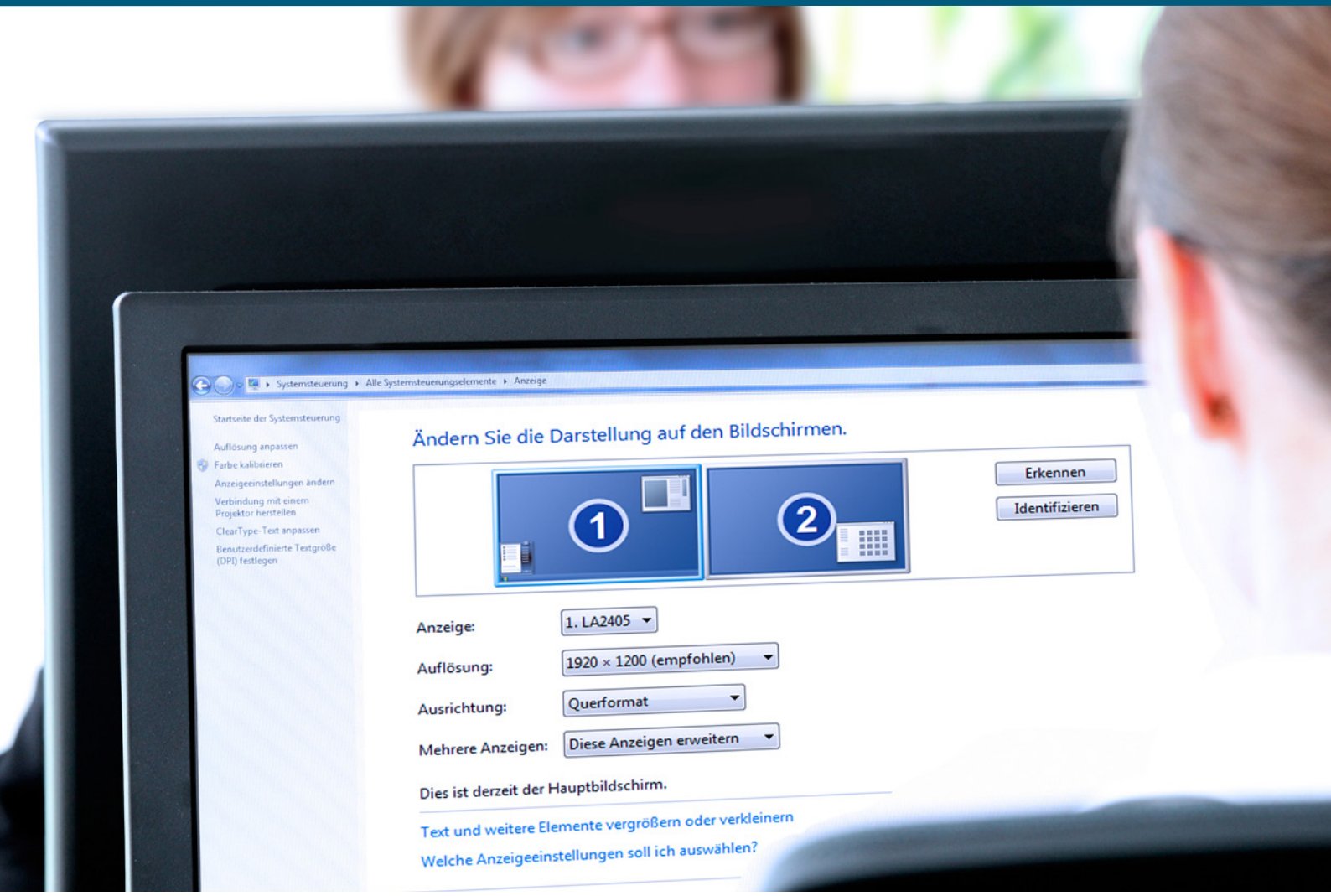

Product-neutral specifications for monitors

Guideline version 1.0

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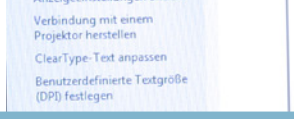

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Product-neutral specifications for monitors

Guidelines version 1.0

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des Bundesministeriums des Innern

Table of contents

Introduction

These guidelines have been developed by a working group of the Beschaffungsamt des Bundesministeriums des Innern (BeschA / Purchasing authority of the Federal Ministry of the Interior), the Bundesamt für Ausrüstung, Informationstechnik und Nutzung der Bundeswehr (BAAINBw / Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support), the Bundesagentur für Arbeit (Federal Employment Agency) and the Bundesverband Informationswirtschaft, Telekommunikation und neue Medien e.V. (BITKOM / Federal Association for Information Technology, Telecommunications and New Media).

The aim of this document is to provide public purchasers within the Federal Government, the Länder and at local government level as well as purchasers working for companies and private institutions – such as churches and associations – with reliable, discerning assistance in compiling product-neutral invitations to tender for the procurement of TFT monitors.

These guidelines apply exclusively to flat-screen monitors connected to workstation PCs. Other new technology types (such as, e.g., touch technology) have not been considered herein.

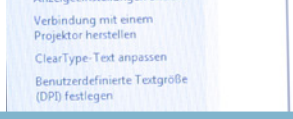
The scope of application of these guidelines is limited to standard monitors for office applications; special applications such as CAD and DTP have not been taken into account. The guidelines furthermore assume that tube monitors (CRT) are no longer relevant for invitations to tender.

The following definitions apply for the purposes of these guidelines:

- »Monitor« is a separate screen device constructed for connection to a computer.
- »Recognised bodies« are testing and calibration laboratories as per the Eichgesetz (German Weights and Measures Act) as well as inspection and certification bodies that comply with the applicable European norms, c.f. § 8 (6) VOL/A-EC.
- The guidelines apply to monitors with a visible screen diagonal of less than (<) 76.20 cm (30 inches).

Product-neutral invitations to tender are necessary because both European and German regulations for awarding public contracts largely prohibit the mentioning of brand names in public invitations to tender. This arises out of European law's prohibition of discrimination stipulated in Art. 23 of Directive 2004/18 and §7 VOL/A and § 8 VOL/A, and is aimed at preventing the exclusion of particular manufacturers and suppliers as potential bidders through the discriminative phrasing of invitations to tender.

This is where these guidelines are of assistance. They provide straightforward help, not only in complying with the legal requirements and, thus, in ensuring fair competition, but also by referring to and describing current technical developments. Because the benchmarking methods applied to notebooks and desktop PCs are unsuitable for monitors, compliance with the legal requirements is achieved by means of product-neutral specifications, the core components of which are technical characteristics and standards.



Aside from these fundamental requirements, the regulations for awarding public contracts also stipulate standards with respect to energy consumption. For instance, § 4 of the Vergabeverordnung (VgV / German regulation on the awarding of public contracts) requires that, when awarding contracts for »technical devices«, the energy efficiency and energy consumption must, as a rule, be considered.

These guidelines will be regularly updated in order to keep abreast of current developments. They are available at www.itk-beschaffung.de

Please note:
The criteria for accessibility are expected to become a component for public invitations to tender as of mid-2013 through EU Mandate M 376.
See http://www.mandate376.eu/

This document would not have been possible without the intensive collaboration of the members of the working group »product-neutral specifications«.

A special thanks in this respect go out to:

- Ingo Frobenius, Oracle Deutschland B.V. & Co. KG
- Christian Herzog, BITKOM e.V.
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1 Display

1.1 Brightness

Maximum settable brightness of at least 250 Cd/m^2

Please note:

- If the devices are to be in use for very long periods, 300 Cd/m2 may be recommendable due to the fading brightness. However, according to the current state of the art they do not fulfil the requirements for Energy Star 5.0 and should therefore not be promoted.

1.2 Contrast

Minimum contrast ratio: 800:1 (static or typical)

Please note:

- Dynamic contrast values are only relevant in relation to moving images (films or very enlarged on-screen displays (zoom, magnifying glass)).
- The dynamic contrast values diverge from the static/ typical contrast values; a direct comparison of dynamic contrast values and static contrast values is not possible.
- Higher contrast ratios are beneficial to users with failing eyesight and render the purchase of special additional devices unnecessary.

1.3 Formats

Recommendations:

- Standard monitor:
  Screen diagonal 48.26 cm (19 inches), format 5:4, resolution: 1280 x 1024
  or
  Screen diagonal 55.88 cm (22 inches), format 16:10, resolution 1680 x 1050
  or
  Screen diagonal 53.34 – 58.42 cm (21 to 23 inches), format 16:9, resolution 1920 x 1080

- High-end monitor, i.e. for workstations with special requirements:
  screen diagonal 58,42 – 68,58 cm (23 bis 27 inches),
  - format 16:10, resolution 1920 x 1200 or
  - format 16:9, resolution 1920 x 1080

1.4 Viewing angle

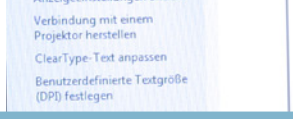
At least 160° horizontal/vertical with a minimum contrast of 10:1

Please note:

- Requirements regarding the viewing angle that go beyond these recommendations should only be considered as assessment criteria if specific prerequisites for use exist.

1.5 Colour

Minimum colour gamut: 16 million



2 Ergonomics

2.1 Height-adjustability

As a rule, workstation monitors should be height-adjustable.

No minimum requirements are recommended. The degree of height-adjustability can be incorporated as an assessment criterion.

2.2 Tiltability and rotatability

Recommendations:

- Minimum tiltability: -5° to +15°
- Rotatability +/- 15°

Values that go beyond these recommendations can, if necessary, be used as assessment criteria.

2.3 Pivot function (portrait page orientation)

Recommendation:

These requirements should only be included if specifically necessary.

Please note:

- Pivot function only if driver software is included, (standard workstation PCs generally offer this function but it cannot be ensured that all workstation PCs do).

3 Equipment

3.1. VESA interface

Recommendation:

One VESA interface should be available.

Please note:

- The VESA interface is a mechanical interface for table and wall brackets or for incorporating thin clients and mini desktops.

Please note: there are different standards in this respect. 100 x 100 mm and 75 x 75 mm are normal for TFTs.

3.2 Reaction time

Recommendation:

12 ms pursuant to Standard DIN EN ISO 9241-3xx

3.3 Pixel fault class

Recommendation:

Class II pursuant to Standard DIN EN ISO 9241-3xx or better

Please note:

- DIN EN ISO 9241-3xx stipulates pixel fault class II for office monitors.
- DIN EN ISO 9241-3xx is a component of GS certification.

3.4 Display/reflaction

Recommendation:

With anti-reflective coating as per DIN EN ISO 9241-3xx

Please note:

- DIN EN ISO 9241-3xx is a component of GS certification.

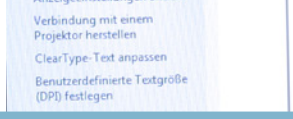
3.5 Audio (speakers)

Speakers should only be requested if specific needs require them.

The speakers can be integrated in the monitor or be a separate module (sound bar) that can be docked onto the screen.

Please note:

- Using speakers can affect the distance between the bottom edge of the screen and the desk surface.
- If there is a specific need for speakers on the monitor, the need for headphone and microphone connections needs to be considered.



3.6 Video interfaces

Recommendation:

- At least one analogue interface (VGA with D-Sub 15; may be possible with adapter)

and

- At least one digital interface (DVI-D or display port or HDMI)

3.7 Plug & Play ability

Recommendation:

Plug & Play ability for PCs

3.8 Scope of delivery

Recommendations regarding the scope of delivery:

- Flat screens incl. base (base must either be mounted or mountable without requiring tools)
- The electricity cable should be at least 1.8 metres long.
- The video cable (minimum requirement VGA and suitable digital cable)
- Driver software (provided this is not already provided by the Windows operating software)
- Instructions for use (paper, electronic medium or download)

3.9 User menu

Recommendations:

- Operation via »On Screen Display« (OSD) or comparable operation via software
- User menu available in German

3.10 Services provided by the contractor

3 year on-site exchange service (note: must be more specifically described, e.g. »at the latest within two working days« during normal business hours).

Please note:

- The term »on-site« can, in this context, refer to the entrance of the building (e.g. gate) or to a specific workstation in the building. The awarding body needs to specify the details in this respect.
- The user is obliged to check, taking into account the requirements, whether other service standards would make more sense or be more economically viable.

3.11 Operating elements

Operating elements such as on/off switches, input select switches and menu buttons should be on the front and easily accessible. They should be visually and tangibly recognisable.

4 Other: optional according to individual requirements

4.1 USB Hub on TFT

Please note:

- Devices with USB hubs (2.0 or above) may in certain cases not fulfil the Energy Star requirements (USB interfaces include energy supply for external devices).
- It is necessary, for data privacy reasons, to check whether an (open) USB interface is permissible.

4.2 Security-/monitor asset management

Options for reading a monitor's serial number via a DDC CI interface. These data can, in general, be used in connection with an asset management system. Functionality is administered via the connected client or via the superordinate network.

4.3 Aids to protect against theft (e.g. steel cable lock)

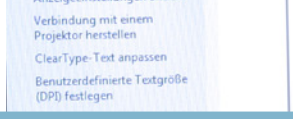
A steel cable lock is a mechanical contraption to protect against theft (steel cable with lock). Use of such a lock requires a corresponding fixture for the lock on the device. Monitors generally feature such fixtures.

4.4 Electronic theft protection

There are electronic anti-theft systems that only allow use of a device subject to entering a password. This function is currently not very widespread.

4.5 Extension of services

The recommended service period of 3 years can be extended by a further 1 or 2 years.



5 »Non-technical« requirements

5.1 Purchasing activities and services

Prior installations that have been performed by the manufacturer/supplier are all components of the purchase contract (use of the EVB-IT Purchase Contract). A purchase contract is also deemed to exist if, in addition to the actual supply and set-up of the devices, further services (e.g. installations or configurations on-site) are provided to the client. In such cases, the EVB-IT Purchase Contract should not be used, but rather the EVB-IT System Supply Contract.

The task of conducting the installation at the client's/user's premises, for instance, constitutes a service within the context of monitor procurement (EVB-IT Service Contract).

The EVB-IT documents and information on how to use these can be found on the website of the Federal Government commissioner for Information Technology at www.cio.bund.de.

This website also provides further information on legal issues in relation to purchasing hardware.

5.2 Support

If necessary, the corresponding support, incl. reaction times and maintenance times, should be agreed upon.

Standard market offers differ with respect to:

- Term of the contract
- Reaction times (period between notification of fault and first reaction of support)
- Restoration time (period between notification of fault and restoration of system)
- Replacement parts logistics
- Additional technical services according to effort and expenditure (hourly rates, travel costs)

The following requirements are possible, depending on respective needs:

- 3, 4 or 5 year on-site service
- On-site service with a reaction time of x hours
- On-site service with a restoration time of x hours
- Availability of hotline for x hours on y days per week
- Replacement part delivery without part exchange conducted by service technician
- Storage of replacement parts at client

Individual agreements can be concluded for the procurement of high availability solutions of security relevant solutions. In such cases it is essential to conduct an assessment of how necessary the requirements are and of the costs that these requirements will incur.

5.3 Logistics

The following logistics features can, if necessary, be agreed upon:

- Specification of maximum delivery time
- Delivery carriage paid
- Delivery abroad
- Delivery to different locations
- Delivery to individual rooms
- Assumption of asset management

6 Valuation of offers

In sections 4 and 5, the criteria for product-neutral specifi-cations are described. The bidders prepare their bids based on these specifications.

These bids are then assessed and evaluated by the awarding body. The awarding body is obliged to award the contract to the most cost-efficient bid. As regards the evaluation matrix, the »Unterlage zur Ausschreibung und Bewertung von IT-Leistungen« (UfAB / Document on inviting tenders for and evaluating IT services) in its current version 2.0 offers extensive support (http://www.cio.bund.de/DE/IT- Beschaffung/UfAB/ufab_node.html).

6.1 Measurement records (e.g. energy consumption)

For many of the evaluation criteria, evaluation on the basis of written bids is sufficient. Specifications may exist, however, the fulfilment of which – and thus the evaluation of which – can only be properly assessed on the basis of the actual object of those specifications. These evaluation criteria include, for instance, energy consumption.

According to the regulations for awarding public contracts, it is not impermissible to require from the bidders that, with respect to relevant specifications, they conduct measurements and create corresponding measurement records. The awarding body must, however, decide on whether such measurement records should be required

- from every bidder,
- Only required from the most cost-efficient bidder/s (according to the files) as verification of their bid
- Or whether to do without such measurement records entirely

By having measurement records submitted, potential defects in the performance of the monitors on offer can already be taken into account during the bid evaluation stage, and thus prior to awarding the contract.

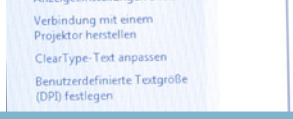
Requiring every bidder to submit a measurement record will however, depending on the scope of measurements to be conducted, result in considerable additional effort for the bidders. Only the successful bidder will be compensated for this effort. The awarding body should therefore consider whether issuing this request to all bidders is justified in relation to the services being tendered.

Alternatively, the most cost-efficient bidder (according to the files) can be requested by the awarding body to produce a measurement record (several cost-efficient bidders can be requested to produce a measurement record).

Only if the number of units is very low or if the bids are verifiably trustworthy should a waiver of the request to produce a measurement record be considered.

Recommendation:

If the number of units is low, requesting all bidders to produce measurement records is expressly not recommended! This is because the effort involved in conducting the measurement can lead to a significant reduction in the number of bids.



6.2 Process of evaluating measurement records

In cases in which measurement records are requested (see above), the object of this request is to verify the information in the written bid.

- If the invitation to tender requests all bidders to submit measurement records with their bid, the awarding body can make its final decision on the basis of the written bids.
- In cases where only the most cost-efficient bidder is requested to submit a measurement record, the following applies:
  - If the measurements confirm the information in the bid, the bid retains its valuation and, thus, its status as the most cost-efficient bid. The conditions for awarding the contract to the bidder have been fulfilled with final effect.
  - If the measurement fails to confirm the service offered, then points will be deducted from the valuation or the bid will be excluded, depending on the significance of the evaluation criterion in question. Such circumstances would change the ranking of the bids. The bidder who now offers the highest cost-efficiency must be requested to conduct a measurement with respect to the services offered. These procedural steps must be complied with until a measurement confirms the service-related information in the bid.

6.3 Carrying out the measurement

If a measurement is to be conducted, then all the relevant requirements must be transparently presented to the bidders in the tender documents.

The measurement of systems can either be conducted by the bidder or, alternatively, by the awarding body. In the latter case, the measurements conducted on test systems can be conducted either by the awarding body's own specialists or by independent third parties (in the event of a dispute regarding the acceptability/independent nature of the test results, testing by independent third parties is given preference).

Depending on who is conducting the measurement (bidder or awarding body), the following information must be included in the measurement:

- Test method (what test methods are used, including all relevant ancillary conditions; test procedure)
- Time schedule for the tests (when is the request issued, how quickly must the bidder make the testing system available, etc.)
- If applicable, who bears the costs of the tests (incl., for instance, who bears the costs of an unsuccessful test)
- If applicable, liability issues with respect to the test object (who is liable for damage to the test object)
- Can the bidder take part in the test or is the bidder obliged to take part in the test


1
2
Identifizieren

The Federal Association for Information Technology, Telecommunications and New Media (BITKOM) represents more than 1,700 companies in Germany. Its 1,200 direct members generate an annual sales volume of 135 billion Euros annually and employ 700,000 people. They include providers of software and IT services, telecommunications and Internet services, manufacturers of hardware and consumer electronics, and digital media businesses. BITKOM campaigns in particular for a modernization of the education system, for an innovative economic policy and a future-oriented Internet policy.

The Purchasing authority of the Federal Ministry of the Interior / BeschA purchases goods and services for 26 federal authorities, government-funded foundations and internationally active organisations. Its product portfolio is extremely wide-ranging, including things as diverse as alarm technology, tents and helicopters, as well as a great variety of services. In 2010, the Beschaffungsamt awarded a total of 1,111 contracts with a total volume of EUR 1,046.3 million.

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