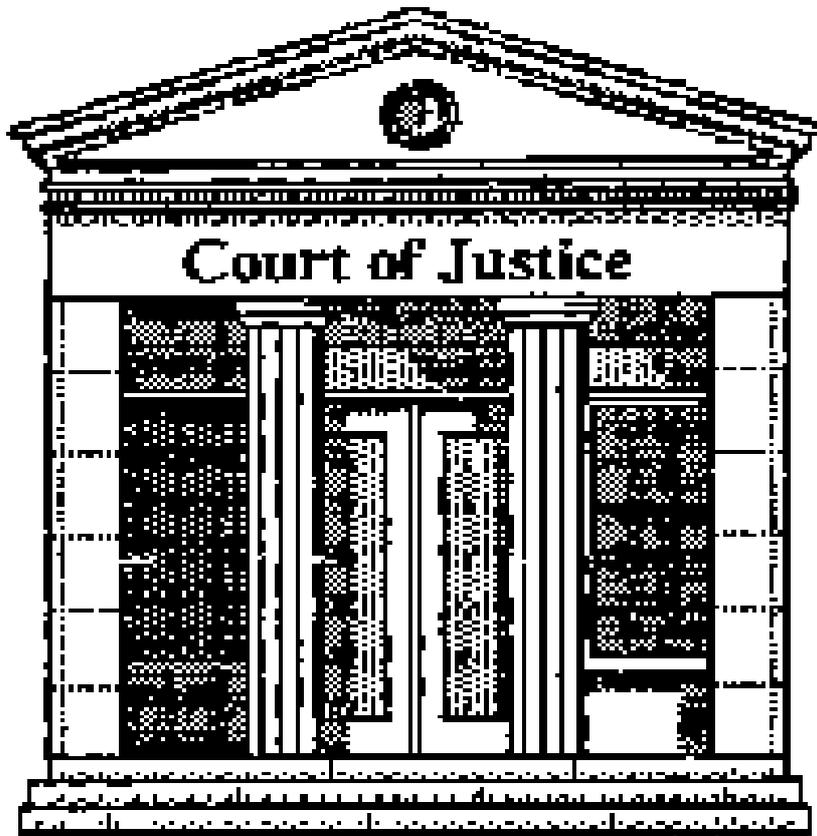




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# Hyperlaw A Legal Database for Teaching



by  
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### 1 Introduction

*Hyperlaw* is an in-house database using HyperCard on the Apple Macintosh. It has been developed over the last two years as a research project within the Department of Finance and Law at the Dorset Institute. Although it began as an exercise simply in HyperCard, the particular limitation of that medium arising from the use of scrolling fields (see section [6\(a\)](#) below) led to a parallel investigation of Guide, and the eventual aim of the project is to make a comparative evaluation of HyperCard and

Guide as bases for constructing learning materials in the form of a Hypertext database. *Hyperlaw* is the prototype of the HyperCard half of the project. It is still *in statu nascendi*, but it is hoped to have a version available for student use in September 1990.

## 2 Aim

The aim is to provide a selection of legal materials on a discrete topic in a form which would:

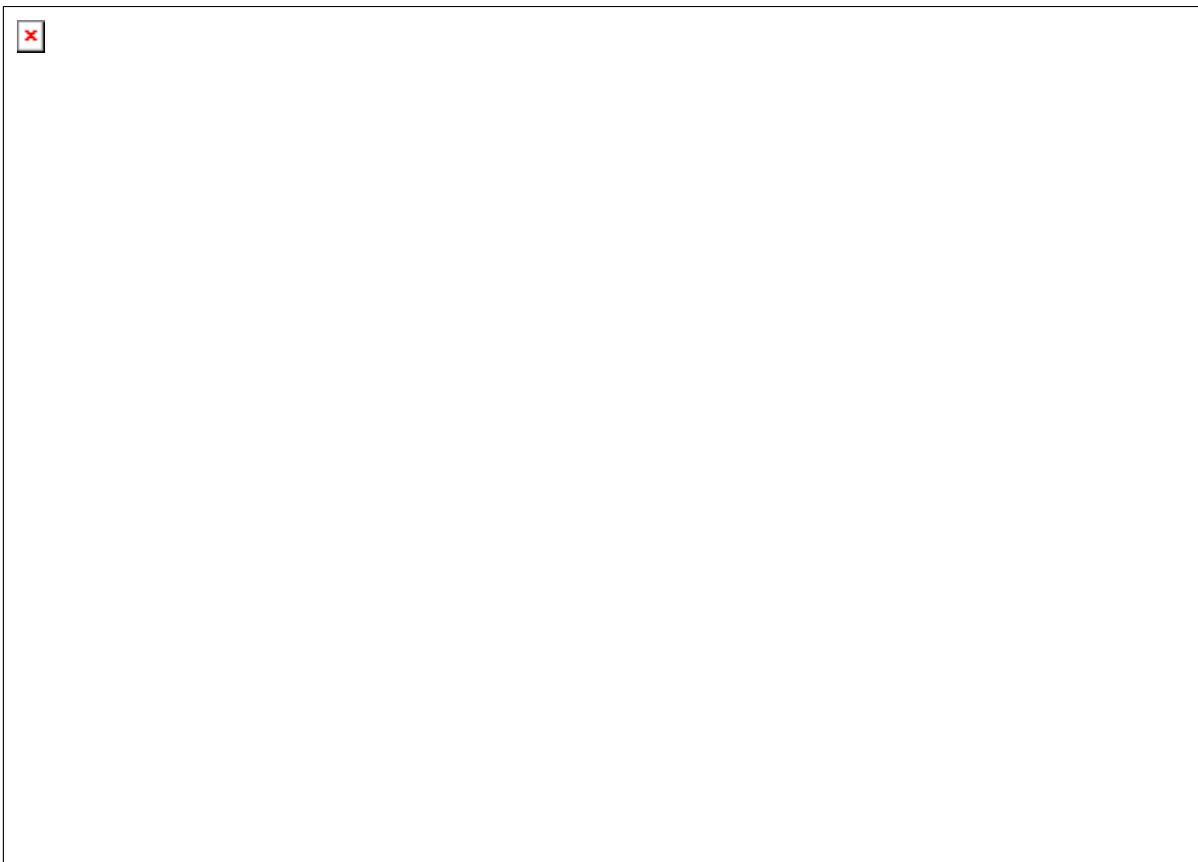
- (a) be easily accessible to law students without specialist computing expertise;
- (b) provide a reasonably complete view of the topic without becoming submerged in detail.

It was hoped to avoid the regrettable tendency of databases to accumulate amounts of information so huge that they become either ruinously expensive or unmanageable, or both.

Disqualification of company directors was chosen as the topic for the prototype, partly on the ground that the primary legislation (the Company Directors Disqualification Act 1986) is relatively short and self-contained; a ground which, however, turned out to be illusory!

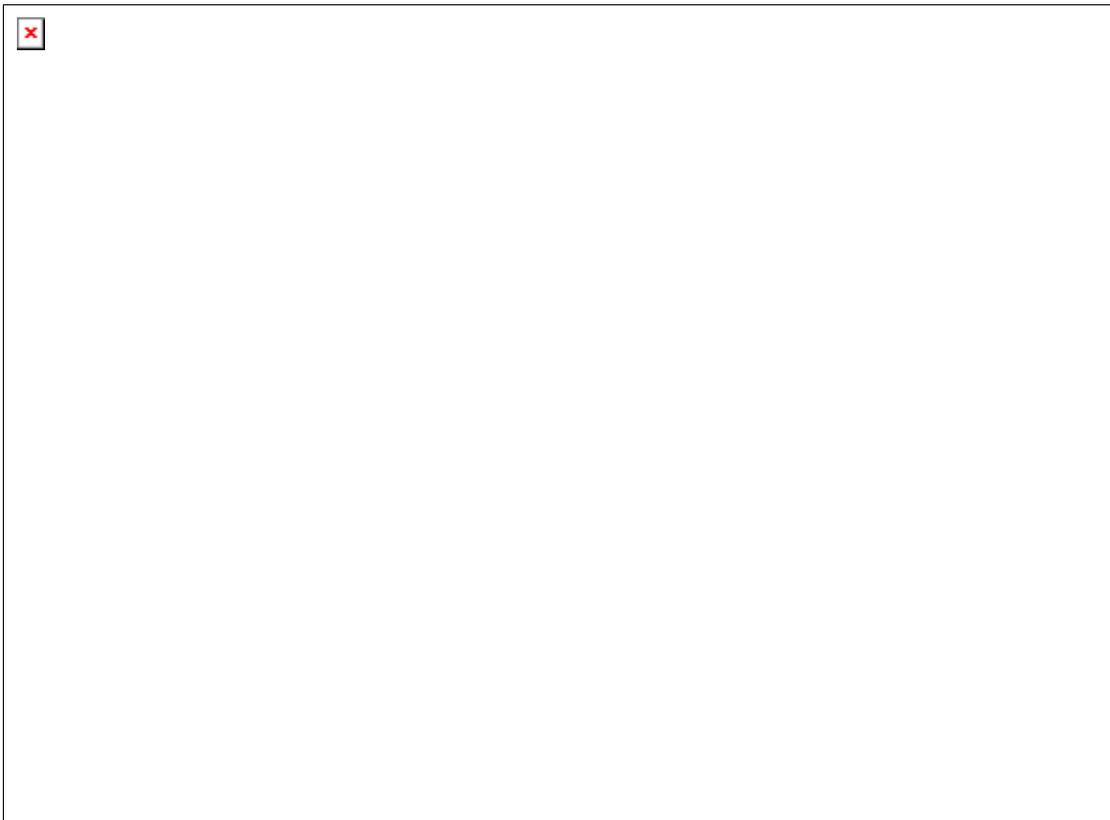
## 3 Structure

*Hyperlaw* offers four ways into its material: through notes, statutes, abstracts of cases and abstracts of articles. These four types of information are held in four sets of HyperCard stacks, the cards in each stack sharing a common background (for examples, see figures 5 - 8 below)

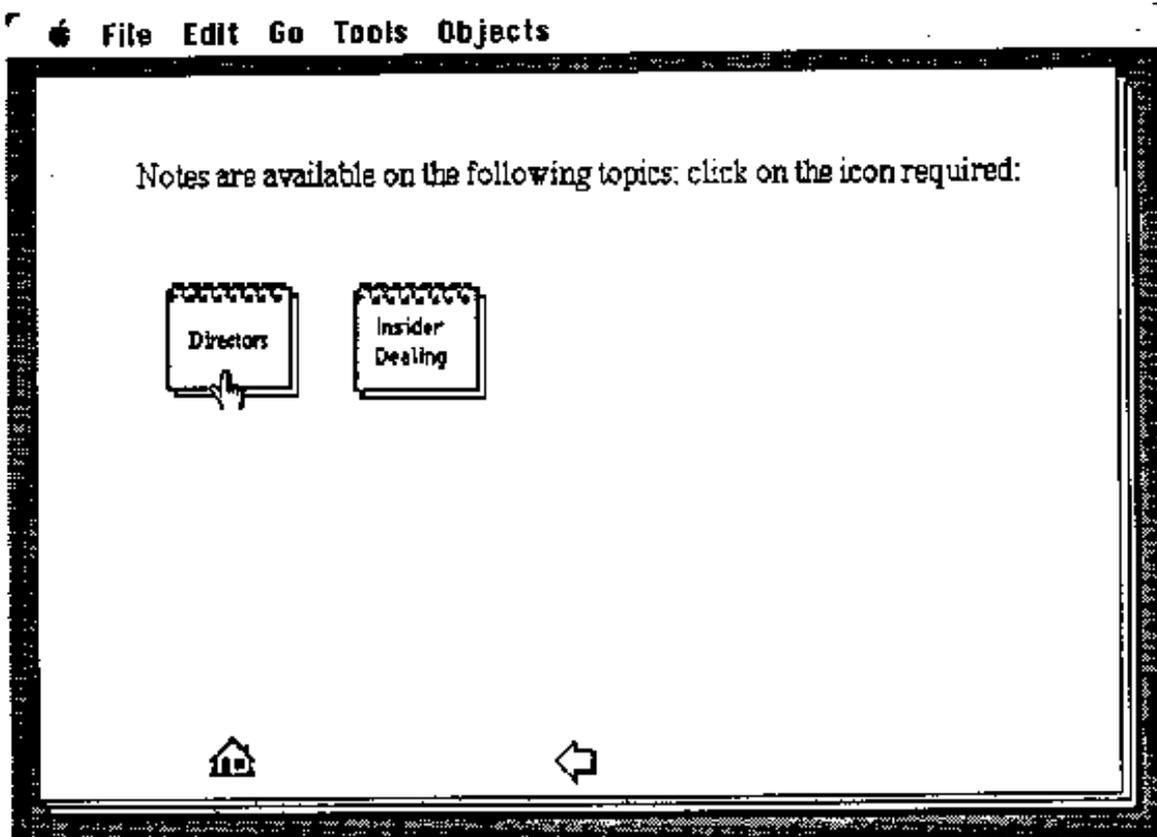


As with all HyperCard structures, *Hyperlaw* is based on a Home stack, and the user is first presented with the Home card (fig1.). Clicking on the *Hyperlaw* icon opens a small "Hyperlaw" stack which

gives a general introduction to the material, and invites the user to open one of the four sets of "law" stacks described above (fig2).

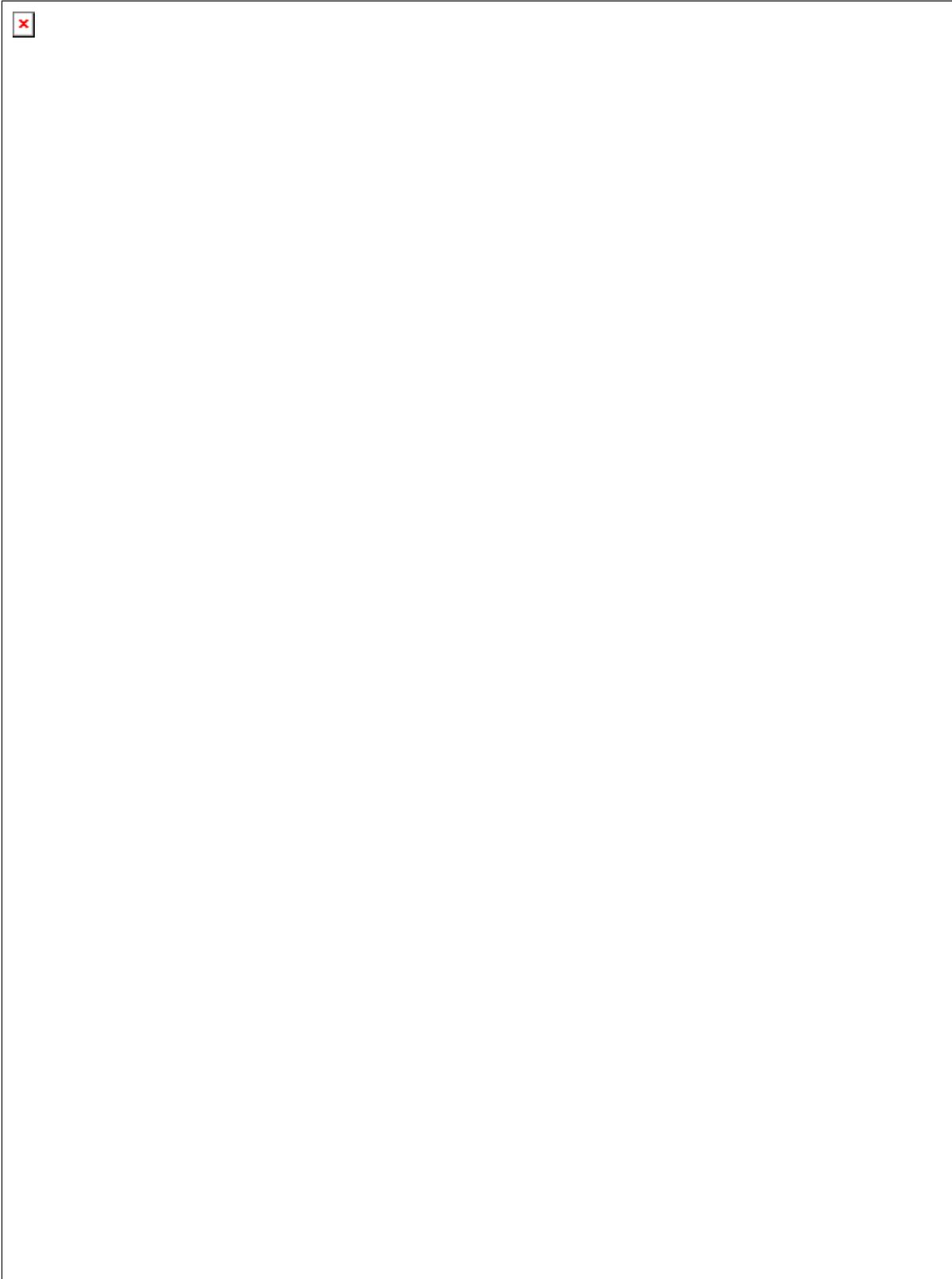


In fact, the next step takes the user not directly to the stack indicated, but to an intermediate "title" stack, which consists of index and "help" cards. For example, clicking on the "notes" button in the "Hyperlaw" stack moves the user to a card indicating the topics on which notes are provided (fig3); a further click on the "directors" button (the only one currently operative) produces a sub-index of topics concerned with directors. The topic currently available in the prototype is "disqualification", and a click on this button takes the user into the "notes" stack proper.



**Fig.3**

Each of the four sets of main "law" stacks has a similar small "title" stack operating as an index. A hierarchical structure is thus created from the Home card down through the Hyperlaw stack to the four title stacks, and thence to the substantive material. A diagrammatical extract of the structure, as it applies to the statutory material, is shown in fig4.



#### 4 Navigation

The strong navigational characteristics of HyperCard enable the user to move effectively around the material without being constrained by the hierarchical structure. The buttons in the title stacks use the general command to go to a named stack; but the individual cards are all cross-referenced as they are constructed, sometimes by writing on a button script; usually by using the "link to" command in the "button info" menu. An example of the operation of the cross-references is given below, [section](#)

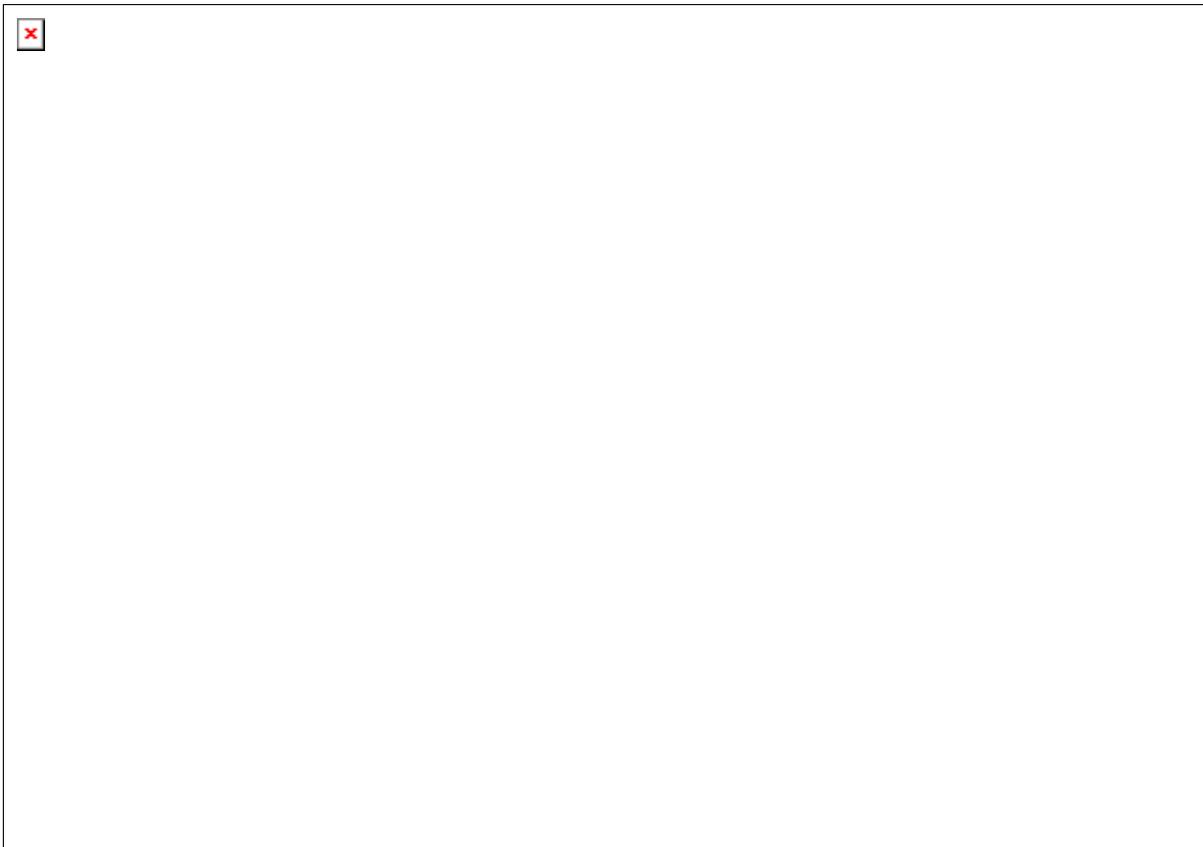
7.

## 5 Card Design

The cards are designed according to the different types of information held in each set of stacks.

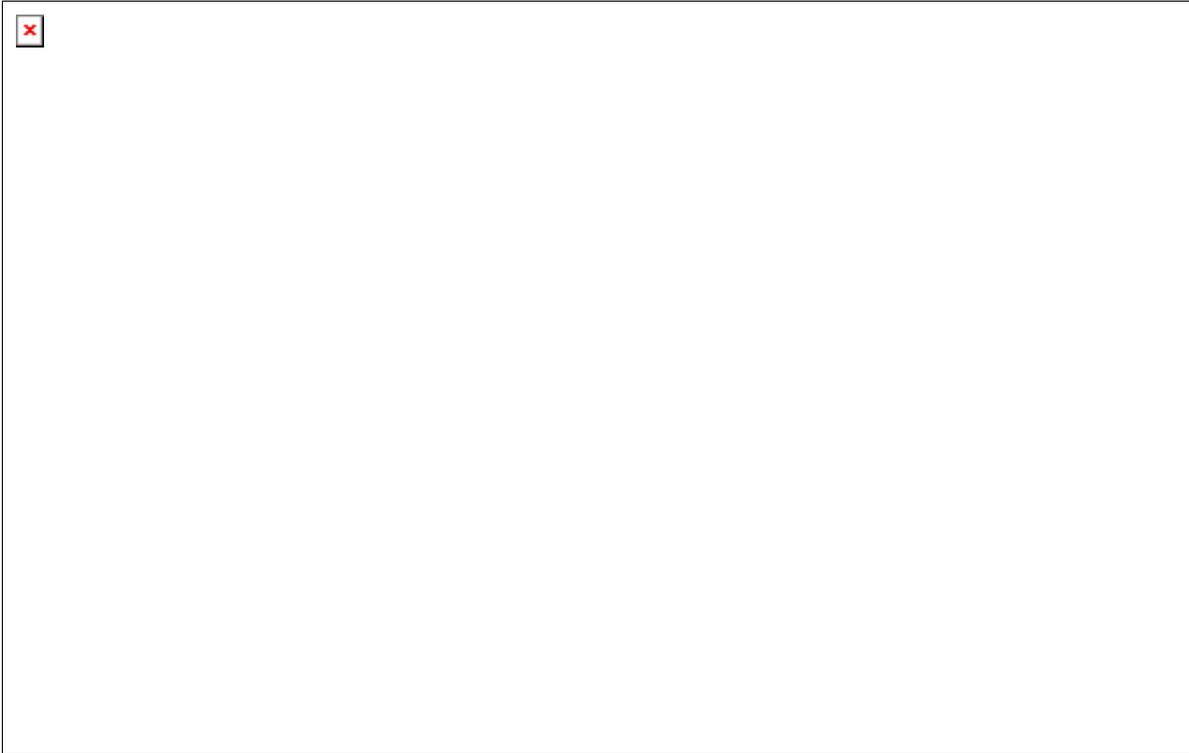
### (a) Notes

This is the simplest card, with a background heading and three fields for subheading, page number and text (fig5). In the first version, the text field scrolled; but this created a problem (see section [6\(a\)](#) below), and the scroll was removed, continuation pages being substituted. The peripheral icons are buttons, the house icon being a "go to home card" button which returns the user to the Home card.



### (b) Articles

This card contains more fields (fig6). Once again, the original scrolling "abstract" field has been replaced by continuation cards. Most of the fields are self-explanatory: "copy" merely enables the user to indicate whether (s)he holds a copy of the article described. The "cross refs" field is used to list (by author or other indicator as required) other relevant articles; each name is a button which will turn up particulars of the other article named. The "keywords" field enables the user to add chosen keywords which can be used to browse on a particular topic by using HyperCard's "find" facility. In addition to the obvious background buttons, the "card-in-hand" icon enables a "sort" button which will enable rearrangement of the cards by author or date if they become disordered (e.g. by the insertion of new ones into the wrong place in the stack). It would be possible in principle to add a button allowing access to the full text of an article; but no attempt has been made to do this in *Hyperlaw*.



### (c) Statutes

Once again, the fields on this card (fig7) are fairly obvious. The unnamed field at the top of the card allows addition of headings from the statute; the main field contains the text. Each subsection is allocated one card. This has been found generally adequate, although very occasionally an unusually long provision such as section 744 of the Companies Act 1985 (a definitions section) requires continuation cards. The buttons are simple: "notes" allows the user to return to the notes index; "back" allows him to return to the previous card (not necessarily the preceding subsection); "index" returns him to the index of statutes; "sort" again allows restacking in serial order of disarranged cards. References in the text of the statute to other provisions are also buttons which cross-reference to the text of those provisions, in whatever statute they are found. One lesson learnt early on was that even an apparently short statute like the Company Directors Disqualification Act may contain an unsuspected multitude of cross-references, which in turn lead to others in other statutes, and the stacks tend to grow very fast.

File Edit Go Tools Objects

**COMPANY DIRECTORS DISQUALIFICATION ACT 1986**

s. **2 (1)** Disqualification on conviction of indictable offence

The court may make a disqualification order against a person where he is convicted of an indictable offence (whether on indictment or summarily) in connection with the promotion, formation, management or liquidation of a company\*, or with the receivership or management of a company's property.

Notes

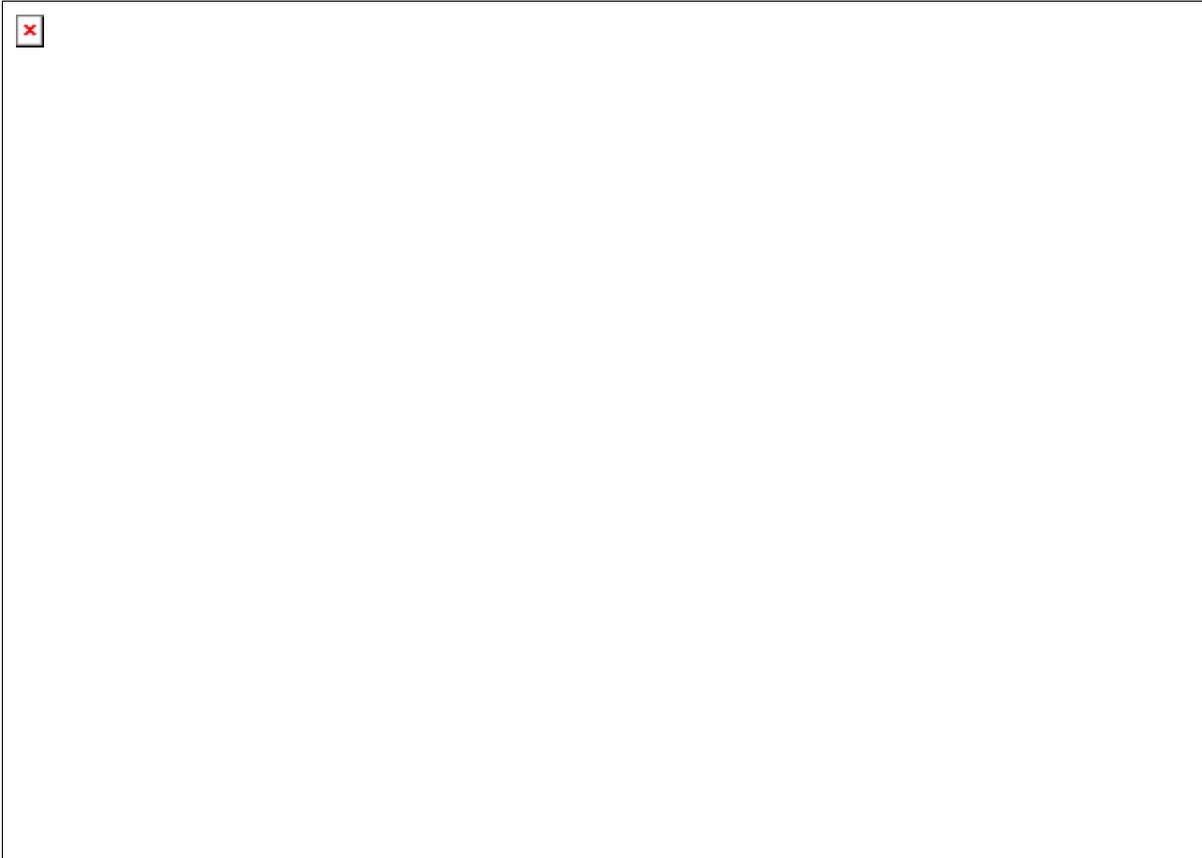
\* "in connection with the management of a company": see R v Campbell [1984] BCLC 83

Back Notes  
Sort Index

Fig.7

## (d) Cases

This card (fig8) is fairly self-explanatory. The "cross refs" filed lists some other related cases; the names are buttons which lead to the relevant card. Keywords can be inserted to meet the user's needs, and searched using the "find" tool in the "Go" menu. Other cases of statutory provisions in the text (once again, the scroll has been abandoned) are buttons referring to the relevant cards in the same or other stacks.



Of the peripheral buttons in the card background, most are obvious. The "sort" button allows sorting by name or date; the "full" button allows the user to access LEXIS via specially written software using the Red Ryder communications package. At present, this facility is somewhat cumbersome, and takes the user into LEXIS only as far as the NAME prompt in the Cases library. The user must type in the name of the case in order to reach the text of the full report.

### **(e) The Dustbin**

Although *Hyperlaw* is a prototype, which sets out to deal with a relatively small and self-contained topic, it quickly became apparent that even within the "small" topic of director's disqualification the number of cross-references in the statutory material alone was growing too fast for comfort. Bearing in mind Bacon's maxim that "it were infinite for the law to consider the causes of causes", it was decided to set a limit to the extent of the database for practical reasons. *Hyperlaw* thus contained a number of "dead ends" (particularly, but not exclusively, references to repealed legislation) where the user is sent to a "dustbin" card; a catch-all disclaimer which refers him to the library.

## **6 Problems**

Like all constructors of prototypes, the author has encountered some problems. Some are briefly noted here; not in any particular order of importance.

### **(a) Scrolling fields**

When the cards were first designed, it seemed obvious that the HyperCard facility of the scrolling field was tailor-made for those items in any of the stacks where the amount of text outran the small size of the card, and such fields were put into the background of all the cards. But the problem is that HyperCard buttons are located with respect to the screen, not the text displayed on it, so that when

the text is scrolled, all the cross-references built into it are displaced and immediately become useless. It was this which first led to the consideration of Guide, the buttons of which *are* located in the text; but this medium remains to be explored.

### (b) Word Processing

One of the limitations of HyperCard is the relatively crude nature of the word processing facility: text characteristics can be set within each field, but not varied, so that (for example) references which are buttons cannot be identified by the use of bold or italic type, paragraphs can only be indented by the use of the space bar because the tabulator key is a function key, moving the user to the next field on the card. It is rumoured that HyperCard 2 will show an improvement in this respect.

### (c) Subsets

It is difficult to isolate subsets of cards from a stack. For example, there is a stack of "case" cards called "director's cases". To isolate the cases concerned with disqualification, it would be possible to copy the relevant cards and create a new stack called "disqualification cases"; but this would involve a lot of wasteful duplication, using valuable memory. To avoid this, *Hyperlaw* uses a specially written button script behind the "Disqualification" button in the cases index to search for relevant cases in the "keywords" field. This involves the user pressing the Return key to move on to each new case, and is thus a deviation from the button principle which makes navigation error more likely. It is hoped to devise a better way to find selected subsets of cards.

### (d) Buttons

The buttons in *Hyperlaw* have all been set manually. This is tedious (although in practice not as slow as might be thought). Successful cross-referencing depends on setting the buttons on each card as it is generated. If *Hyperlaw* is to be significantly extended, ways must be found of speeding up this process, while maintaining accuracy of linkage and avoiding superfluity.

## 7 A sample of *Hyperlaw*

To illustrate a typical path through the *Hyperlaw* stacks, suppose that the moves outlined in section 3 above have brought the user to page 1 of the notes on disqualification of directors (fig5). The user wishes to investigate the point on offences in connection with the management of the company. A click on the reference to s2. will take him to the text of the first subsection of that section (fig7). In the "notes" field at the bottom of the card is a reference to the case of R v Campbell. Clicking on this produces a note of the case (fig8), from which (if he wishes) the user can move to other cases noted in the "cross refs" field, or call up LEXIS and examine the full text report; or return (by using the "back" button) to the text of the statute, and look at the rest of section 2 by clicking on the "next" arrow at the bottom of each card.

## 8 Conclusion

*Hyperlaw* so far only works in the office; it has not been fully tried on students. If carefully constructed, it can clearly provide (perhaps on annually updated CDs) a useful customised learning resource which might mitigate some of the difficulties inherent in numbers of students making multiple journeys to use a necessarily limited collection of reference material in the library, and

having to do all their cross-referencing manually. It will not of course *replace* such reference material, but may allow "open" or "distance" treatment of selected topics. Its success will clearly depend on the quality of selection of the material to be included in any given topic, and experience has shown that even apparently limited topics generate a large amount of potential material; but it seems feasible and worth trying.

As a resource for professional use, *Hyperlaw* has potentiality, although the criteria for selection of material will have to be more stringent, and the material itself more complete, which raises the inevitable questions of resourcing for its construction and maintenance. Such an extension would only be worthwhile if better ways can be found of importing text into HyperCard and processing it within that medium; not least by writing a satisfactory automatic button generator to streamline at least the bulk of cross-referencing.