaudrat; *RIDA* July 2009, no. 221, p. 508 and p. 304, obs. P. Sirinelli; *JCP* 2009, 328, obs. E. Treppoz. On the debate between the unitary method and the distributive method of classification concerning multimedia creations, see F. Macrez, *Créations informatiques: bouleversement des propriétés intellectuelles? – Essai sur la cohérence des droits*, Lexis Nexis Litec, CEIPI coll., Paris, 2011, no. 227 *et seq.*, and the cited references.

30. V.-L. Benabou, note, cited *supra*, under the *Infopaq* decision.

31. CJEU, 16 July 2009, case C-5/08, *Infopaq International*, *supra*, paragraphs 38 and 39; the rationale is repeated in the judgment in the *Premier league* case: CJEU, 4 Oct. 2011, *Premier League*, cited *supra*, paragraph 156.

32. Unless it is enough to prove that the extract in question "shares" the originality of the work from which it is drawn (see, raising the question, V.-L. Benabou, note *supra*, p. 381).

33. CJEU, 22 Dec. 2010, case C-393/09, *BSA*, *supra*, paragraph 51 (emphasis added).

34. CJEU, 2 May 2012, case C-406/10, *SAS*, *supra*, paragraph 46 (emphasis added).

35. *Ibid*, paragraph 42 (concerning programming languages and formats of data files).

36. CJEU, 16 July 2009, case C-5/08, *Infopaq International*, cited *supra*; also: CJEU, case C-604/10, 1 March 2012, *Football Dataco and Others v. Yahoo! UK Ltd and Others*, *Com. com. électr.*, 2012, 5, p. 26, note C. Caron; *Gaz. Pal.* 2012, no. 214-125, p. 11, note L. Marino; *RLDI* 2012, 82, p. 6, note C. Castets-Renard; *Europe* 2012, 5, p. 46, note L. Idot; *RIDA* 2012, April 2012, no. 232, chron. P. Sirinelli; *EIPR* 2011, 33(5), p. 324, com. R. Montagnon and M. Shillito.

37. Directive of 14 May 1991 on the legal protection of computer programs, codified by Directive 2009/24/EC of 23 April 2009, cited *supra*.

38. Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, *OJEC*, 27 March 1996, L 77.

39. Directive 2006/116/EC of the European Parliament and of the Council of 12 December 2006 on the term of protection of copyright and certain related rights, *OJEC*, L 372, p. 12.

40. V.-L. Benabou, note under CJEU, 16 July 2009, cited *supra*, at p. 380 (viewing the “terminological shift [as] inappropriate”). *Contra*: C. Caron, note *supra*. (“The result is to establish the French concept of originality, theorised by Desbois, in European law”; and later “this European conception of originality in literary works closely resembles the one prevailing in French law”). Compare, noting – doubtless correctly – that the trend in French case law towards a more objective approach pre-existed the Court of Justice’s proactive intervention, C. Castets-Renard, “L’originalité en droit d’auteur européen: la CJUE creuse le sillon”, *RLDI* 2012, 82, p. 6. Also compare, in the UK, E. Derclaye, “Infopaq International A/S v Danske Dagblades Forening (C-5/08): wonderful or worrisome? The impact of the ECJ ruling in Infopaq on UK copyright law”, *EIPR* 2010, 32(5), p. 247 (“By clearly adopting the criterion of creativity, the ECJ’s ruling changes the current criterion of sufficient skill, judgement, labour and capital that still applied to all works except databases and computer programs”).

41. A. Lucas, *Droit d’auteur et numérique*, Litec, Paris, 1998, no. 85.

42. CJEU, 16 July 2009, case C-5/08, *Infopaq International*, *supra*, paragraph 45.

43. Cass. Plenary, 7 March 1986, *Babolat v. Pachot*, *JCP éd. E*, 1986, II, 14713, note J. M. Mousseron, B. Teyssié and M. Vivant, *RIDA* July 1986, no. 129, p. 136, note A. Lucas; *RTD com.* 1986, p. 399, obs. A. Françon.

44. CJEU, 2 May 2012, case C-406/10, *SAS*, *supra*, paragraph 67.

45. *Ibid*, paragraph 45; CJEU, 22 Dec. 2010, case C-393/09, *BSA*, *supra*, paragraphs 44-46.

46. See “*Generalia specialibus non derogant*” in H. Roland and L. Boyer, *Adages du droit français*, Litec, Paris, 1999, p. 296 *et seq.*, pointing out that the significance of this rule of interpretation “is not as trenchant as *Specialia generalibus derogant*: the special law is bound to derogate from the general law, within the scope of the derogation that it creates; by contrast, the general law does not necessarily lead to the disappearance of a special law. Therefore, it is a question of particular cases and the maxim will apply to the extent that it may reflect the legislator’s intention”.

47. CJEU, 22 Dec. 2010, case C-393/09, *BSA*, *supra*, paragraph 55.

48. *Ibid*, paragraph 57.

49. V.-L. Benabou, obs. *supra*.

50. E. Derclaye, “L’arrêt *Softwarová* : une révolution en droit d’auteur ou une ‘erreur de jugement’?”, *RDTI* 2011, 43, p. 59.

51. Terms which we regarded as synonymous until now and which should be treated as different here.

52. Order of 22 December 1981 on the enrichment of the French language, *Journal Officiel*, 17 Jan. 1982: the term “logiciel” is defined as “the set of programs, procedures and rules, and possibly documentation, relating to the operation of a data processing system”.

53. See, for example, M. Vivant, “Logiciel 94: tout un programme?”, *JCP éd. G* 1994, I 3792, no. 6.

54. A. Lucas, “Objet du droit d’auteur - Oeuvres protégées. Logiciels”, *J.-Cl. Propriété littéraire et artistique*, 24 Sept. 2008, fasc. 1160, no. 28.

55. CJEU, 2 May 2012, case C-406/10, *SAS*, *supra*, paragraph 70: “the reproduction, in a computer program or a user manual for that program, of certain elements described in the user manual for another computer program protected by copyright is capable of constituting an infringement of the copyright in the latter manual”.

56. See, notably, P. Gaudrat, “The Protection of Software by Literary and Artistic Property”, *RIDA*, April 1986, no. 128, p. 180.

57. See, for example, A. Lucas and H.-J. Lucas, *Traité de la propriété littéraire et artistique*, Litec, Paris, 2006, no. 64.

58. This case does not raise questions on the interpretation of the concept of communication to the public which the Court had to deal with elsewhere (CJEU, case C-306/05, 7 Dec. 2006, *SGAE*, *Propr. intell.*, 2007, 22, p. 87, note A. Lucas; CJEU, 4 Oct. 2011, *Premier League*, *supra*): no public is involved, even indirectly, here because the source code remained secret. The hypothesis of an open source code, i.e. directly disclosed to the public, could be considered. However, that was not the case in this dispute; nor is it the case in the vast majority of suits heard by national courts.

59. It can be defined as “assigning an epithet (or status) to a subject or an object” (see “Qualification” in A.-J. Arnaud (ed.), *Dictionnaire encyclopédique de théorie et de sociologie du droit*, LGDJ, Paris, 1993).

60. See, notably, A. Lucas and H.-J. Lucas, *Traité de la propriété littéraire et artistique*, *op. cit.*, no. 44; M. Vivant and J.-M. Bruguière, *Droit d’auteur*, Dalloz, coll. “Précis Droit Privé”, Paris, 2009, no. 41.

61. P. Gaudrat, “Réflexions sur la forme des œuvres de l’esprit”, *Mélanges en l’honneur de André Françon*, Dalloz 1995, p. 195: “Because the nature of the protectable form has not been sufficiently defined, there is a tendency for forms that are alien to the spirit of the protection to be accommodated more and more readily within it.”

62. V.-L. Benabou, note *supra*.

63. CJEU, 16 July 2009, case C-5/08, *Infopaq International*, *supra*, paragraph 34.

64. *Ibid*, paragraph 35.

65. *Ibid*, paragraph 37.

66. *Ibid*, paragraphs 45, 46, 48 and 51.

67. CJEU, 22 Dec. 2010, case C-393/09, *BSA*, *supra*, paragraph 48 (for the two quotations).

68. *Ibid*, paragraph 49; Advocate General's Opinion, 14 Oct. 2010, case C-393/09, *BSA*, *supra*, paragraphs 75-76.

69. This is noted in the next paragraph: CJEU, 22 Dec. 2010, case C-393/09, *BSA*, *supra*, paragraph 50 ("In such a situation, the components of a graphic user interface do not permit the author to express his creativity in an original manner and achieve a result which is an intellectual creation of that author.").

70. Advocate General's Opinion, 14 Oct. 2010, case C-393/09, *BSA*, *supra*, paragraph 77.

71. Moreover, one may wonder what level of detail (computer scientists would say granularity) should be considered: at the most elementary level, everything, or almost everything, will come within the field of ideas. To take up the example of a more traditional literary work in the *Infopaq* case, the Court of Justice rightly noted that "[w]ords as such do not [...] constitute elements covered by the protection" (CJEU, 16 July 2009, case C-5/08, *Infopaq International*, *supra*, paragraph 46). Yet it is unimaginable to exclude all the words of a text from the assessment in order to judge its originality! The logic of fragmentation carries with it the "risk of reducing the scope of copyright" (V.-L. Benabou, note under the *Infopaq* judgment, cited *supra*, p. 381). Taken to the extreme, it would not be possible to find any elementary fragment showing originality.

72. CJEU, 22 Dec. 2010, case C-393/09, *BSA*, *supra*, paragraph 46.

73. Unless, as Professor Benabou speculates, the Court considers that the definition of a work is identical to that of originality (obs., *supra*, under the *BSA* judgment, at p. 210). However, this amounts to the same thing as the confusion between the object (subject matter) and the criterion.

74. Compare, considering that "the Court confuses (merges!) the two protection criteria, form [...], on the one hand, and originality, on the other," E. Derclaye, "L'arrêt Softwarová: une révolution en droit d'auteur ou une 'erreur de jugement'?", article *supra*, at p. 62. In our view, there are not two *criteria* but rather one object which must fulfil the single criterion of originality.

75. *Ibid*; D. Gervais and E. Derclaye, "The scope of computer program protection after SAS: are we closer to answers?", *EIPR* 2012, 34(8), p. 565, at p. 568.

76. Article 1(2).

77. The position is intended, in order to allow the Directive's scope to evolve: if there had been an overly precise definition of a computer program, it might soon have become obsolete in an evolving sector. See the European Commission's remarks, Proposal for a Directive, COM(1988) 816 final, cited in the Advocate General's Opinion, case C-406/10, 29 Nov. 2011, *SAS Institute Inc. v. World Programming Ltd*, *supra*, paragraph 46.

78. CJEU, 22 Dec. 2010, case C-393/09, *BSA*, *supra*, paragraph 35; CJEU, 2 May 2012, case C-406/10, *SAS*, *supra*, paragraph 35.

79. CJEU, 22 Dec. 2010, case C-393/09, *BSA*, *supra*, paragraph 33; CJEU, 2 May 2012, case C-406/10, *SAS*, *supra*, paragraph 34.

80. CJEU, 22 Dec. 2010, case C-393/09, *BSA*, *supra*, paragraph 38. The reasoning is implicitly taken up in the *SAS* judgment: CJEU, 2 May 2012, case C-406/10, *SAS*, *supra*, paragraph 38.

81. Advocate General's Opinion, 14 Oct. 2010, case C-393/09, *BSA*, *supra*, paragraphs 47 and 59 *et seq.* ("contrary to other works protected by that right which appeal directly to the human senses, a computer program has a practical purpose and is therefore protected as such"). On the preparatory design material, which is protected when it leads to the creation of a program: *ibid*, at paragraphs 62-64.

82. See *infra*, the second part of this study.

83. At any rate, that is how the Court rephrased the question (paragraph 29). To be precise, the British court asked whether "it is not an infringement of the copyright in the first program for a competitor of the rightholder [...] to create another program [...] which replicates the functions of the first program" (see paragraph 28 of the *SAS* judgment).

84. Advocate General's Opinion, case C-406/10, 29 Nov. 2011, *SAS Institute Inc. v. World Programming Ltd*, *supra*, paragraph 55.

85. See, on the distinction, H. Croze, "La (non) protection des fonctionnalités et de l'algorithmique", *Le logiciel entre brevet et droit d'auteur - le logiciel après la loi du 10 mai 1994 Transactive*, *CUERPI* 1996, p. 81, at p. 86.

86. Advocate General's Opinion, case C-406/10, 29 Nov. 2011, *SAS Institute Inc. v. World Programming Ltd*, *supra*, paragraph 63: "The structure of the program will define the program's functionalities and describe the combination of those functionalities. The very function of the program [...] will dictate that combination. [...] Whatever its nature and scope may be, it is my view that the functionality, or indeed the combination of several functionalities, continues to be comparable to an idea and cannot therefore be protected, as such, by copyright."

87. In this respect, the question whether the amount of detail with which the functionality was replicated affects the analysis (subparagraph (d)) of the second preliminary question is logically settled by referring it back to the national court to assess the originality of the reproduced elements (*ibid*, paragraph 67).

88. *Computer Associates International, Inc. v. Altai, Inc.*, 23 *USPQ* (*United States Patent Quarterly*) 1241 (2d Cir. 1992).

89. Directive of 14 May 1991 on the legal protection of computer programs, codified by Directive 2009/24/EC of 23 April 2009, *supra*, recitals 13 to 15: "Whereas, for the avoidance of doubt, it has to be made clear that only the expression of a computer program is protected and that ideas and principles which underlie any element of a program, including those which underlie its interfaces, are not protected by copyright under this Directive; Whereas, in accordance with this principle of copyright, to the extent that logic, algorithms and programming languages comprise ideas and principles, those ideas and principles are not protected under this Directive; Whereas, in accordance with the legislation and jurisprudence of the Member States and the international copyright conventions, the expression of those ideas and principles is to be protected by copyright;"

90. H. Desbois, *Le droit d'auteur en France*, Dalloz, Paris, 1978: "Ideas, as such, taken in themselves, independently of the form in which they have been clothed, may not be appropriated. Only the form in which the idea has been presented gives rise to exclusivity, provided that it is original." A. Lucas and H.-J. Lucas, *Traité de la propriété littéraire et artistique*, *op. cit.*, no. 302, p. 243, and the numerous references cited there. Compare, in US law, D.J.M. Attridge, "Copyright Protection for Computer Programs", *EIPR* 2000, 12, p. 563,

who concludes the study with the following proposal: “copyright law should adopt a restrictive approach to the protection of ideas”.

91. WIPO Copyright Treaty of 20 Dec. 1996, Article 2.

92. CJEU, 2 May 2012, case C-406/10, *SAS*, *supra*, paragraph 40.

93. *Ibid*, paragraph 41.

94. *Ibid*, paragraph 40; Advocate General’s Opinion, case C-406/10, 29 Nov. 2011, *SAS Institute Inc. v. World Programming Ltd*, *supra*, paragraph 57.

95. See, in connection with France’s revolutionary laws, referring to a regulation of “industrial progress”, E. Pouillet, *Traité des dessins et modèles de fabrique*, 3<sup>rd</sup> ed., 1899, Marchal et Billard, p. 12. In 1762, Louis XV had signed a declaration to regulate the privilege granted to inventors for the purpose of “stimulating the development of the inventive spirit and the progress of industry” (cited in J. Schmidt-Szalewski and J.-L. Pierre, *Droit de la propriété industrielle*, Litec, Paris, 2007, p. 5).

96. European Parliament, Report on the Jurisdictional System for Patent Disputes, 2011/2176(INI), Legal Affairs Committee, 10 Jan. 2012. See, for example, P. Véron, “Quel modèle pour le système juridictionnel des litiges des brevets en Europe?”, *Gaz. Pal.* 2011, 344, p. 30; J.-C. Galloux and B. Warusfel, “Aspects juridictionnels et procéduraux des brevets européen et communautaire”, *Propr. intell.* 2009, 30, p. 9; C.N. Pehlivan, “The creation of a single European patent system: from dream to (almost) reality”, *EIPR* 2012, 34(7), p. 453.

97. CJEU, Full Court, Opinion no. 1/09, 8 March 2011, Europe no. 5, May 2011, study 5 by D. Simon; *Journal du droit international (Clunet)* no. 2, April 2011, chron. 4, p. 555, note D. Dero-Bugny; *EIPR* 2011, 33(7), p. 409, A. Poore.

98. The question was whether there was an act of copyright infringement under Directive 91/250 in the event that “a competitor of the rightholder without access to the source code of the first program, either directly or via a process such as decompilation of the object code, [created] another program which replicates the functions of the first program”.

99. CJEU, 2 May 2012, case C-406/10, *SAS*, *supra*, paragraph 51. In this study, we shall not discuss in detail the developments concerning the scope of Article 5(3) and the questions concerning decompilation submitted to the Court even though WPL had not carried out any decompilation in this case. See D. Gervais and E. Derclaye, “The scope of computer program protection after *SAS*: are we closer to answers?”, *EIPR* 2012, 34(8), p. 565, at p. 570 *et seq.*

100. *Computer Associates International Inc v Altai* (1992), cited *supra*; *Lotus Development Corp. v. Borland International, Inc.*, 49 F.3d 807 (1st Cir. 1995), on which: M. Schwarz, *Copyright Protection is ‘Not on the Menu’: Lotus Development Corp. v. Borland International, Inc.*, *EIPR* 1995, pp. 337-339. See, for example, E. Derclaye, “Software Copyright Protection: Can Europe Learn From American Case Law?”, *EIPR* 2000, 2, p. 56, at p. 57 *et seq.*; P. Samuelson, T. Vinje and W. Cornish, “Does copyright protection under the EU Software Directive extend to computer program behaviour, languages and interfaces?”, *EIPR* 2012, 34(3), pp. 158-166, at p. 161.

101. Along the same lines, in France, stating that “the functionalities of software, defined as the implementation of its ability to perform a precise task or to obtain a given result, do not, as such, enjoy copyright protection, where they only correspond to an idea”: Cass. 1<sup>st</sup> Civ., 13 Dec. 2005, no. 03-21.154, *Bull.*, 2005, 499, p. 420, *RLDI* 2006, 14, *Éclairage* 396, p.

15, note P. Belloir; *JCP E* 2006, 23, 1896, note P. Masquart; *RTDCom* 2006, p. 79, obs. F. Pollaud-Dulian; *Prop. ind.*, March 2006, 3, comm., 27, J. Schmidt. See also (and more broadly): S. Carre, “Actualité(s) du logiciel”, *Prop. ind.*, June 2006, 6, study, 16.

102. For a criticism of the “merger doctrine” by eminent US authors, see Laddie, Prescott and Vitoria, *The Modern Law of Copyright and Designs* (3<sup>rd</sup> ed., 2000), nos. 3.74 to 3.80, deploring “the ‘idea-expression fallacy’”: “the maxim is obscure or, in its broadest sense, suspect”.

103. Advocate General’s Opinion, case C-406/10, 29 Nov. 2011, *SAS Institute Inc. v. World Programming Ltd*, *supra*, paragraph 52. In paragraph 54, the Advocate General takes as an example the case of an airline ticket reservation system, drawn from the *Navitaire / EasyJet* case heard in the British courts (High Court of Justice (Chancery Division), 30 July 2004, *Navitaire Inc. v. Easyjet Airline*, [2004] EWHC 1725 (Ch), *Com. com. électr.* 2005, 2, *Alerte* 66, by P. Kamina; *EIPR* 2004, 26(11), N192-193.

104. Advocate General’s Opinion, case C-406/10, 29 Nov. 2011, *SAS Institute Inc. v. World Programming Ltd*, *supra*, paragraph 55.

105. F. Macrez, “Logiciel: le cumulard de la propriété intellectuelle” in J.-M. Bruguière (ed.), *L’articulation des droits de propriété intellectuelle*, Dalloz 2011, p. 47.

106. Advocate General’s Opinion, case C-406/10, 29 Nov. 2011, *SAS Institute Inc. v. World Programming Ltd*, *supra*, paragraph 63.

107. F. Macrez, “Logiciel: le cumulard de la propriété intellectuelle”, article cited *supra*.

108. Advocate General’s Opinion, case C-406/10, 29 Nov. 2011, *SAS Institute Inc. v. World Programming Ltd*, *supra*, paragraph 76.

109. P. Roussel, “La maîtrise d’un langage de programmation s’acquiert par la pratique”, *Com. com. électr.*, April 2005, 4, study, 5 (also quoted in the Advocate General’s Opinion). See also M. Vivant, “Propriété intellectuelle et nouvelles technologies. À la recherche d’un nouveau paradigme.” in Y. Michaud (ed.), *Université de tous les savoirs - Les Technologies*, Odile Jacob 2002, p. 165.

110. Advocate General’s Opinion, case C-406/10, 29 Nov. 2011, *SAS Institute Inc. v. World Programming Ltd*, *supra*, paragraph 71.

111. M. Vivant, *et al.*, *Lamy Droit du numérique*, Lamy, Paris, 2012, no. 160.

112. See, for example in Great Britain: High Court of Justice (Chancery Division), 30 July 2004, *Navitaire Inc. v. Easyjet Airline*, cited *supra*, at §88: “What this recital [14], and the associated dispositive provision of Article 1(2), appear to be intended to do, is to keep the language free for use, but not the ideas expressed in it”. And, in the United States: *Lotus Development Corp. v. Borland International, Inc.*, *supra*, at p. 818.

113. Article 1(2), second sentence (emphasis added).

114. Which is categorically excluded by the Advocate General in an example of confusion between the object and the criterion that we criticised earlier (Advocate General’s Opinion, case C-406/10, 29 Nov. 2011, *SAS Institute Inc. v. World Programming Ltd*, *supra*, paragraph 71: “programming language is made up of words and characters known to everyone and lacking any originality”).

115. Formats of data files are a specific case: by deciding that the format of data files is not a “form of expression of the program” for the purposes of the Directive, the balance painstakingly found in the provisions on decompilation is upset. Indeed, the introduction of an exception for decompilation in Article 6 logically implies that protection for the logical interface exists under the same Directive. The desire that what strongly resembles basic information should be left free to use can be supported (although the referral to the “ordinary law” does not totally preclude protection). Having said that, it is not possible to depart from the text itself: what meaning is to be given to the existence of an exception if the monopoly that it was supposed to limit is withdrawn? The Advocate General’s approach, which was not taken up, was more convincing in that it sought to define the relationship with Article 6: *ibid*, paragraph 77 *et seq*.

116. CJEU, 2 May 2012, case C-406/10, *SAS*, *supra*, paragraph 39.

117. CJEU, 22 Dec. 2010, case C-393/09, *BSA*, *supra*, paragraph 38 *et seq.*, at paragraph 40: “the graphic user interface is an interaction interface which enables communication between the computer program and the user”.

118. Advocate General’s Opinion, 14 Oct. 2010, case C-393/09, *BSA*, *supra*, paragraph 73: “Behind the graphic user interface there is a complex structure developed by the programmer. He uses a programming language which, structured in a certain way, will create a special command button, for example, ‘copy-paste’, or permit an action, such as double-clicking on a file to open it or clicking on an icon to minimise an open window.”

119. See, for example, in Germany where case law notes that although the interface is implemented in the program’s structure, the program and the interface must be analysed as two different objects of law: OLG Düsseldorf, 29 June 1999, *CR* 2000, 184 – *Framing*; OLG Hamburg, 11 Jan. 2001, *ZUM* 2001, 519, at 521 – *Faxkarte*; OLG Hamm, 24 Aug. 2004, *MMR* 2005, 106. Similarly, in England: High Court of Justice (Chancery Division), 30 July 2004, *Navitaire Inc. v. Easyjet Airline*, cited *supra*.

120. It should be clarified that the latter may not exist in the case of an interpreted language (usually “scripting” languages) which is executed by an interpreter program and not directly by the machine. A “source code” (actually a script) is present whatever the case.

121. Emphasis added.

122. V.-L. Benabou, note *supra*, p. 208: “the interface considered as such is part of the software but not a big enough part to be assimilated to the whole. It is an *infra* software work”.

123. M.-A. Santopaolo, *Protection juridique des langages de programmation*, DEA dissertation, Montpellier, 2002, cited in M. Vivant, *et al.*, *Lamy Droit du numérique*, *op. cit.*, no. 160.

124. CJEU, 2 May 2012, case C-406/10, *SAS*, *supra*, paragraph 43: “if a third party were to procure the part of the source code or the object code relating to the programming language or to the format of data files used in a computer program, and if that party were to create, with the aid of that code, similar elements in its own computer program, that conduct would be liable to constitute partial reproduction”.

125. V.-L. Benabou, “Retour sur dix ans de jurisprudence de la Cour de justice de l’Union européenne en matière de propriété littéraire et artistique: les méthodes”, article *supra*, pp. 152-153 (for the two quotations).

126. F. Macrez, *Créations informatiques: bouleversement des propriétés intellectuelles?*, *op. cit.*, no. 546; M. Vivant and J.-M. Bruguière, *Droit d'auteur*, *op. cit.*, no. 64.

127. See, on this discussion, F. Macrez, *Créations informatiques: bouleversement des propriétés intellectuelles?*, *op. cit.*, no. 494 *et seq.* and the cited references; F. Macrez, "Les fonctionnalités du logiciel sont (toujours) de libre parcours", *RLDI* 2008, 36, *Éclairage*, 1195, p. 14.

128. CJEU, 4 Oct. 2011, *Premier League*, *supra*, paragraph 188: ("...given the requirements of unity of the European Union legal order and its coherence...").