

# NPS UPDATE

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Newsletter of the South African National Payment System (NPS) reform initiative

Effective means of making payments is a prerequisite for economic activity. It is difficult to imagine how any modern economy would function without the ability to transfer funds from a buyer to a seller. Paper-based payment instruments, such as cheques, have played a major role in decreasing the public's dependence on cash, and the advent of electronic payment instruments has, and still is, increasing the options that are available to effect payments.

The term National Payment System (NPS) is used to describe all payment mechanisms and encompasses the underlying roleplayers, systems, agreements, associations, technology and legislation.

## Why reform the NPS?

Although South Africa has numerous sound and very efficient payment mechanisms, as well as a sophisticated infrastructure, the NPS as a whole has a number of shortcomings:

- A lack of information and systems to manage the inter-bank exposures resulting from payment transactions of banks' customers.
- Implicit dependence on the financial backing of the SA Reserve Bank to ensure that the clearing banks will be able to settle their daily exposures to one another.
- Legal uncertainty regarding multilateral netting as the basis for determining inter-bank exposures.
- Lack of appropriate mechanisms to make high-value payments.

The attention given internationally to the soundness of payment systems and the dependence of cross-border trade on the soundness of a trading partner's domestic payment system have also resulted in the South African

NPS being scrutinised by the international financial community. The main focus of international attention is on the reduction of the systemic risk inherent in national payment systems and, consequently, in cross-border payment systems. Systemic risk is the domino effect that results when one bank is unable to meet its obligations and other banks consequently default on their obligations, posing a threat of the whole financial system collapsing. This can have international ramifications, since a defaulting local bank can introduce the domino effect into the financial system of a foreign country.

## Blueprint for the future

To address these shortcomings, the South African banking industry launched a project to formulate a long-term strategy for the domestic payment system. The NPS project, as it has become known, is a collaborative exercise between the SA Reserve Bank and banks. The strategy-formulation phase of the project took 18 months of seri-

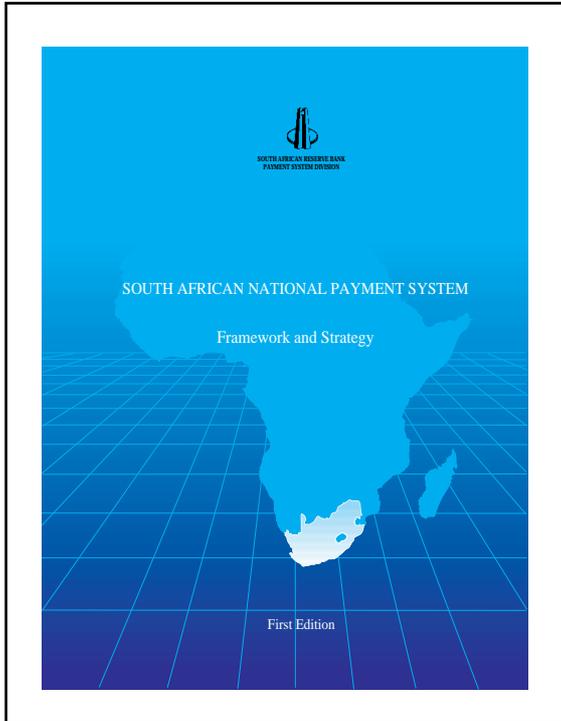
ous discussion and analysis and was officially rounded off on 15 November 1995 when the Governor of the SA Reserve Bank, Dr Chris Stals, and Dr Danie Cronjé, in his role as the then chairman of the Council of South African Banks

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(COSAB), jointly accepted the National Payment System Framework and Strategy as the guideline for the reform of South Africa's payment system.

International response to the South African strategy has been most encouraging. William J. McDonough, President of the Federal Reserve Bank of New York, remarked, "... I am particularly interested in efforts such as yours which focus attention on the impor-



tance of national payment systems for economic and financial stability. We have read your document with interest and applaud ... efforts to initiate a comprehensive strategy to modernize and advance South Africa's payment system ...".

Peter Allsopp, formally from the Bank of England, commented that "We would certainly endorse the overall approach, from the emphasis on user needs through to the clear identification of responsibilities once the NPS is established, and the adoption of an evolutionary and pragmatic approach to the project's development...".

## At the core of the NPS

One of the most significant changes to the current payment system is the establishment of a real-time settlement system in the SA Reserve Bank. This system will be aimed at reducing systemic risk, by ensuring irrevocable settlement finality between the banks. The system will be available to all banks, even those that have not made use of settlement facilities in the past, to transfer funds amongst themselves, across their settlement accounts at the SA Reserve Bank.

A copy of the Framework and Strategy document can be obtained from the Payment System Division of the SA Reserve Bank, at a cost of R30,00. Orders can be placed by contacting Pat Smith at telephone numbers 012 313-3460 (voice) or 012 313-3934 (fax).

The document is also available for scrutiny on the Internet, at the following address:  
<http://www.resbank.co.za>

## Driving the implementation

To facilitate the implementation of the identified strategies, an interbank NPS Implementation Co-ordination Team (NICT) is ensuring that the strategies are implemented according to the very tight deadlines. The co-ordination effort is led by Dr Philip Tromp, who is both the head of the SA Reserve Bank's Information Technology Department and the Payment System Division, and is ably supported by the following business and technology managers of banks:

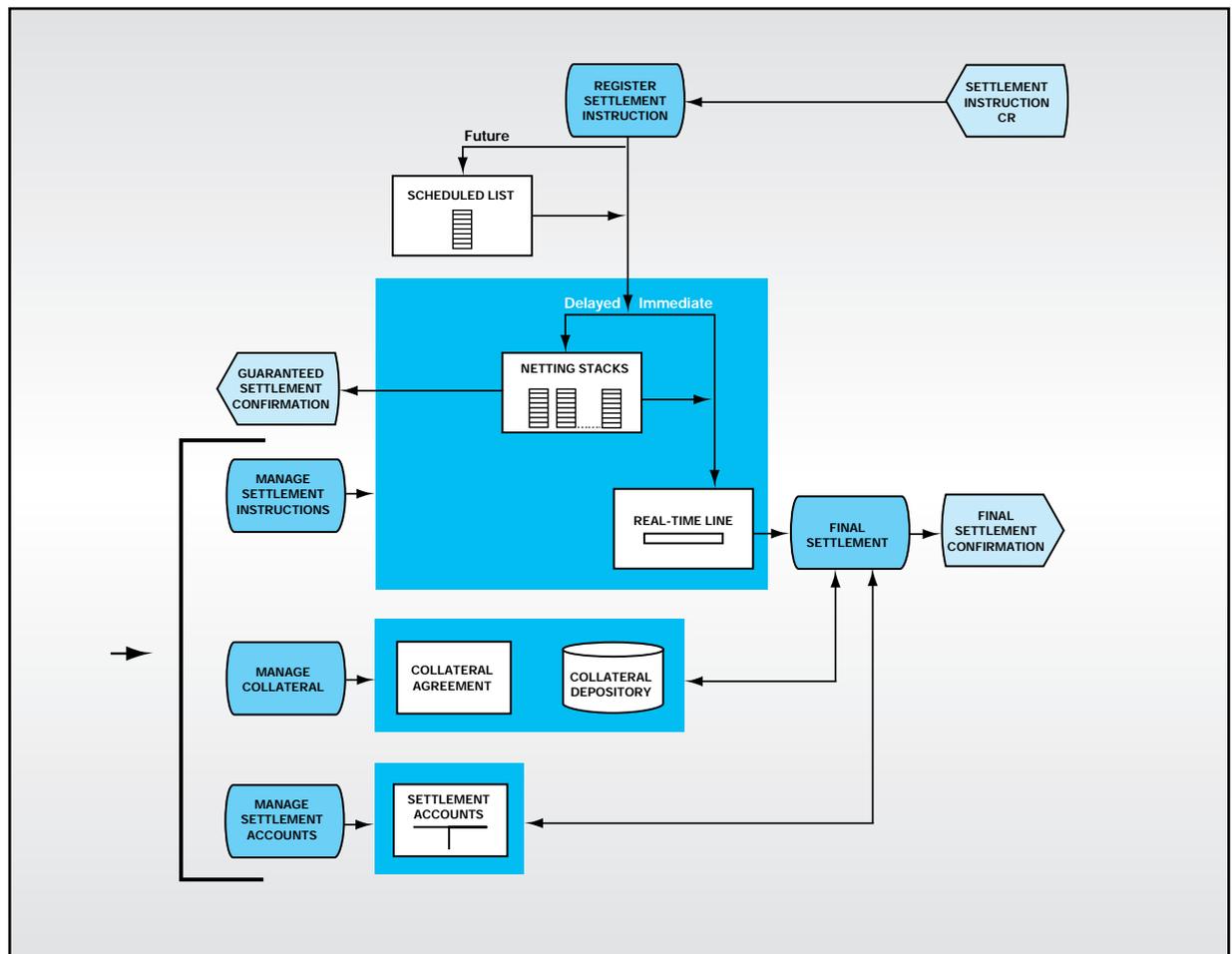
- Mr Johnny Pienaar (ABSA Bank Ltd)
- Mr Nelis Havinga (ABSA Bank Ltd)
- Mr Jon Wildman (First National Bank of SA Ltd)
- Mr Peter Rawlings (First National Bank of SA Ltd)
- Mr Deitmar Seidler (First National Bank of SA Ltd)
- Mr Graham Steyn (Nedcor Bank Ltd)
- Mr Barry Hore (Nedcor Bank Ltd)
- Mr Mike Lear (The Standard Bank of SA Ltd)
- Mr Ray Holtshousen (The Standard Bank of SA Ltd)
- Mr Errol van der Merwe (The Standard Bank of SA Ltd)

NICT oversees the implementation of a wide range of strategies, and is responsible for ensuring that developments are synchronised amongst all participants. At a recent meeting between the SA Reserve Bank and banks not directly involved in NICT, it was decided that a frequent update from the SA Reserve Bank on the developments would suffice. It was also agreed that any bank could approach any NICT representative, or Mr Keith Smith of the SA Reserve Bank (012 313-3499 (voice) or 012 313-3934 (fax)) should they wish to clarify any issue, or voice their concerns or suggestions at the NICT forum. The SA Reserve Bank also undertook to hold information sessions for all banks as and when required.

Since the facility will provide numerous settlement options to banks, it will be known as the South African Multiple Option Settlement (SAMOS) System. The various settlement options will include:

- Immediate settlement of a single settlement instruction or a number of settlement instructions concurrently.
- Bilateral and multilateral net settlement of a number of settlement instructions.
- Settlement of one or more settlement instructions at a predetermined time, or on a predetermined condition.

The SAMOS System will provide banks with the infrastructure to monitor and manage their interbank settlement exposures throughout the day.



In order to facilitate the transfer of settlement instructions between banks, via the SAMOS System, all banks will be able to link electronically to the SA Reserve Bank by means of SWIFT, or through a domestic settlement network. In the same way, payment clearing houses (PCHs), such as the ACB, will be able to transfer instructions to the SAMOS System.

In order to minimise the liquidity requirements of banks, the SAMOS System will contain a dynamic collateral management component, which will automatically take up selected financial instruments made available to the SA Reserve Bank for securing overdraft facilities. As and when a specific bank receives funds, the system will automatically release the securities back to the bank. Banks will be able to make securities available to the SA Reserve Bank, either by reserving securities in the Central Depository (CD), or by physically handing certificates in at the SA Reserve Bank's Johannesburg branch. In order to facilitate the smooth exchange of messages between the CD and the SA Reserve Bank, the CD will thus also have to be linked to the settlement network.

## What needs to be done

In order for the NPS strategies to be completed successfully, numerous projects have already been initiated by the banking industry. These projects aim to:

- **Introduce payment risk-management** and risk-reduction measures.
- **Create NPS management structures**, in order to establish an organisational framework within which the NPS can be managed.
- **Define new NPS business practices**, for example, policies and procedures pertaining to, *inter alia*, payment, settlement and collateral.
- **Define common data and processes** by, *inter alia*, creating and publishing an NPS business model.
- **Develop and enhance systems**, in order to enable real-time settlement and introduce risk-reduction measures in inter-bank clearing systems.
- **Communicate** with domestic and international stakeholders and create an awareness of the risks in payment systems, as well as educate payment system users in the use of the NPS.
- **Establish a sound legal framework** to support NPS practices.
- **Develop a comprehensive NPS information base** in order to analyse payment behaviour and payment stream utilisation.
- **Devise strategies** to address, *inter alia*, cross-border payments, regional payment systems and electronic cash.

## Involving all concerned

Various information sessions, seminars, workshops and presentations on developments and progress with the NPS project have been held with the banks, business, professional associations, other financial institutions and regulatory bodies.

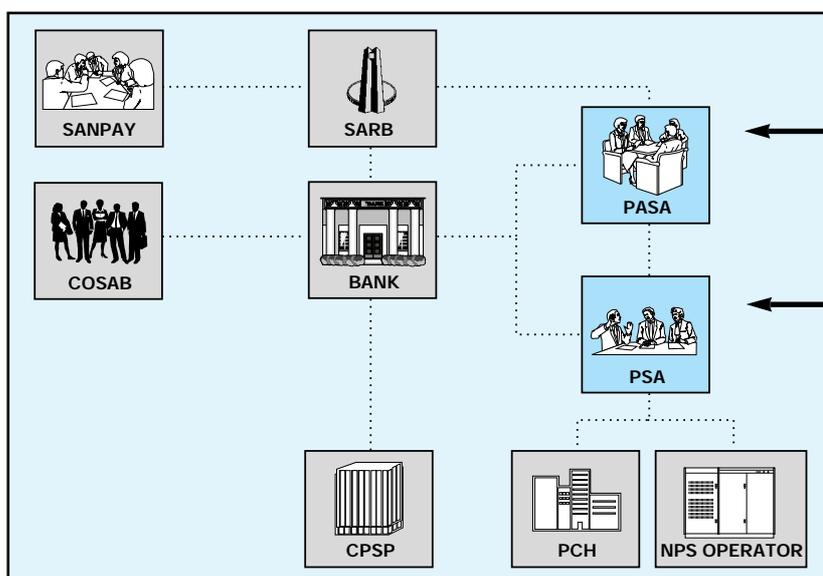
Dissemination of relevant information to all stakeholders will be an ongoing process during the implementation of the NPS. Various workshops and presentations, as well as status updates, are planned for the second half of 1996.

Anyone interested in obtaining further information, can contact Pat Smith at telephone numbers 012 313-3460 (voice) or 012 313-3934 (fax).

## What's happening ...

### Establishment of management structures

Significant progress has been made with the establishment of the Payments Association of South Africa (PASA). PASA will be the governing body for all payment stream associations (PSAs) and will enforce policy decisions in conjunction with the SA Reserve Bank.



The constitution of PASA has been drafted and was formally adopted by the COSAB board and the SA Reserve Bank on 15 August 1996.

Once PASA has been established, the next step will be to identify payment streams and to create PSAs. These associations will represent all banks that wish to offer a particular payment service to their customers and will operate under the policy and broad parameters defined by PASA.

# What's happening ...

## Overcoming the technology risk

The development and establishment of the SAMOS System, and related settlement network, present the SA Reserve Bank with unique technological and project-management challenges.

In order to reduce the technological and inherent project risk, and in order to ensure the successful and cost-efficient establishment of the SAMOS System and related network, the SA Reserve Bank entered into a technology partnership agreement with Persetel.

Persetel is already involved in various aspects of system and network development, and the SA Reserve Bank is confident that this partnership will ensure the successful establishment and implementation of the SAMOS System.

## Defining the SAMOS System

The SA Reserve Bank, in co-operation with banks, has been working on the business specifications of the SAMOS System since March 1996 and, following the sign-off of the specifications of the real-time line\* processor in April, developed a prototype of this processor on the selected technology platform. More detailed specifications of the other SAMOS components were defined between May and July, and are currently being finalised with banks.

The prototype was completed on schedule, and the only SAMOS specifications outstanding are the netting stack, scheduled list processors and a number of internal housekeeping utilities, which will be addressed during the next few months.

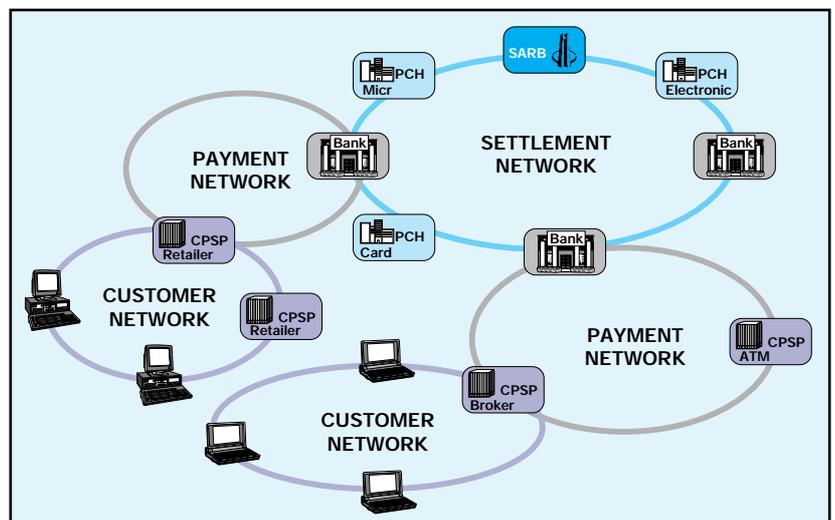
\*(Refer to diagram under "At the core of the NPS")

## Establishing the settlement message carrier

After the intensive analysis of various options, it was agreed between the SA Reserve Bank and the banks that provision would be made initially for two message carriers. Due to the sizeable current investment by the banking industry in SWIFT, it was decided that banks could use SWIFT to transfer payment messages between themselves and the SA Reserve Bank's system.

An alternative mechanism would, however, also be established for those banks who do not currently have SWIFT or would prefer to use a domestic message carrier. The domestic carrier would also be ideal for the introduction of credit-push type payment instruments in future.

The message flows and the different technological interfaces are currently being discussed with the banks.



# What's happening ...

## Monitoring the emergence of E-cash

A project has been initiated to investigate the emergence of new electronic cash and payment instruments such as E-cash.

The scope of the project will include security issues, monetary-policy implications and the regulatory requirements pertaining to these instruments, brought about by, for example, Internet developments.

The following people attended the first meeting held at the SA Reserve Bank on 24 April 1996.



*E-Cash - At the back are Keith Smith (SARB), Philip Tromp (SARB) Michael Jordaan (Rand Merchant Bank), John Gallias (African Bank), Errol van der Merwe (Standard Bank), Attie van der Linde (ABSA Bank), Andries Smit (Boland Bank). In front are Jon Wildman (First National Bank), Johann Bence (SARB), Keir Dellar (NBS), Andresia Erasmus (Imperial Bank).*

The following representatives of the banking industry currently serve on the project team:

Mr Attie van der Linde (ABSA Bank Ltd)	Mr Michael Jordaan (Rand Merchant Bank Ltd)
Mr Andries Smit (Boland Bank PKS Beperk)	Dr Philip Tromp (SA Reserve Bank)
Mr Jon Wildman (First National Bank of SA Ltd)	Mr Johann Bence (SA Reserve Bank)
Mr Mike Welman (First National Bank of SA Ltd)	Mr Keith Smith (SA Reserve Bank)
Mr Andresia Erasmus (Imperial Bank Ltd)	Mr Errol van der Merwe (The Standard Bank of SA Ltd)
Mr Keir Dellar (NBS Bank Ltd)	Mr Nic Walters (Syfrets Bank Ltd)
Mr Colin Wheeler (Nedcor Bank Ltd)	Mr John Gallias (The African Bank Ltd)
Mr Gerald Kitchen (Nedcor Bank Ltd)	

Further information can be obtained from Pat Smith at 012 313-3460 (voice) or 012 313-3934 (fax).

## Changes to the SA Reserve Bank Act

In order for the SA Reserve Bank to play a leading role in the establishment, regulation and supervision of the NPS, it is necessary to amend the provisions of the South African Reserve Bank Act in order to enhance and augment the powers pertaining to the SA Reserve Bank's role and functions within the NPS.

COSAB has already been informed of the proposed amendments, which are scheduled to be approved by Parliament during the second half of 1996.

# What's happening ...

## Developing the cross-border strategic framework

**A**fter a preliminary brainstorming session during the middle of 1995, delegates from the SA Reserve Bank and banks conducted an investigation into cross-border issues in Europe and the United Kingdom during November 1995.

The objective was to identify cross-border issues, alternatives and approaches towards solutions. The team visited, *inter alia*, SWIFT, Euroclear, the EC Commission, the Bank for International Settlements, Cedel, the Austrian National Bank, the Bank of England, APACS and ECHO.

A project plan to develop a strategic framework for cross-border payments between South Africa and its trading partners was presented to NICT in May 1996. The following project team was subsequently established:

Mr Johnny Pienaar (ABSA Bank Ltd)	Ms M Donaldson (Nedcor Bank Ltd)
Mr Nelis Havinga (ABSA Bank Ltd)	Mr Mark Booysen (Rand Merchant Bank Ltd)
Mr Gordon Little (ABSA Bank Ltd)	Dr Philip Tromp (SA Reserve Bank)
Mr Jon Wildman (First National Bank of SA Ltd)	Mr Mike Huber (SA Reserve Bank)
Mr Peter Rawlings (First National Bank of SA Ltd)	Ms Ilna Ströh (SA Reserve Bank) - Project Manager
Mr Don van der Merwe (First National Bank of SA Ltd)	Mr Peet Uys (SA Reserve Bank)
Mr Pieter van Deventer (Mercantile Bank Ltd)	Mr Mike Lear (The Standard Bank of SA Ltd)
Mr Graham Steyn (Nedcor Bank Ltd)	Mr Arthur Cousins (The Standard Bank of SA Ltd)
Mr Norman Stegmann (Nedcor Bank Ltd)	

An orientation worksession was held on 1 July 1996, and a two-day worksession was conducted in August 1996. Good progress was made and the groundwork done towards establishing a national strategy in this regard.

## Developing an NPS business model

**I**n February 1996, a team of representatives from the banking industry set about compiling a business model to underpin the NPS Strategic Framework. IBM's Information Framework for the Financial Industry was used to provide a baseline data model. The resulting business model will, however, encompass both data and process components.

The objective is to publish a business model for the benefit of all NPS stakeholders, in order to provide them with the standard information requirements, processes and interfaces to the NPS, as well as between different components and roleplayers within the NPS.

A first edition of the NPS business model is expected to be published at the end of October 1996. This edition will focus on the settlement component and will include, *inter alia*, the message templates and other specifications required to utilise and interface with the SAMOS System.

The Business Analyst Team members involved in this initiative are:

Ms Colleen Pappalardo (ABSA Bank Ltd)	Ms Ilna Ströh (SA Reserve Bank)
Mr Garth Trumble (Bankserv)	Ms Marietjie van Straaten (SA Reserve Bank)
Mr Colin Dean (Bankserv)	Ms Bjefke Bonnema (SA Reserve Bank)
Mr Dale Mostert (First National Bank of SA Ltd)	Mr Mike Denoon (The Standard Bank of SA Ltd)
Ms Leonie Steward (First National Bank of SA Ltd)	Mr Mark Walsh (The Standard Bank of SA Ltd)
Ms Jenny du Plessis (Investec Bank Ltd)	The team is assisted by Cathy Bourhill of IBM

# What's happening ...

## Southern African Development Community (SADC) payment system initiative

**M**any countries in Africa have become increasingly aware of the importance of payment systems in the development of their economies, and some are actively developing strategies for payment systems.

In South Africa, the NPS strategy has been published and now requires enhancements to include international payments, in order to ensure that payments can be exchanged effectively and that the related risks are identified.

The participation of all countries in the payment infrastructures of the SADC region and the exchange of payments between these countries, as well as internationally, need to be addressed for the benefit of all countries of the region. The SADC countries are Angola, Botswana, Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.

In accordance with its responsibility for the SADC Finance and Investment Sector, South Africa has obtained the approval of the central banks of SADC member countries to launch a SADC project. The objectives of the project are, *inter alia*, to define a co-ordinated regional approach to cross-border payments and the implications for trade, central bank policy and exchange controls; and to assist individual SADC countries further to develop a domestic strategy and a development plan, in order to facilitate cross-border payment, not only among themselves, but also internationally. Initially, a survey will be conducted to establish the existing situation as regards clearing, payment and settlement strategies and systems in the region's countries.

The project was launched with an Orientation Workshop, held in Pretoria at the end of July 1996. All twelve SADC member countries were represented by delegates appointed by the governors of the SADC countries' central banks. The Orientation Workshop was a success, both in terms of its content and the participation of delegates as a SADC grouping.

The responsibilities for, and the staffing and funding of, this project were discussed, and a comprehensive project plan is being finalised. The agreed follow-up actions will receive attention over the next few months. The outcome of these activities will be discussed at a second regional workshop, which is planned for February 1997.

### What does...mean?

<b>ACB</b>	<i>Automated Clearing Bureau</i>
<b>CD</b>	<i>Central Depository</i>
<b>COSAB</b>	<i>Council of South African Banks</i>
<b>CPSP</b>	<i>Customer Payment-service Provider</i>
<b>NICT</b>	<i>NPS Implementation Co-ordination Team</i>
<b>NPS</b>	<i>National Payment System</i>
<b>PASA</b>	<i>Payment Association of South Africa</i>
<b>PCH</b>	<i>Payment Clearing House</i>
<b>PSA</b>	<i>Payment Stream Association</i>
<b>SAMOS</b>	<i>South African Multiple Option Settlement System</i>
<b>SADC</b>	<i>Southern African Development Community</i>

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