is particularly useful where the customer may wish to express product feature preferences and view the corresponding proximity of each offered product. The result is a ranking of products, which can be tuned by the customer by varying the preferences and viewing the consequent effect on the ranked list (Stolze 1998). Such a tool encourages the user to consider non-price-related features, and helps the customer to explore the trade-off between product features and price. This is not just of benefit to the customer, because providers are also keen to have a means of drawing attention to their products' distinguishing features other than price (Guttman et al. 1998).

The catalogue therefore helps the customer make an informed purchase decision, and can facilitate product purchase either via the Session Agent or, as may be preferable in some business scenarios, directly with the selected insurer.

SUMMARY AND FUTURE WORK

The ViMP system described in this paper satisfies the necessary design criteria to support a market place for complex products and services such as insurance. A prototype has already been developed and a demonstration system has been installed on IBM's intranet. A more substantial pilot implementation, trading real insurance products, is planned for 1999 in partnership with a major insurance company. Further work is planned which will allow market specific rules to be defined independently of the set of providers attached to the market place. This will allow the ViMP market place infrastructure to support more than one electronic market place, with individual providers being able to advertise multiple products in multiple market places. An example of the type of market specific rules to be handled would be locally imposed compliance legislation such as national regulations for the sale of investment and pension products.

The need for common data definitions, to be used by all providers, and their management within the market place, have been left outside the scope of this paper, but are an essential pre-requisite for the successful development of a commercial electronic market place (Dogac et al. 1998).

There is also scope to extend the product description and matching languages used by the traders. Application of ViMP to a business services market place is planned which will bring together the semi-autonomous entities which form a virtual enterprise. It remains to be seen what further extensions to the ViMP architecture will prove necessary to cope with the different realm of business services, though we believe that such business to business trading of services will demand many of the design features already incorporated within ViMP.

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ELECTRONIC COMMERCE IN (RE-)INSURANCE INDUSTRY

BY STEFAN SIEGER, FINANCIAL PROJECTS AND DIVISIONAL INFORMATION TECHNOLOGY, SWISS RE, SWITZERLAND*

INTRODUCTION

Today the term "Electronic Commerce" encompasses different aspects of electronic communication. The definition varies depending on the industry in question and the technology and provider used. The (re-)insurance industry understanding of it is a combination of business strategies and distributed processes using multiple technologies to manage the transaction of information between business entities by exchanging and processing recorded information electronically supporting the underlying relationship. This therefore includes unstructured (e.g. e-mail) and structured (e.g. EDI) electronic data transfer.

The following article shall focus on Electronic Commerce market initiatives - on a international and cross community scale - in the business-to-business sector of the

insurance industry (especially the electronic communication between broker, insurance and reinsurance company) and not on the waste field of the business-to-consumer sector of the primary insurance companies. It also shall show the peculiarities of the processes involved in the insurance industry in the light of the possibilities of the new technologies used in Electronic Commerce.

* Stefan Sieger
(Stefan_Sieger@swissre.com)
is responsible for Electronic Commerce
Market Initiatives within Swiss Re
Zurich. In this function he represents
Swiss Re in different international
standardisation bodys and is chairman
of the Electronic Insurance Commerce
Switzerland Group
(EICS; http://www.eicswiss.ch).

INITIATIVES IN THE INSURANCE INDUSTRY

Despite the increasingly rapid advances made in the field of technology (PC, networking, Internet), companies in the insurance industry are making the most use of the new technical possibilities offered today in their internal operations only, while hardly employing them at all when communicating with their business partners. It consequently comes as no surprise that many of the work processes used in the insurance industry are still inefficient and prone to error, one reason being the necessity for data to be re-entered many times. To increase the efficiency of daily business in the insurance industry, a number of initiatives have been launched in the field of Electronic Commerce.

In 1987 8 major Continental-European non-life (re)insurers founded the RINET Community (Reinsurance and Insurance NETwork). The aim of this network was and still is to take advantage of new technologies to allow it to capitalise on the possibilities offered by electronic commu-
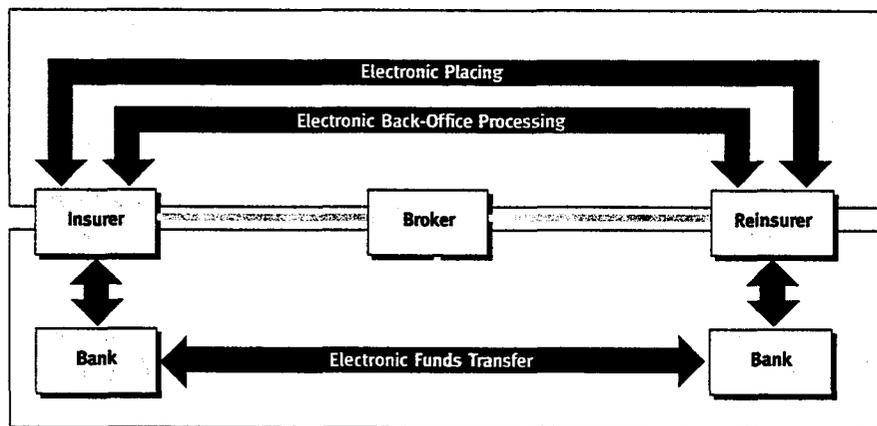
nication for the exchange of data more efficiently and effectively between primary insurers, brokers and reinsurers. In 1992 RINET and LIMNET (London Insurance Market NETwork), BRMA (Brokers and Reinsurance Market Association) and RAA (Reinsurance Association of America) formed the JV (Joint Venture) aimed at defining internationally valid and recognised EDIFACT standards (UN/EDIFACT approved) for data transfer between primary insurers, brokers and reinsurers. 1995 saw WIN (World Insurance Network) take part in the JV and 1998 IVANS (Insurance Value Added Network Services). The development of EDI standards for placing and for the back office has since been completed. With EPS (Electronic Placing Support) and ECA (Electronic Claims and Accounting) LIMNET is targeting a standardisation of the processes in the London market (partly based on international EDI standards for JV). GBS (Global Broking System) and WIN (World Insurance Network) are brokers' pilot projects which, in a first phase, accommodate the needs of the placing area in particular. In the US efforts are also being made to define some common EDI standards for the life business cycles.

Even if most of the pilot projects have been so far limited to the exchange of structured data, current projects target the entire field of Electronic Commerce. For example, the RINET Community is researching and promoting the deployment of solutions for the entire electronic com-

munication loop (see below) using the RINTrade concept. Assessments and tests of the practicability of solutions for the demands of the placing area constitute the main focus.

To put it in a nutshell: a lot of initiatives have been launched so far, but none of them could really establish as THE initiative. To many communities with different 'traditions' and 'cultures' are looking for individual solutions; also trying to take on some of the old processes into the new world. Only slowly do the communities realise that doing Electronic Commerce does not mean keeping the current processes (well established for the paper world) but re-engineering them.

It therefore comes with no surprise that in mid-July 1998 top-level management at RINET, LIMNET and WIN joined efforts to discuss possibilities and ways of creating one global organisation and vision that would eliminate the existing overlap between the various communities. The steering committee will put forward concrete proposals at the end of November 1998.

ELECTRONIC COMMUNICATION LOOP

In order to understand and describe in more detail the features of the so called electronic communication loop of the insurance industry, it has been splitted down into the three fields of electronic placing, electronic back-office processing and electronic banking and electronic funds transfer.

ELECTRONIC PLACING

Data exchanged for the placement of risks are in most cases not created in one single system. They come in many various forms and in different stages of completion. They mostly are in the form of unstructured data. The processes used in companies and markets are often not comparable with their counterparts in other companies and markets. The insurance business is a people business, and it is thus highly likely that it will remain only partly automated in the future. Another factor to be borne in mind is that electronic documents (e.g. email) are far from being of equal importance to a letter or fax (especially looking at the legal validity on an international scale). As soon as a deal has been settled the data on the contract will be entered in a business system and will be transformed into a structured format.

ELECTRONIC BACK-OFFICE PROCESSING

The back-office aspect stands out for its ability to be standardised in terms of both processes and data, the latter of which are produced in bulk. As the data are already compiled in a system in structured form, it is easy to convert and transmit them automatically in a standardised general form (EDI). By skilfully linking (referencing) technical statements of account and accompanying detailed information in supporting messages (such as bordereaux, claims and messages regarding premium calculations), there is theoretically no limit to the amount of data that can be transferred. The marginal costs of sending an additional item of information that has already been entered into the system are actually almost zero. The same conditions apply to the recipient, although receiving electronic data and, in particular, further processing them fully automatically makes high demands on the interface. Furthermore, the automatic processing calls for constant high quality standards (especially as far as implementation is concerned)

ELECTRONIC BANKING AND ELECTRONIC FUNDS TRANSFER

The comments made on electronic back-office processing can virtually all be applied to data transferred in electronic banking. Although the messages are far from being as complex, given the security measures (electronic signature, encryption) necessary, some additional barriers have to be overcome that emerge as a result of the banking world's slower pace in introducing internationally accepted and implemented standards for communication between clients and banks. The standards used in the banking industry for intra-banking communication (e.g. SWIFT used for electronic funds transfer) are well and successfully implemented and used, but not the standards to get into the banking industry (today still too many banks have different standards with different national dialects and procedures in place which make it especially for global reinsurance companies not easy to scope with).

OUTLOOK

The last section shows how Electronic Commerce could influence and change the processes and the roles employed in the reinsurance industry.

PLACING

The possibilities made available by new technologies such as desktop video-conferencing, whiteboarding, imaging, partly automated placing programs, as well as plans of how to save relevant business documents across the industry in electronic form on secure data servers, will greatly facilitate the access to underwriting information. Processing and assessing information rather than creating it will pose the greatest challenge in the electronic global marketplace. To this end, new, efficient tools and processes will have to be developed. It is also important that personal contact between market participants not be neglected. Modern technology can only partly replace face-to-face negotiations. Consequently, a local presence and Electronic Commerce are not incompatible. By employing the new technologies and possibilities as integrated part of their

job underwriters will be able to focus on the more delicate and complicated cases as well as provide their clients with first-class service and support.

BACK OFFICE AND BANKING

The more recent releases of the major standard reinsurance applications will all be equipped with JV-EDI interfaces. For this reason, EDI will become a tried and tested integral part of both non-life and life business. By using clear references and labels for the data, it will be possible to process a large share of the electronic data traffic fully automatically - it will even be possible to automatically control and

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RINET
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WIN
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URL http://www.worldins.com

compare it with available in-house reference data. The references from insurance-related messages will be taken over in banking orders as well, so that credits and debits can be allocated to the relevant transactions both simply and automatically (fully-automated payment transactions). Now that employees in back-office departments are being relieved of monoto-

nous and error-prone copy typing exercises, they can focus increasingly on complicated cases and quality assurance. Employing EDI messages not only allows a standardisation of data at a technical level but also results, indirectly, in a standardisation of data definitions and contents. It therefore might result in an improvement of quality and understanding.

CONCLUSION

It is evident that there still lies an enormous potential in the insurance industry as far as doing-business-more-efficient is concerned. It is also foreseeable that the use of new technologies will change existing processes as well as create new business forms. It must not be forgotten that the reinsurance business has a long tradition and is far more complex and therefore less standardizable as business in other industries. It is therefore understandable (especially when looking at a partly non-existing cost-conscious) that the pace in implementing new technologies has been slower than elsewhere.

In conclusion it can be said that the next few years will see a lot of changes in the field of Electronic Commerce in the insurance industry. This can clearly be seen in the investments being made by insurance market participants in the pilot schemes mentioned above, in the growing interest of software providers in developing solutions for Electronic Commerce and in market participants' realisation of the importance of this field. However, it should not be forgotten that, at the end of the day, technology will not be the decisive factor for success or failure but rather the content of information that is transmitted electronically and those responsible for it.