

NEWRO – Market study on NEW euRO banknote technologies

Disclaimer

The contents of this document are merely for information purposes. If you are interested in sending a formal application for the NEWRO tender, please obtain the valid documents and application forms by writing to procurement@ecb.int and indicate the procurement reference number 13360/BN/CDE/2009.

1. General description

Banknote research and development (R&D) activities are driven by the Eurosystem's duty to maintain the integrity of euro banknotes by protecting them against counterfeiting. Continuing advances in technology and the wider availability of reproduction methods, however, could render today's banknote security features obsolete. Therefore, the European Central Bank (ECB) is continuously looking into a wide variety of different concepts for novel security features. Counterfeit deterrence is strengthened by the incorporation of such security features into banknotes. A security feature is something unique and distinguishable that is integrated into the banknote to authenticate it and to prevent it from being counterfeited.

The ECB is interested in carrying out a market study on medium and long-term research technologies that could be used to further secure euro banknotes in the future. The market study should account for as many types of technologies as possible by obtaining input from multidisciplinary organisations.

A similar approach has already been taken by other issuing authorities, such as the Bureau of Engraving and Printing (BEP), which awarded the National Academy of Sciences (NAS) a contract in 2005 to investigate threats and next generation features to protect US dollar banknotes. However, this public report includes many proposals that are already included in today's security features or minor variations on concepts already seen in the security industry. The ECB is aiming for a medium to long-term approach useful for identifying radically new concepts that could be further developed by R&D programmes.

In order to provide tenderers with a better idea of the maturity of the concepts required, the ECB is seeking the kind of technologies that can be used in laboratory demonstrator samples within a 5-10 year timeframe. These laboratory samples or embryonic security features should be conceived in such a way that the users can check their authenticity simply by using any one of our five basic senses (the so-called Level 1 features) or with the assistance of a simple and inexpensive handling tool (the so-called Level 2a features). This tool should be auxiliary and does not provide a direct answer to the authenticity of the banknote, which is left exclusively to the discernment of the user. To give an idea of the simplicity of these tools, a magnifying glass or a laser pointer could fall under this category. Level 1 features

should receive the highest priority and efforts should be concentrated on those features, although suggestions for Level 2a features may also be made.

An example of Level 1 features in the euro banknotes are the watermark, the foil stripe, the numeral changing colour ink or the tactile marks.

Security features are often designed by technical experts and it is a common mistake to assume that the end-user, i.e. the general public, will have the same technical skills. Moreover, it is a fact that, although euro banknotes contain more than ten security features, the public will, on average, only remember two of these features. For these reasons, the awarded supplier should be skilled not only technically, i.e. have knowledge of physics, but should also have experts in other areas, such as human perception and public awareness. Once a security feature has finally been introduced into a euro banknote, the ECB must inform the public in accordance with certain criteria, making it very important for communication to be an acquired skill. The tender will cover at least the following five subject areas:

1. physics;
2. chemistry;
3. biology;
4. communication;
5. human perception.

The main criteria for applicants are:

- a. To possess the widest range of technological fields covered by their team of experts, including those mentioned above.
- b. To be not only multidisciplinary, but also be familiar with the research, technological trends and patenting situation in the EU.
- c. To provide a demanding review of the new concepts and ideas throughout the project.
- d. To provide unbiased assessments and recommendations. For this reason, and to prevent a conflict of interests, profit organisations with an interest in the security printing business have been excluded from this tender procedure.

In order to address these broad and demanding requirements, the proposed but not compulsory way of conducting this tender procedure is to ask tenderers to create a temporary grouping (consortium) of research organisations that includes partners from different European countries. The temporary grouping should be led and coordinated by one of the companies/institutions (from this point on referred as “companies”) that will also act as the main contact with the ECB and will be jointly and severally liable vis-à-vis the ECB with regard to the successful completion of the project. This leading company will be the one to submit the tender application, to duly complete the form, and, if invited to tender, the one to send the proposal on behalf of the created temporary grouping. All members of the temporary grouping are required to sign the tender application form.

2. Summary of the administrative process

The NEWRO tender follows the rules used for a negotiated tender procedure, which may be summarised as follows:

Selection phase:

Companies interested in submitting a proposal should request the tender application form (e-mail address: procurement@ecb.int) and indicate the procurement reference number 13360/BN/CDE/2009. It should be jointly completed by the temporary groupings. The application form collects information on the track record of the temporary groupings. Once the deadline for the selection phase has expired, all the applications received will be evaluated in accordance with the selection criteria laid down in the contract notice. Those with higher scores will be formally invited to tender (ITT), i.e. to submit a proposal for the NEWRO tender.

Award phase:

Those companies invited to tender will complete the relevant forms and documents aimed at assessing the quality of the specific proposals for the NEWRO tender. The award criteria will be the following:

- price;
- quality of the proposed assessment methodology;
- experience of the coordinating team members leading the international teams;
- amount of human resources for the project management;
- quality of the proposed planning;
- quality of the proposed final report structure; and
- diversity of the subject areas under examination.

The ECB will evaluate the tenders and award the contract to the tenderer with the highest score. Following the evaluation of the tenders, the ECB may negotiate with tenderers in order to bring their tender in line with the ECB's requirements.

After the contract is awarded, it will be signed by the parties and the works will commence. A contract template will be provided by the ECB.

Timing: (tentative)

12 June 2010 – Publication in the Official Journal of the European Union

31 August 2010 – Deadline for receipt of applications

20 September 2010 – Invitation to tender

8 November 2010 – Deadline for tenders

10 December 2010 – Internal decision

1 January 2011 – Beginning of activities

Link to informative documents (non-final!):

- [Tender application form](#)
- [Legal template](#)