Introduction: The Forensic Forum

The aim of the forensic forum under the auspices of the ACFE SA is to standardise and regulate scientific methodologies employed during forensic investigations, which are carried out in conjunction with criminal or civil legislation. Such investigations include almost all disciplines and practices involved.

It is instrumental to lead the way in terms of setting standards in all the disciplines of forensics applied during any given investigation and although there are well known and international standards in most of the disciplines, some changes may be required to address the situation in South Africa and Africa in the context of our own environments and applicable legislation and/or legal systems and frameworks.

Forensic scientists and criminal investigators need to be guided with acceptable standards and procedures for carrying out such examinations. Although the ACFE refers to “certified fraud examiners” it recognises the fact that a strong association exists with forensic examiners and practitioners. All forensic disciplines will accordingly be included in the Forensic forum.

The ACFE SA Chapter: Background

The need to raise the standard of fraud examination in South Africa and for a professional body which was not limited to a specific profession such as accounting or law resulted in the establishment of a local chapter with the mission to provide a community environment in which local forensic examination practitioners can associate. Local membership provides several benefits including: a network of experienced professionals; a training framework for practitioners with “how to” guidance, technical updates and ethical standards; regular discussion forums on issues relevant to the local environment; annual workshops on fraud examinations; and a video library with case studies. This chapter is a collection of individuals in South Africa from all industries and professionals, who all have a single goal in mind; the reduction of white-collar crime in South Africa.

ACFE Professional Standards - www.acfesa.co.za

I. Preamble of the ACFE SA

The Association of Certified Fraud Examiners is an association of professionals committed to performing at the highest level of ethical conduct. Members of the Association pledge themselves to act with integrity and to perform their work in a professional manner.
Members have a professional responsibility to their clients, to the public interest and each other; a responsibility that requires subordinating self-interest to the interests of those served.

These standards express basic principles of ethical behaviour to guide members in the fulfilling of their duties and obligations. By following these standards, all Certified Fraud Examiners shall be expected, and all Associate members shall strive to demonstrate their commitment to excellence in service and professional conduct.

II. Applicability of Code

The CFE Code of Professional Standards shall apply to all members and all Associate members of the Association of Certified Fraud Examiners. The use of the word “member” or “members” in this Code shall refer to Associate members as well as regular members of the Association of Certified Fraud Examiners.

III. Standards of Professional Conduct

A. Integrity and Objectivity

1. Members shall conduct themselves with integrity, knowing that public trust is founded on integrity. Members shall not sacrifice integrity to serve the client, their employer or the public interest.

2. Prior to accepting the fraud examination, members shall investigate for potential conflicts of interest. Members shall disclose any potential conflicts of interest to prospective clients who retain them or their employer.

3. Members shall maintain objectivity in discharging their professional responsibilities within the scope of the engagement.

4. Members shall not commit discreditable acts, and shall always conduct themselves in the best interests of the reputation of the profession.

5. Members shall not knowingly make a false statement when testifying in a court of law or another dispute resolution forum. Members shall comply with lawful orders of the courts or other dispute resolution bodies. Members shall not commit criminal acts or knowingly induce others to do so.
B. Professional Competence

1. Members shall be competent and shall not accept assignments where this competence is lacking. In some circumstances, it may be possible to meet the requirement for professional competence by use of consultation or referral.

2. Members shall maintain the minimum program of continuing professional education required by the Association of Certified Fraud Examiners. A commitment to professionalism combining education and experience shall continue throughout the member’s professional career. Members shall continually strive to increase the competence and effectiveness of their professional services.

C. Due Professional Care

1. Members shall exercise due professional care in the performance of their services. Due professional care requires diligence, critical analysis and professional scepticism in discharging professional responsibilities.

2. Conclusions shall be supported with evidence that is relevant, competent and reasonable.

3. Members’ professional services shall be adequately planned. Planning controls the performance of a fraud examination from inception through completion and involves developing strategies and objectives for performing the services.

4. Work performed by assistants on a fraud examination shall be adequately supervised. The extent of supervision required varies depending on the complexities of the work and the qualifications of the assistants.

D. Understanding with Client or Employer

1. At the beginning of a fraud examination, members shall reach an understanding with those retaining them (client or employer) about the scope and limitations of the fraud examination and the responsibilities of all parties involved.

2. Whenever the scope or limitations of a fraud examination or the responsibilities of the parties change significantly, a new understanding shall be reached with the client or employer.

E. Communication with Client or Employer

1. Members shall communicate to those who retained them (client or employer) significant findings made during the normal course of the fraud examination.
F. Confidentiality

1. Members shall not disclose confidential or privileged information obtained during the fraud examination without the express permission of proper authority or order of a court. This requirement does not preclude professional practice or investigative body reviews if the reviewing organization agrees to abide by the confidentiality restrictions.

IV. Standards of Examination

A. Fraud Examinations

1. Fraud examinations shall be conducted in a legal, professional and thorough manner. The fraud examiner’s objective shall be to obtain evidence and information that is complete, reliable and relevant.
2. Members shall establish predication and scope priorities at the outset of a fraud examination and continuously re-evaluate them as the examination proceeds. Members shall strive for efficiency in their examination.
3. Members shall be alert to the possibility of conjecture, unsubstantiated opinion and bias of witnesses and others. Members shall consider both exculpatory and inculpatory evidence.

B. Evidence

1. Members shall endeavour to establish effective control and management procedures for documents. Members shall be cognizant of the chain of custody including origin, possession and disposition of relevant evidence and material. Members shall strive to preserve the integrity of relevant evidence and material.
2. Members’ work product may vary with the circumstances of each fraud examination. The extent of documentation shall be subject to the needs and objectives of the client or employer.

V. Standards of Reporting

A. General

1. Members’ reports may be oral or written, including fact witness and/or expert witness testimony, and may take many different forms. There is no single structure or format that is prescribed for a member’s report; however, the report should not be misleading.
B. Report Content

1. Members’ reports shall contain only information based on data that are reasonable and relevant to support the facts, conclusions, opinions and/or recommendations related to the fraud examination. The report shall be confined to subject matter, principles and methodologies within the member’s area of knowledge, skill, experience, training or education.

2. No opinion shall be expressed regarding the legal guilt or innocence of any person or party.

FORENSIC FORUM

A. Introduction

i. Forensic Discipline - Voice truth verification specialist

ii. The ACFE SA was assisted by Leon Towsen to compile these standards

iii. Description of the Forensic Discipline - Layered Voice Analysis (LVA) - Nemesysco Ltd.

Purpose:
The purpose of this Forensic Discipline is to serve as an Investigative Focus Tool.

Objective:
The main objective of this Investigative Focus Tool is to optimize the process of determining the true facts pertaining to the issues under investigation by performing the analysis with integrity and objectivity, whilst utilising professional competence and due professional care to convey accurate results which can be used during investigations or business decisions. The analyst performing these analyses should handle the results with the necessary confidentiality.

Skills:
The analysts performing these analyses are required to have adequate communication skills in order to interview the subjects and convey their findings in a written report as well as a sound knowledge of computer skills in order to record and analyse the verbal responses delivered by the subject to the questions posed using the relevant technologies.
Application:
The successful application of this Investigative Focus Tool will enable the analyst and investigator to determine malicious intent, provide risk assessments, evaluate emotional and cognitive (CKC) has reservations about using this description, as no DOD system can realistically compute ‘emotions’ nor malicious ‘intent’ Simply put... VSA applications are designed to identify spoken deception.ie: mistruths or deception in a controlled setting) emotions as well as improve efficiency and decision-making processes.

Application of the Forensic Discipline
i. National and International

Purpose of the Forensic Discipline
ii. Investigative Focus Tool;
iii. Fraud and corruption assessment and verification;
iv. General employee veracity assessments;
v. Pre-employment screening;
vi. Proactive prevention strategies;
vii. Any criminal or malicious behaviour

Criminalistics
i. This section describes the legislation or common law applicable to the specific Forensic Discipline

Within the Republic of South Africa there are no regulatory laws forbidding the application of truth verification technology however it has been stated in case law that the results of such technologies are merely one evidentiary fact and cannot in itself prove guilt. However, the results of TVT has been readily accepted by the CCMA.

ii. Therefore, the legislation and regulations applicable to this Forensic Discipline can be found in inter alia:

iii. The Constitution of South Africa, Act 108 of 1996 with specific reference to:
   a. Chapter 2 Section 10 - Human Dignity;
   b. Chapter 2 Section 12 - Freedom and security of the person;
   c. Chapter 2 Section 14 - Privacy;
   d. Chapter 2 Section 30 - Language and culture;
   e. Chapter 2 Section 32 - Access to information;
   f. Chapter 2 Section 35 - Arrested, detained and accused persons
   g. Chapter 2 Section 36 - Limitation of rights.

ii. The Criminal Procedures Act, Act 51 of 1977:
a. All relevant aspects and section relating to the regulation of the administration of the Criminal Justice System in the Republic of South Africa.

viii. The King Code of Governance Principles and the King Report on Governance (King IV).
ix. Protection of Personal Information Act, No 4 of 2013.
x. Promotion of Access to Information Act, No 2 of 2000

Ethics in Administration

i. This section will indicate existing national and international ethics for the Forensic Discipline if not aligned with the ACFE Code of Ethics and Professional Standards above.

ii. It is mandatory that every analyst abide by the ACFE’s Code of Ethics and in addition apply the following principles:

iii. All “subjects” (persons subjected to assessment) are to be treated in a humane and dignified manner based on the grounds that every “subject” subjected to assessment has experienced a traumatic event and/or is under stress.

iv. All “subjects” must be properly briefed and enlightened regarding the processes and the limitations of the technology utilized during the assessment, prior to the commencement of the assessment.

(When administering one-on-one TV tests, the Examiner should use only scientifically peer reviewed and validated pre-test methodologies, as endorsed by the APA, SAPA-VSA and not random methods).

v. Every “subject” has the right to refuse to undergo assessment and may not be deprived of this right.

vi. Every analyst must ensure that the results obtained from the analysis are accurate and precise.

vii. All analysts must seek assistance from equally qualified colleagues to verify their findings and ensure accurate and precise results.

viii. It is imperative that all analyst remain impartial and perform the analysis of the assessment with integrity and objectivity in order to ensure precise and accurate.

ix. Every analyst must convey these accurate findings in writing to the client or other authorised persons and be available to discuss these findings with the client or authorised persons.
x. Every analyst (Examiner) must ensure that the assessment is finalised within a reasonable time frame whilst still ensuring that the findings are accurate and precise and render a service with professional competency after taking into consideration the personal limitations of the analyst.

xi. The Forensic Discipline must be used to provide quality work with precise and accurate results instead of rushed and possible erroneous results to ensure a high quantity of assessments finalised.

xii. Every analyst must ensure the confidentiality of all findings and only disclose their findings to individuals with the appropriate authorisation.

xiii. Every analyst (Examiner) must have policies, procedures and processes in place in order to ensure that confidential information is safeguarded and prevent confidential information contained in reports, recordings and other working documents from becoming known to persons without the appropriate authorisation.

xiv. Analysts are obligated to inform the client of any relevant information that came to the attention of the analyst during the assessment which information may have a negative effect on the business of the client. (affects the current circumstances • suggest deletion)

xv. All analyst should perform the assessments and analysis in accordance with the relevant legislation as set out above to promote and uphold the public confidence in the application of this Forensic Discipline.

xvi. Every analyst must be prepared to testify regarding their findings in any disciplinary, criminal or civil judicial proceedings.

xvii. The application of this Forensic Discipline is not to be used as an “intimidation technique” and thus the analyst and employer must refrain from using the discipline as such.

xviii. All analysts must refrain from referring to similar systems and fellow analysts in a derogatory manner. If an analyst should act in such a manner, the ACFE SA and the authority that issues that analyst their license should be informed of the aforesaid misconduct in writing. (In SA law, the licence holder can do nothing to discipline its paying clients. The licence holder is a vendor only. Nothing more. In reality, vendors who sell ‘relicensing options’ are merely annuity collectors. The use of the term licence in this regard is somewhat misleading as the ‘licence’ does not provide any guarantee or legal protection to examinees/consumers.)

xix. **Examiner Education and Training**

The minimum qualification, experience, compliance requirements and operational requirements for the Forensic Discipline at entry level.

i. Grade 12.

ii. Minimum of 6 months on-the-job supervised training in a field related to the Forensic Discipline;
iii. Certified and trained by Nemesysco Service Centre Africa at level 1. (All other technology must please add to this part.

iv. Certified by accredited AVSAPRO Instructors. (Cape Town, Centurion, Johannesburg) and accredited by SAPA - VSA (South Africa Polygraph & Voice Stress Association)

**AVSAPRO Training: Standard DOD Examiner**

**Minimum Requirement:**

Grade 12

Candidate must be computer literate.

Training given by Avsapro follows polygraph methodology closely and utilises only the scientifically validated Question Constructs as approved by the APA. The psychophysiology as approved by APA is closely adhered to.

Training provided is comprehensive.

**History of DOD**

Discussion of various technologies and techniques.

**Biology pertaining to VSA**

**Pre-test interview & methodology.**

The psychological set.

**In-test methodology**

**Post test methodologies.**

**Question Construction using validated Constructs only.**

**Constructing Questions / Definition of Question types.**

**Scenario role play workshop.**

**Practice live testing under supervision.**

**Using AVSAPRO to conduct telephonic testing.**

**Using AVSAPRO together with biofeedback polygraph in real time.**

**Applicable legislation in SA**

**Report Writing.**

**Final Day: Revision, Correction & Assessment of candidate.**

Unlimited after training support via mobile/eml/whatsapp/sms/Teamviewer/Skype

Candidate has to involve his/her Instructor and submit 10 test criteria in order to receive certification.

**ADVANCED DOD EXAMINER**

As per Standard Examiner, including:

7 Day training course. (2 extra days)

Additional Modules:

- SCAN Workshop
- Truth Extraction Workshop
- Trust Risk Survey
Forensic Interview using Reid’s presumptive questioning technique.

Personality Profiler

The psychophysiology teaching as endorsed by APA is not frivolous and should not be disregarded. It has been researched and reviewed hundreds of times since the mid 1930’s. Any dilution of training standards leads to compromised test data and unreliable test results.

“LVA 6.50 training” - Dr G van Damme:

The LVA6.50 training comprises of an intensive, 5-day basic course during which the basis for LVA operatorship is presented. During the training, the analyst will be systematically trained in the underlying principles of veracity assessment, in the related skills thereof and will obtain the necessary proficiency in the Layered Voice Analysis technology specifically. During this course, the examiner is educated with regards to Psychophysiology, the history of veracity assessment and an overview of the technologies and techniques available, investigative tools, interviewing and interrogation techniques, the concepts of Proof of Evidence, witnessing in the Court of Law and the ethical code of conduct to follow when using any LVA system.

Substantial time is spent on practical exercises with the LVA system in On-line and Off-line modes. During the course three qualifying tests are completed consisting of a theoretic exam, a technical exam regarding all the technical element of the technology and a final practical exam where the examiner’s proficiency is examined. Proven record of reliability, integrity, objectivity and professionalism.

The minimum qualification, experience, compliance requirements and operational requirements for the Forensic Discipline at an advanced level 2 (Master operator).

Advanced training.

It remains the privilege of Nemesysco Ltd, at its own discretion and that of its service centres, to identify certain candidates (of course after initial consultation with the employer) for any further tuition and extra qualification.

What we do with qualified operators, as per their request and normally without any charges but also without qualification, is a “recap”. When you complete level 1 you know the basis and how to solve already solved problems. When you go to practical uses, you often find things that are not black and white - and so we need people to work for at least 100 hours on the system and gather experience and QUESTIONS. Then we discuss the LVA considering these questions, and how to work around complications people find. This should give them tools to deal with the new problematic issues they will encounter. This is what I, for example, many times did with Pierre and with Bianca.
Level 2 “interrogation mode” / the D4 version of LVA650 - receive an advanced operator certificate).

Requirements for qualification: Reading of 2 books from a list provided and the writing of a synopsis of these where after the findings are discussed with the student. The student also must research and study the following topics which will also be discussed during evaluation: definitional elements of a crime, basic knowledge of Criminal Procedure, sensations - emotions and perceptions, the major culture in the student’s region about inter culture wrong-doings and an adequate knowledge of the constitution of his/her country of operation. Finally, the candidate’s ability to give a respectable presentation of the psychophysiology and the workings (including the shortfalls) of veracity assessment in general is observed and evaluated:

i. Grade 12;
ii. Must have successfully completed 250 LVA tests and analysis after passing certification at level 2;
iii. Must have working knowledge of other Psychophysiology based deception detention technology;
iv. Certified by Nemesysco Service Centre Africa expert evaluation panel; and
v. Successful completion of the CFE Examination.

B. Minimum Knowledge and Skills

The minimum criteria in terms of formal education, technical and legal certification as well as experience required in the specific Forensic Discipline.

iv. Sound knowledge of and experience with Civil and Criminal Procedure Legislation.
v. Adequate experience in the procedures of presenting evidence and findings in judicial proceedings.
vi. Sound knowledge of different interviewing techniques, crime investigation techniques and the psycho physiological stress indicators of the human body.
vii. Basic computer literacy.
viii. Compiling reports
ix. Well-developed and strong analytical skills

Forensic Process

The general acceptable practice in the specific Forensic Discipline - nationally and internationally. Description of the practices, procedures, policies, systems and outputs used and required for the specific Forensic Discipline.
i. Detailed briefing by the client to understand the circumstances and the mandate under which to operate and conduct the assessment.
   a. During this briefing, the entire process that is going to be followed should be explained to the client.

ii. Preparation of the interviewing facility.
   a. When selecting an interviewing facility, special care should be taken to select a setting which places the “subject” at ease and a setting with the least amount of background noise which could have an impact on the technology’s effectiveness.

iii. Preparation of the questionnaire.
   a. The analyst should decide on the relevant questionnaire using only scientifically validated Question Constructs as per APA research, to use in these circumstances.

iv. Interviewing the subject.
   a. Before the commencement of the assessment, the subject must be informed of the procedure and focus should be placed on keeping the subject calm and adhering to set procedures.

v. Recording the interview.
   a. Special care should be taken to ensure that all the equipment functions properly and that the best possible recording can be obtained.

vi. Refrain from prejudice and subjectivity.
   a. The analyst should not comment or speculate regarding the subject’s veracity prior to analysing the assessment and obtaining accurate and precise results.

vii. Accurate analysis of the verbal responses supplied to the questions posed.

viii. Timeous submission of written reports.

ix. Adherence and Compliance with discipline Licence Agreements.

x. Utilisation of advanced/ upgraded Computer Software.

xi. Compliance with Business ethics and all appropriate legislation.

Interdisciplinary Forensic Standards

i. National or international standards that exist for the specific forensic discipline.

ii. ACFE SA membership and alignment to its Code of Conduct and Professional Standards.

iii. Ensure that analysts are adequately trained and be in possession of a competency certificate. Certification by licensee and or his/her appointed RSA representative with a proven track record of honesty and professionalism.

iv. Registration and trade in accordance with the Companies Act [RSA]
Quality Control

a) Interaction with trained specialists capable of verifying analysis findings and results.
b) Various questionnaire protocols are available to the analyst enabling him/her to conduct a variety of assessment interviews and compare results.
c) Periodic audits on assessments done by the approved licence holder of the technology to ensure that a high standard of accurate and precise results are obtained and that the correct procedure is followed. Unless this para stipulates an actual number of tests within a prescribed time, it is meaningless.

Glossary of Terminology applicable

a) Control (The international standard naming is COMPARISON QUESTION) Question: A carefully posed question which induces a measurable reaction which can be used as a baseline stress level. (It is not a carefully posed question. What does this mean? A Comparison Question is a probable known lie and must follow the format of either Backster’s Exclusive Time Question, or Reid’s Universal Comparison Question) Validated Question Constructs pose a series of Neutral, Comparison, Relevant and Sacrifice Relevant questions in a prescribed format)
b) DI: Deception Indicated. Term describing test results, which indicate to the examiner that the subject is being untruthful. The modern terminology is ‘Significant Response Indicated’
c) Homeostasis: This is the normal, conscious state of mind and body in which no direct jeopardy is present, and in which there is not complete relaxation and not excessive excitation. Homeostasis refers to the ability of the body or a cell to seek and maintain a condition of equilibrium or stability within its internal environment when dealing with external changes. It is involved in the maintenance of the constant internal environment which includes the function of kidney, liver, skin, etc. In humans, homeostasis happens when the body regulates body temperature in an effort to maintain an internal temperature around 98.6 degrees Fahrenheit. For example, we sweat to cool off during the hot summer days, and we shiver to produce heat during the cold

d) IC: Irrelevant Control question designed to be irrelevant to the issues for which the test is being conducted. There is no such thing as an Irrelevant Control Question

e) NDI: No Deception Indicated. This is the analytical result that reports that a VSA subject appears to have been truthful in his responses to the VSA. Modern terminology: No Significant Response

f) Questionnaire Protocols: Description of questionnaire document and sequences in which questions are to be put. Aka Question Constructs.
g) Subject or Examinee: Individual undergoing veracity assessment.

h) LVA: Layered Voice Analysis. Uses pitch and tone of voice.
   VSA: Microtremor based Voice Analysis, Uses sub audible microtremors (The Lippold Tremor)

i) The Online Mode: The Online Mode is used when an analysis is required during a real-time conversation. This real-time analysis enables the interviewer to focus on certain suspected aspects and ask additional questions. The Online Mode is will be best used during face-to-face or telephonic interviews because the analysis can be performed while the conversation is being held.

j) The Offline Mode: The Offline Mode enables the analyst to conduct an in-depth analysis of pre-recorded audio. The Offline Mode will be best used when a conversation with a suspect is recorded on a digital tape recorder and later analysed when the Offline Mode can exclude any noise and irrelevant sections and only analyse the relevant sections.

k) Calibration: The calibration process involves that the interviewed subject answers five emotionally acceptable questions to establish an emotional baseline where the interviewed subject is assumed to be present. The calibration process also considers the background noise level so it can be ignored when the system is working in the analysis phase. The calibration process is used in both the Online and Offline Mode. The samples that are the best suitable for calibration is the subject’s name, date of birth, address or cell phone number.

l) Truth: When the system indicated a textual message stating “Truth” it means that there was no deception indicated on the segment that was just analysed. The system was therefore unable to detect any special emotional findings pertaining to that specific voice segment.

m) HIGH SOS: This textual message indicated that the system identified a “Say or Stop” situation. In these situations, the subject is knowingly not revealing all the information relevant to the question that was asked or regrets providing the information he or she just divulged.

n) Inaccuracy: Lie indication at medium levels were detected. This is not deception stemmed from deceptive intention, but the details are not accurate so you can interrogate deeper or continue as you wish.

o) False Statement: The system detected an extreme mixture of emotions, and suspects the veracity of the last statement.

p) Probable False: High probability for deception in the last segment analysed.

q) Suspected: Segments for which the analysis was “Medium” or “Medium-High Risk”.

r) AVSAPRO utilises Neural Network technology (also referred to as Artificial Intelligence, in conjunction with scientifically validated Question Constructs.

s) AVSAPRO controls cadence throughout the test series to prevent Examiners from speeding up the process, and to cater for the Onset Delay of physiological responses. No other voice product utilises Neural Network technology nor can they cater for the Onset Delay.
t) AVSAPRO computes chart results in real time, providing a Stress Value (SV) for every phoneme annotated and a chart, or Series result, and ultimately an exam result. Results are calculated according to the Construct utilised. (ie Screening or Issue test)
u) AVSAPRO incorporates a Scoring audit facility and various reporting modes. It also has modes to process standard YES/NO exams and a separate mode to analyse running narrative (alibi stories)
v) Examiners utilising AVSAPRO in conjunction with biofeedback polygraph report a high correlation in results, in the order of 99%.

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