Sentinels year plan 2005

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Introduction

In 2004 the main Sentinels activity was the selection of research projects. This selection process has been concluded with the meeting of the Steering Group on November 24, 2004. In that meeting, the Steering Group granted six projects out of 15 submitted.
These projects will start in 2005. A user committee will be formed a few months after the start of a project, which means that at the end of 2005 most user committees will be active.
More information about the Sentinels research program can be found in the document "Sentinels in a nutshell" [1] or more extensively in the research program text [2] and the year plan 2004 [3].

This document describes the year plan 2005 for Sentinels. Chapter 1 describes the budget available for the program, chapter 2 lists the members of the Steering Group, the Program Committee and the Daily Board, chapter 3 describes the planning for 2005, and chapter 4 relates the aims and objects as described in the research program with Sentinels activities during 2005.
At the beginning of 2005, the year report 2004 for Sentinels will appear.

1 Budget

1.1 Overall program budget

Table 1.1(a) lists the revenues and table 1.1(b) lists the total expenses for the Sentinels research program. There are three main types of expenses: expenses for project costs (see section 1.3), expenses for knowledge exchange (see section 1.4), and expenses for office costs & program management (see section 1.5).
Table 1.2 lists the total expenses per year. Both tables are the same as in the yearplan 2004 [3] and have been discussed in that document.

1.2 Projects granted in 2004

In 2004, the first round of Sentinels proposals has been granted. This process will be described in more detail in the year report 2004. The following projects have been granted:

- 6677, Erik Poll, JASON, Generic and Secure Remote Management Infrastructure.
- 6679, Prof.dr. Roel Wieringa, IPID, Integrated Policy-based Intrusion Detection.
- 6680, Dr. Ronald Cramer, Practical Approaches to Secure Cooperation.
- 6682, Dr.ir. Raymond N.J. Veldhuis, ProBiTe, Protection of Biometric Templates.
- 6684, Herbert Bos, DeWorm, Worm monitoring on Internet backbones.
- 6687, Erik de Vink, PINPAS JC, Program INferred Power-Analysis in Software for Java Card.

1.3 Expenses for project costs

Table 1.3 lists the project costs as granted by Sentinels (column 'aangevraagd en toegekend') and the contribution by industry for each project (column 'totale bedr.bijdr.').
As can be seen, the total budget available for the first round was 4.6 M€ (table 1.2), while only 3 M€ has been spent (table 1.3). The reason for this is that 40% of 15 proposals, that

contributor	**amount (M€)**	
Public contributions:		
Technology Foundation STW	2.5	
NWO	2.5	
Ministry of Economic Affairs	2.5	
Total public contributions		*7.5*
Matching funds:		
Industry (research, knowledge exchange)	2.1	
University (Vici-style professor)	0.4	
Universities (research)	p.m.	
Total matching contributions		*2.5*
total revenues		10.0

(a) Revenues

expenses	**%**	**amount (M€)**
Research (incl. Vici-style professor)	80	8.0
Knowledge exchange (a.o. security ambassador, workshops, symposia, publ., comm.act., web portal (safe-nl, www.sentinels.nl))	10	1.0
Office costs & program management	10	1.0
total expenses		10.0

(b) Overall expenses

Table 1.1: Revenues and overall expenses

amounts in M€	2004	2005	2006	2007	2008	2009	2010	2011	total
Fundamental projects round 1		1.6							1.6
Method and tools projects round 1		1.9							1.9
Prototype projects round 1		1.1							1.1
Fundamental projects round 2				0.8					0.8
Method and tools projects round 2				0.8					0.8
Prototype projects round 2				0.6					0.6
Vici-style professor				1.2					1.2
Knowledge exchange (a.o. security ambassador, workshops, symposia, publ., comm.act., web portal (safe-nl, www.sentinels.nl))	1.0								1.0
Office costs & program management	1.0								1.0
total expenses									10.0

Table 1.2: Expenses per year.

is, six proposals, have been granted (as has been stated in the research program [2]). The remaining 1.6 M€ will be spent during the second round of proposals (which itself has much less budget available than the first round, this can be observed from table 1.2).
Table 1.4 is a subdivision by project. From this table, the budgets for the various projects can be derived. Unfortunately, for two reasons, the expenses per year in 2005 cannot be detailed more than in this table.
The first reason is partly due to the method STW grants project costs. STW grants expenses for personnel (PK in the table) in two parts: a first part for the first three years, and the second part for the last project year. Expenses for material costs, foreign travels and investments (MK, BR and IK in the table) are also granted in two parts, but for these types of expenses the first part is granted for two years, and the second part for the last two years (both can be seen by inspecting the 'bars' in the table). The second part of the budget comes available after approval of the continuation request, which should be submitted to STW after the first 1.5 year of the project. This ensures the scientific and utilisation quality of the program.
The second reason that expenses per year in 2005 cannot be specified in more detail is that the projects have just been granted and at the time of writing there was no time to request the project leaders for their expenses for 2005. In the year plan 2006 the expenses per year will be more specified. Note that, on average, it takes at least six months to find personnel for a project, so the real project expenses will only start in 2006.

1.4 Expenses for knowledge exchange in 2005

In 2005, we expect at least one annual workshop. Most probable, this workshop will be held together with a Senter workshop in spring 2005.
At the end of 2005, a brokerage event will be held, since the second call for pre-proposals

projnr	titel	totale projectkosten
6677	JASON, Generic and Secure Remote Management Infrastructure	512.000
6679	IPID, Integrated Policy-based Intrusion Detection	431.560
6680	Practical Approaches to Secure Cooperation	624.600
6682	ProBiTe, Protection of Biometric Templates	567.200
6684	DeWorm, Worm monitoring on Internet backbones	188.000
6687	PINPAS JC, Program INferred Power-Analysis in Software for Java Card	608.668
	totalen	2.932.028

Table 1.3: Sentinels project costs.Translation of text: totale projectkosten = total project costs.

projnr	titel	wie	soort	jaar 1	jaar 2	jaar 3	jaar 4
6677	JASON, Generic and Secure Remote Management Infrastructure	Chess	PS	1500 uur over 48 maanden			
6679	IPID, Integrated Policy-based Intrusion Detection	Rabobank NL	PS	990 uur over 48 maanden			
		TNO Telecom	PS	660 uur over 48 maanden			
6680	Practical Approaches to Secure Cooperation	Philips Research	PS	1650 uur over 48 maanden			
6682	ProBiTe, Protection of Biometric Templates	Philips Research	PS	3200 uur over 48 maanden			
			MS	[not disclosed]			
6684	DeWorm, Worm monitoring on Internet backbones	TNO Telecom	PS	500 uur over 48 maanden			
			MS	[not disclosed]			
6687	PINPAS JC, Program INferred Power-Analysis in Software for Java Card	TNO ITSEF	PS	1280 uur over 48 maanden			
			MS	[not disclosed]			
		STMicroElectronics	PS	384 uur over 48 maanden			
		Giesecke & Devrient	PS	384 uur over 48 maanden			

Table 1.4: Sentinels project costs for each project.
Translation of texts: jaar xx = year xx; wie = contribution by industry; PS = personele steun = contribution by industy in personnel; MS = materiele steun = contribution by industry in materials; xx uren over yy maanden = xx hours for yy months.

will be published at the end of 2005 (see chapter 3).
The costs for both of these workshops are not known at the moment.
Other costs are the Sentinels ambassador. At the moment, the costs for this item are not known.

1.5 Expenses for office costs & program management in 2005

The expenses for office costs & program management as expected for the following years are outlined in table 1.5. This table is the same as the table in the year plan 2004.
For 2005, these will be spent on legal advice and contract making with industry participating in Sentinels projects, managing the projects, costs for making the profile for the Sentinels ambassador, for making a year plan 2006 and a year report 2005, and possibly for meeting costs.
At the November 24, 2004 Steering Committee meeting, the Steering Group expressed a strong wish to reduce these costs.

year	amount (k€)
2004	145
2005	95
2006	165
2007	140
2008	120
2009	120
2010	115
2011	100
total	1.000

Table 1.5: Estimated expenses per year for office costs & program management

1.6 Advance payment Ministry of Economic Affairs

The letter of the Ministry of Economic Affairs of December 18, 2003, in which the Ministry acknowledges their contribution to the Sentinels program, contains the following part about a possible advance payment (Dutch: 'voorschot'):

> Op uw schriftelijke verzoek kan maximaal 1 maal per jaar een voorschot worden verstrekt op basis van een liquiditeitsoverzicht, gespecificeerd conform de door u bij uw jaarplannen in te dienen begroting, met dien verstande dat in totaal maximaal 80% van het verleende subsidiebedrag als voorschot kan worden verstrekt. Geen voorschot wordt gegeven indien het te verstrekken voorschot minder is dan 20% van het maximaal te ontvangen subsidiebedrag.

For 2005, the Sentinels program office does *not* request an advance payment since projects will start at some moment in 2005 and we expect that the advance payment is less than 20% of the maximum amount to receive. In the year plan 2006, we will request an advance payment.

2 Program management

The members of the Steering Group have been appointed by the participants providing funds for Sentinels. Approval from the Steering Group for the members of the Program Committee and the Daily Board has been obtained before new members joined the Program Committee or the Daily Board. For tasks and responsibilities of the Steering Group, Program Committee and the Daily Board, see the research program [2, chapter 6].

2.1 Steering Group members

The Sentinels Steering Group members are:

- Prof.dr. W. Jonker, Philips Research Laboratories & University of Twente (chairman)
- Dr. R.D.T. Janssen, Technology Foundation STW (secretariat)
- Dr.ir. A.A.J.M. Franken MBA, Technology Foundation STW & Netherlands Organization for Scientific Research
- Drs. H.J.T. Nieuwenhuis, Ministery of Economic Affairs
- Ir. A.A.J. Reuver, IBM Nederland N.V

2.2 Program Committee members

The Sentinels Program Committee members are:

- Prof.dr. W. Jonker, Philips Research Laboratories & University of Twente (chairman)
- Dr. R.D.T. Janssen, Technology Foundation STW (secretariat)
- Drs. J.T. Bisseling, Senter
- Dr.ir. A.M. Bos, Chess Information Technology BV
- Prof.dr. W.J. Fokkink, Centrum voor Wiskunde en Informatica & Vrije Universiteit Amsterdam
- Dr.ir. L.J.N. Franken, ABN-AMRO Bank N.V.
- Prof.dr. P.H. Hartel, University of Twente
- Prof.dr. B.P.F. Jacobs, Radboud University Nijmegen
- Dr.ir. P. de Jager, TNO Telecom
- E.R. de Lange, Ministery of Economic Affairs
- Dr.ir. J.C.A. van der Lubbe, Delft University of Technology
- Ir. H.A.M. Luiijf, TNO-FEL
- Prof.ir. E.F. Michiels, Ernst & Young EDP Audit & University of Twente
- Prof.dr.ir. B. Preneel, Katholieke Universiteit Leuven
- L.A.M. Strous, De Nederlandsche Bank N.V.
- Prof.dr. A.S. Tanenbaum, Vrije Universiteit Amsterdam
- Prof.dr.ir. H.C.A. van Tilborg, Technische Universiteit Eindhoven
- Dr. E.P. de Vink, Technische Universiteit Eindhoven & Leiden University

In 2005, two new persons will be added to the Program Committee.

2.3 Daily Board members

The Sentinels Daily Board members are:

- Prof.dr. W. Jonker, Philips Research Laboratories & University of Twente (chairman)
- Dr. R.D.T. Janssen, Technology Foundation STW (secretariat)
- Prof.dr. B.P.F. Jacobs, Radboud University Nijmegen

- Dr.ir. P. de Jager, TNO Telecom

2.4 Program office

The Technology Foundation STW will act as the Program Office. A program officer and a management assistant will be (part-time) assigned. Professional assistance of Senter will be asked to realize the Sentinels dissemination goals.

3 Planning

3.1 Sentinels ambassador

The security ambassador is, just as the Vici-style professor, one of the important instruments to ensure that security research results from Sentinels remain visible and accessible even when the program has ended. He/she is someone who is very capable in promoting the Sentinels range of ideas.

Ideally, such a person should be from industry, so that Sentinels vision and research is actively promoted by both an expert from a university (the Vici-style professor) and an expert from industry. The security ambassador is *the* central point of access for anyone in need of security expertise. He/she is employed through a company or foundation (possibly the National ICT Security Research and Competence Center), at his/her start with budget from Sentinels.

In 2005 the Sentinels ambassador will start his/her work. The Vici-style professor will start in 2007.

3.2 Sentinels vision

At the November 24, 2004 Steering Committee meeting, the Steering Group expressed a strong wish to have a more focussed program. Part of this focus is the Sentinels vision, which should be completed before the the second call for pre-proposals at the end of 2005. The security ambassador will have a large contribution to this vision since he/she is the central point of access for anyone in need of security expertise.

3.3 Time line

The time line for Sentinels is shown in figure 3.1. The bar for “projects round 1” also includes the user committees of the projects.

Except from a more detailed procedure of the Vici-style professor and the inclusion of the Sentinels ambassador and Sentinels vision, this timeline is the same as in the yearplan 2004 [3].

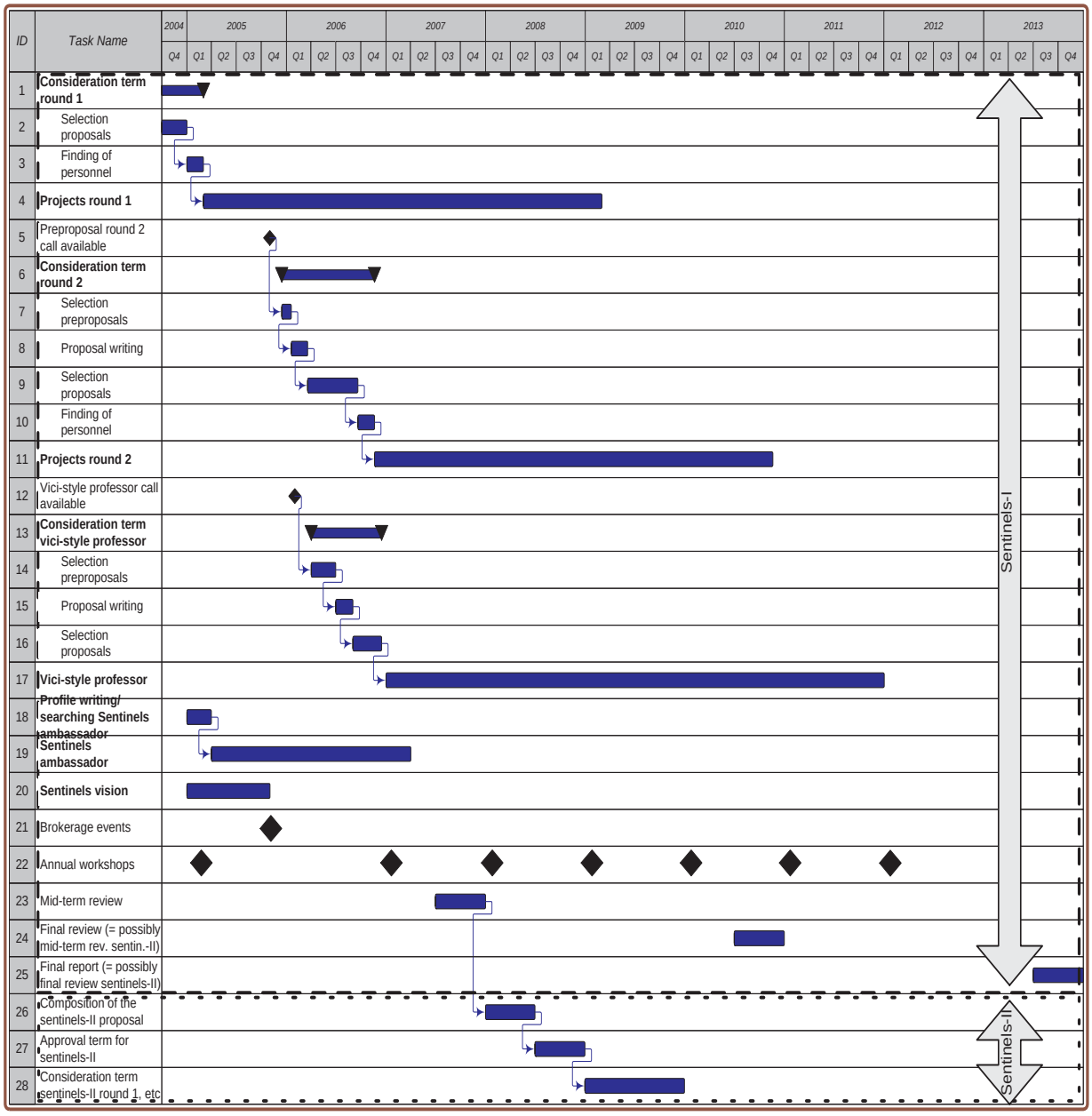

Figure 3.1: The Sentinels time line. The dashed box encloses Sentinels(-I) (as described in [2] and this document), the dotted box Sentinels-II (the possible follow up program, see [2, sec. 7.7]).

3.4 Detailed time line for 2005

The following milestones have been defined for 2005:

March 31, 2005:	profile Sentinels ambassador available; start ambassador as soon as possible
October 2005	Sentinels vision available (hopefully sooner)
November 1, 2005:	call pre-proposals round 2 available
December 15, 2005, 8.00 AM:	deadline pre-proposals
During 2005	start Sentinels projects
During 2005	start user committees of Sentinels projects
January 2006:	meeting Program Committee
January 2006:	notification of acceptance pre-proposals
March 20, 2006, 8.00 AM:	deadline proposals
September 2006:	meeting Program Committee
September 2006:	meeting Steering Group
September 2006:	notification of acceptance proposals

All participants (and especially Program Committee members) are encouraged to actively support dissemination activities. Members of the Program Committee will actively participate in ongoing national discussions (involving for instance TNO and other research institutes, universities and a possible “Regieorgaan ICT-onderzoek”) about further coordination and consolidation of security research.

3.5 Events in 2005

Two important events are planned for 2005: the annual workshop and an brokerage event for round 2. The annual workshop most likely will be organized in cooperation with Senter.

Of course, we will promote Sentinels activities at meetings organized by related research programs, such as from BSIK, IOP and IST. Some of these programs have security related aspects and all will benefit from mutual cooperation.

4 Aims and objectives

The overall aim of the Sentinels program is to bring major improvements to the scientific and engineering aspects of secure systems design in the Netherlands. Simply stated, it wants to do so by making it possible for good researchers to do good and relevant research in this area, and by making sure that the outcome benefits society as a whole. The program is in fact emphasized on the work floor level, and tries to avoid a non-productive early institutionalization.
The detailed objectives of the program are the development of knowledge, the development of competence core areas[1], the creation and expansion of networks, the knowledge dissemination and the anchoring of the knowledge resulting from the program, all related to security in ICT, networks and information systems.
In the research program text [2, chapter 3], the following activities (subdivided by objective) were given. Below, for each of these activities a more detailed specification of activities in 2005 or activities continuing throughout the program, is given. Most of these activities have been explained in previous chapters of this year plan.

Development of knowledge (in Dutch: “kennisontwikkeling”)

- to stimulate collaborative and multidisciplinary research in established and new areas related to security.
  - six granted projects (continuing activity)
  - six user committees (continuing activity)
  - various activities of Program Committee members (continuing activity)

Development of competence core areas[1] (in Dutch: “zwaartepuntvorming”)

- to define and manage a comprehensive research agenda for system level security in the Netherlands, concentrating and extending the national areas of expertise.
  - Sentinels ambassador (continuing activity)
  - Sentinels vision
  - six granted projects (continuing activity)

Creation and expansion of networks (in Dutch: “netwerkvorming”)

- to consult extensively with the industry on their needs and requirements for system level security;
  - Sentinels ambassador (continuing activity)
  - brokerage event
  - six user committees (continuing activity)
- to embed the research in the European context through liaison with FP6 Networks of Excellence and Integrated Projects;
  - various activities of Program Committee members (continuing activity)

[1]Competence core areas are like focus areas but the difference is that with competence core areas research groups each chose a *different* research area (of course, they can chose more than one). Then, they can specialize in that area. This prevents overlap between different research groups and also prevents that research areas become so fragmented that they do not have any international impact.

- to promote a comprehensive research agenda for system level security in the Netherlands.
  - ◇ various activities of Program Committee members (continuing activity)

Knowledge dissemination (in Dutch: “kennisoverdracht”)

- to act as a forum for knowledge transfer and to disseminate the research results into society (education, industry, government, public authorities, hospitals, etc.);
  - ◇ six user committees (continuing activity)
  - ◇ annual workshop
  - ◇ website www.sentinels.nl (continuing activity)
  - ◇ Sentinels ambassador (continuing activity)
  - ◇ various activities of Program Committee members (continuing activity)
- to make ongoing security research —both within and outside the program— more visible and more accessible, via a clear presence on the web, the Vici-style professor and through a security ambassador;
  - ◇ website www.sentinels.nl (continuing activity)
  - ◇ Sentinels ambassador (continuing activity)
  - ◇ The Vici-style professor will start in 2007
- to act as a platform with the aim to initiate, support and establish training and education in ICT security.
  - ◇ no activities planned in 2005

Anchoring of knowledge resulting from the program (in Dutch: “verankering”)

- to develop, based on the research projects, a long-term exploitation and anchoring plan for ICT security in the Netherlands, including a National ICT Security Research and Competence Center and a follow-up research program (Sentinels-II);
  - ◇ possibly various activities of Program Committee members and others for a National ICT Security Research and Competence Center
- to contribute and support the forming of a “Regieorgaan ICT-onderzoek”.
  - ◇ various activities of Program Committee members (continuing activity)
  - ◇ Sentinels ambassador (continuing activity)
- to ensure that security research results from Sentinels remain visible and accessible even when the program has ended, via a clear presence on the web, the continuation by a university of the Vici-style professor and through a company or foundation (possibly the National ICT Security Research and Competence Center) employing the security ambassador.
  - ◇ Sentinels ambassador (continuing activity)
  - ◇ website www.sentinels.nl (continuing activity)
  - ◇ possibly various activities of Program Committee members and others for a National ICT Security Research and Competence Center

References

1. Rik D.T. Janssen, “Sentinels in a nutshell”. www.sentinels.nl/sentinelsnutshell.pdf.
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