XIX. Congress of the European Athletics Coaches Association: Combined events
- 3.-5. February 1995 in Valladolid/Spain -

by Axel Berndt and Helmar Hommel

1. Introduction

This was the first of the numerous congresses of the European Athletics Coaches Association (EACA) to deal exclusively with the combined events. However, the combined events were always included, at least to some extent, in the programme of the past congresses. More than 50 coaches from 22 European countries (Belgium, Denmark, Germany, Estonia, Finland, Great Britain, Ireland, Iceland, Italy, Norway, Austria, Poland, Sweden, Slovenia, Spain, Hungary, and Cyprus), as well as from Angola, Australia, Canada, Puerto Rico and South Africa, took part in the congress, which was excellently organised by the Spanish Athletics Federation and the regional federation Castilla y Leon together with the Spanish Olympic Committee. The European Athletics Association (EAA) received special thanks for its award of scholarships to 19 coaches.

The congress was opened and headed by the President of the EACA, Frank W. Dick, the former chief coach of the British Amateur Athletics Association. For three days he led the way through the various topics supremely well and was always able to draw from his wealth of experience and to make suggestions on every topic. After each lecture, workshop groups were formed, with each group dealing with a different group of events in a more detailed way. The results of these workshops were then discussed again in the plenum. This method, which had already been used during the Berlin congress in 1993, proved once again very successful and useful for discussions because experience shows that the participants are less shy to ask questions in a smaller group than in the whole plenum.

The programme included the following topics:
- Sprinting and speed disciplines
- Endurance disciplines and endurance
- New horizons for the mens' and women's decathlon
- Elastic strength disciplines

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(Translated from the original German by Jürgen Schiffer)
• Specific conditioning and competition planning for women athletes
• Recruitment and development of young athletes
• Optimization and strength training
• Club decathlon international
• Training and competition planning
• Combined events as a basis for athlete development
• A combined events Grand Prix.

This report is based on the lectures, workshop discussions and summaries as well as on the available Conference Proceedings.

2 Sprint and speed events
   – Frank Dick (Great Britain)

Frank Dick's lecture focused on the speed-dependent events, particularly in terms of speed development and planning. Slight performance improvements in events depending on sprinting ability (in the decathlon: 100 metres, 400 metres, 110 metres hurdles, long jump, high jump, pole vault, and in the heptathlon: 200 metres, 100 metres hurdles, long jump, high jump) are awarded relatively high point gains.

This dominance of the sprint and speed-strength events has a direct influence on combined events training and on the ideal type of combined events athlete, who should above all possess great speed, so that the foundation can be laid in the running and jumping events for an above-average performance. The last two world record holders, Daley Thompson (GBR) and Dan O'Brien (USA), are conspicuous for their extraordinary performances in the sprint, long jump and high jump, which conceal their somewhat weaker throwing performances.

Therefore, the emphasis in training should be on those contents which are oriented to the development of both general speed-strength and sprinting ability.

The main advantage in being "sprint gifted" is that it frees more time in the balance of the programme to work on technical events and yet continue to enjoy a gain in points from one competition to the next.

In the decathlon, each day opens with the fastest discipline - 100 metres on the first day; 110 metres hurdles on the second day. In the heptathlon, the two day programme commences with the fastest discipline - 100 metres hurdles. The increase in the points gained through the development of the ability to produce a quality performance in these disciplines is not the only advantage; The rhythm of the competition is set and the motivational climate is considerably enhanced.

Dick believes that speed is the final sophistication in learning techniques. Every coach is aware of the problems which arise when an athlete attempts to execute a technique faster than stability of that technique will permit. The good news is that the athlete can learn how to co-ordinate his or her limb movements, balances, timings, and learning situations to do so. In sprinting and hurdling, the final 40 metres or 4 hurdles may take 3-4 quality races to get right, but the athlete will get there.

Once sprinting speed has reached new levels, it has critical impact on the long jump, high jump and pole vault, as new speed levels must be accommodated to take-off timings. For example, if a decathlete has broken his lifetime best in the 100 metres, he will hit the long jump board in the next event faster than normal. Unless this has been regularly rehearsed, the free thigh/take-off leg synchronisation will collapse.

Again it is through competition in these individual events that the shift in timing will be learned more effectively. This must be carefully planned, because as the athlete enters his/her peak sprinting phase, there are few opportunities to fit in the competitive stimuli required without risking injury or a possible competition overload!

Speed in the throws is developed as in training for individual events, but once more, it requires competition, especially in the discus and javelin, to co-ordinate timing with speed. The pressure of competition is the key to adrenaline and, therefore, speed.

To a certain extent competition can, of course, be "modelled" in training by stimulating this or that crisis situation. The athlete, then takes time to visualise the problem - then role-plays to solve it.

It was pointed out that placing the emphasis in this way on the development of general speed-strength and special sprint ability also has a positive effect on the throws, since, besides technique, speed-strength and explosive strength play a dominant role in the throwing events and, in the early stages, conditioning aspects can be neglected.

Dick presented a global planning pattern for the development of speed in the yearly cycle (see Table 1). For the individual training phases model weekly cycles were presented, which were supplemented by tables for time control in test runs in relation to the 100 metres, 200 metres and 400 metres running
Table 1: General scheme of training planning – distribution of speed work

<table>
<thead>
<tr>
<th>Training weeks</th>
<th>Phase</th>
<th>Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 – 4</td>
<td>Introductory • General all round mobility, strength and endurance • Training routine</td>
</tr>
<tr>
<td>2</td>
<td>5 – 12</td>
<td>Core • Develop general; maximum; elastic strength • Develop running endurance (strength, aerobic, speed) • Technical development</td>
</tr>
<tr>
<td>3</td>
<td>13 – 16</td>
<td>Specific • Maximum strength levels • Speed endurance • Sprinting speed • Technical speed</td>
</tr>
<tr>
<td>4</td>
<td>17 – 18</td>
<td>Pre-competition • Speed endurance • Sprinting speed • Competitive attitude • Techniques in competition</td>
</tr>
<tr>
<td>5</td>
<td>19 – 22</td>
<td>Competition • Speed competition • Regeneration • As before</td>
</tr>
<tr>
<td>6</td>
<td>23 – 27</td>
<td>Core • As before ) qualifying competition</td>
</tr>
<tr>
<td>7</td>
<td>28 – 36</td>
<td>Specific • As before ) during this period</td>
</tr>
<tr>
<td>8</td>
<td>37 – 40</td>
<td>Pre-competition • As before (includes individual competitions, major competitions)</td>
</tr>
<tr>
<td>9</td>
<td>41 – 48</td>
<td>Competition • Medical management</td>
</tr>
<tr>
<td>10</td>
<td>49 – 52</td>
<td>Regeneration</td>
</tr>
</tbody>
</table>

Performance. The data for the bounding controls is listed in Table 2.

3 Endurance events and endurance – Andy Higgins (Canada)

Andy Higgins, coach of Mike Smith and others, introduced his contribution by pointing out that the decathlon and the heptathlon are single events. They are a unit, a combination of interrelated disciplines. They must be seen this way and not as a collection of many different events. According to Higgins, they are combined events, not multiple events, and there is a very synergistic relationship among them. They not only complement one another, they can create a whole that is greater than the sum of its parts. This is what intelligent, long term preparation is about. It is a science-based art that is worked out between the coach and the athlete over a number of years.

Higgins put forward the somewhat exaggerated thesis that actually in all running events the relevant factors are mainly speed endurance (especially in the 100 and 400 metres) or basic endurance (especially in the 1500 metres). This also applies to the combined events because the competitions last a very long time (2 days) and there are several warm-ups and breaks between the different events.

According to Higgins, performance, even the 100 metres, is very much dependent on speed endurance, since a sprinter develops his pure speed only up to approximately 60 metres (with the exception of a few world-class athletes) and achieves a good personal performance by maintaining his speed or losing as little velocity as possible. This loss in velocity could best be reduced by training speed endurance.

Higgins stated that 400 metres training is speed-endurance training. Good results achieved here should also have a positive effect on the jumps as speed endurance training leads to a faster recovery after each trial. This is certainly an interesting aspect for the high jump and pole vault, as the long duration of many of the combined event competitions can lead to failures not only because of technical faults but also simply because of fatigue.

Higgins prepares his athletes’ speed-endurance training by a broad endurance training during the first weeks of the preparation period.

Table 2: Bounding controls

<table>
<thead>
<tr>
<th>Target time [s]</th>
<th>Standing long jump [m]</th>
<th>Jump and reach [cm]</th>
<th>3 bounds* [m]</th>
<th>5 bounds* [m]</th>
<th>10 bounds* [m]</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.20-10.65</td>
<td>2.90-3.20</td>
<td>76-85</td>
<td>9.20-10.00</td>
<td>15.90-17.10</td>
<td>29.50-39.50</td>
</tr>
<tr>
<td>10.70-11.10</td>
<td>2.70-3.00</td>
<td>68-77</td>
<td>8.50-9.10</td>
<td>14.60-15.60</td>
<td>27.00-37.00</td>
</tr>
<tr>
<td>11.20-11.70</td>
<td>2.60-2.90</td>
<td>60-69</td>
<td>7.90-8.50</td>
<td>14.00-15.00</td>
<td>25.00-35.00</td>
</tr>
<tr>
<td>11.80-12.20</td>
<td>2.50-2.80</td>
<td>53-61</td>
<td>7.50-8.10</td>
<td>13.40-14.40</td>
<td>23.00-33.00</td>
</tr>
<tr>
<td>12.30-12.70</td>
<td>2.40-2.70</td>
<td>46-54</td>
<td>7.20-7.80</td>
<td>12.80-13.80</td>
<td>21.00-31.00</td>
</tr>
</tbody>
</table>

* from standing
This means that he offers extensive tempo runs two to three times a week and fairly fast cross-country runs of 30 to 45 minutes duration three times a week. These cross-country runs are carried out prior to the main training, as part of the warm-up, while, during this phase, extensive tempo runs are performed after technique or strength training. Sometimes cross-country and tempo runs are also combined with one another, as a kind of test. So now and then, on Saturdays, Higgins has his athletes do a very fast cross-country run, with the goal of achieving a personal best (about 40 to 45 minutes). Following this, after stretching and some easy co-ordination exercises, the athletes run 1 x 1000m or 1 x 1200m at the 1500m race tempo and 3 x 200m at about 28 to 30 sec with rest intervals of 2 min duration.

Higgins expressly pointed out that the purpose of this programme was to improve the athlete's psychological abilities (will-power). Athletes who improve well in the course of this running programme, are no longer afraid of the 1500 metres run at the end of a decathlon.

The criticism of this strong emphasis on endurance and speed endurance focused on the question whether the high volume of running training does not have a negative influence on technique training within the weekly planning and whether the regeneration time between the training sessions is not too short. Although there is an improvement of the basic psychological and physiological condition, improvement in the area of technique may be blocked because the athlete is actually always too tired to learn or improve new complex co-ordination movement patterns.

In this context Higgins directed attention to the general problem in combined events training of how to combine all the components of the performance profile of a combined events athlete in such a way that the intended result is achieved. Higgins regards the work of a coach as a “creative act”, aiming to combine, in an optimal way, the knowledge of the physical, psychological and biomechanical prerequisites and necessities with the possibilities of the respective athlete. For Higgins the coach is both an artist and sculptor, who works his sculptures out of stone, or a composer, who makes a piece of music by combining individual sounds.

The somewhat eccentric presentation of A. Higgins was fairly well received by most of the audience – mainly because of his practical way of presenting things, using numerous examples, and the comparison of the coach with an artist, who in general receives much more esteem from the public than does the coach (with the exception of football coaches). This comparison was really “balm to the coaches’ soul”.

4 New horizons for the men’s and women’s decathlon

– Helmar Hommel (Germany)

Originally it had been planned to deal with this topic in the form of a roundtable discussion prior to the start of the congress. As this discussion did not take place, H. Hommel gave a brief outline of the historical development of the women’s combined events and the new trend to the decathlon for women. He presented the pros and cons of the women’s decathlon, gave an evaluation from his point of view and then presented ideas of possible ways in which the decathlon could be made a more attractive event.

At the end of the seventies the women’s pentathlon, which was a one-day event, developed to the heptathlon as it is known today. This development had been suggested by many athletes and coaches and was based on extensive discussions about which additional events should be included in the heptathlon.

Some pros and cons for the women’s decathlon are:

**Cons:**
- The physiological and psychological load will be too high.
- Young athletes tend to lose their interest in the decathlon because it is too complex and the training volume is too high.
- There will be a loss of interest especially in developing countries.
- The introduction of the women’s decathlon will lead to a change in the profile of today’s athletes.
- Female decathletes must be much more all-round athletes than heptathletes because speed and elastic strength are needed to a greater extent for the decathlon than for the heptathlon. Furthermore, it should be taken into consideration that the 200 and 800 metres of the heptathlon are very similar, since the 800 metres event is not very much endurance-oriented.

**Pros:**
- Women are as tough or even tougher than men, they recover faster and have greater will-power.
• Interest will increase because there are very attractive and challenging events such as the pole vault.
• The athlete's profile will not change because the only really “new” event is the pole vault. However, this discipline will soon become an established part of an all-round athletic education.
• The lack of facilities and/or equipment cannot be accepted as an argument against the women's decathlon because this applies also to the men's decathlon. These problems can be solved only if bodies like the IAAF help, for example through knowledge transfer by the RDCs, by conducting coach education courses, etc.

However, even if the women's decathlon were introduced, there would still be one difference between the men's and women's decathlon: The women will continue to run 100 metres hurdles instead of 110 metres because 100m is the standard length of the women's individual event.

The discussion about the possible structure of the decathlon for women led to some fundamental questions:
1) Do most of the athletes concerned really want an extension of the existing heptathlon or is it merely that a few coaches and officials are interested in extending the programme?
2) Should the women's heptathlon be extended by one, two or even more disciplines. If so, by which disciplines?
3) Should there be a women's decathlon with the same grouping of events as in the men's decathlon. Or should one stick to the 800 metres rather than the men's 1500 metres?

The majority of the coaches present were of the opinion that there is still too little progress in the women's pole vault on an international level to extend the women's heptathlon to the decathlon. The national associations interested should first of all gain experience in this area. On an international level no change should take place before the Olympic Games 2000.

A discussion followed about how the men's decathlon might be made still more attractive for both athletes and spectators, both in the stadium and on the TV screen. The most important points arising from this discussion were:
1) A new scoring system: As the opinion is frequently put forward that the throws are currently scored too badly, some members of the audience suggested ways in which this situation might be improved. However, the majority were against any changes being made to the current scoring table, in order to maintain the continuity of record development and the comparability of the performances achieved.
2) Organisation of the time schedule: Most coaches were of the opinion that spending more than 12 hours of competition on each of two days does not further performance. Nor is the long duration of the competition very attractive for the spectators in the stadium and in front of the TV sets. An alternative would be to start the competition rather late, not before 11 or 12 o'clock, and thus to limit competition to two half days. It was planned to work towards a tightening of the time schedule at big meets through the EACA and the national federations.
3) A one-hour decathlon or half-an-hour indoors pentathlon: These suggestions for additional competitions should be followed up, since they would make a pleasant change as far as the presentation of the combined events to the spectators is concerned.
4) A junior Combined Events European Cup for under 23 year olds: The majority of coaches voted for this possible extension of international competition.
5) A decathlon World Cup: Some participants proposed a World Cup for combined events athletes, similar to the already existing European Cup for combined events. This World Cup could be conducted in alternation with the European Cup. However, most coaches were of the opinion that the attractiveness of the Combined Events Cup had decreased significantly because neither the athletes nor the organisers show much interest.

The congress participants were of the unanimous opinion that in general more should be done to make the combined events more interesting for spectators and the media and to motivate more athletes to participate in the combined events. In this regard, Germany was presented as an exemplary “combined events country”, because it appears that there is an optimal combination of advantageous conditions – a long and successful combined events tradition – and good youth work with corresponding opportunities for competition. There are also enthusiastic and well informed spectators and great interest is shown by the media. These are conditions which are absent in almost all other countries.
A special approach to increasing the attractiveness of the combined events for people in general and for young people in particular is the “Decathlon for All” competition, promoted by the German Decathlon team. This competition is open to everybody, men and women, old and young people, experienced and inexperienced athletes. The competition is organised by well-known elite athletes and coaches, who try to teach people at least some feeling for the decathlon. All participants wear identical T-shirts and are awarded the same prizes. Ordinary people can compete with (instead of against) well-known athletes. “This approach can help to increase overall interest in the decathlon, it can lead to the identification of otherwise only passive spectators with the decathlete and it can arouse the interest of potential young decathletes.

Other aspects of the topic “Decathlon towards 2000” were raised by Frank Dick, who asked the following questions: Why only ten events in the future? Why shouldn’t the triple jump be included? What about mixed men’s and women’s competition as in tennis? What about the inclusion of the relay? And what about the team decathlon?

5 Elastic strength and the jumping events
— Elio Locatelli (Italy)

E. Locatelli, who was chief coach of the Italian Athletics Federation until the end of 1994 and former coach of the long jumper Evangelisti and others, presented a variety of exercises and tests for the improvement of speed-strength and for use as training and competition control. Most of these exercises are based on Locatelli’s experience in the area of performance development in the jumps through systematic strength work, as related to the well-known investigations by Bosco et al. In this context the focus is on the contractile and, in particular, the elastic elements of the muscle fibres.

In technical terms “elastic strength” means the strength exerted during the take-off in all kinds of jumps. However, according to Locatelli, the correct definition of speed-strength should be “explosive-reactive ballistic strength”.

Investigations by Bosco (1991 and 1992), based on findings by Cavagna et al. (1965) and Kom (1973), show that the effects of different strength and explosive power training methods on the development of maximal explosive reactive power are somewhat contradictory. Improvements of muscular strength and power may occur in several components of the muscular function but the exact nature of the mechanism has not yet been shown conclusively. However, the following factors seem to influence the development of explosive power:

1) Rate of messages from the brain to the muscle.
2) Number of muscle fibres to which messages are sent.
3) Influence of biofeedback from Renshaw cell proprioceptors (muscle spindles, Golgi tendon organs, joint receptors, etc.) at spinal and/or supraspinal level.
4) Type of muscle fibres (fast and slow twitch fibres).
5) Size and strength of each muscle fibre.
6) Involvement and utilisation of “elastic strength” during “stretch shortening” type of muscular activation.

The main purpose of training is the improvement of motor performance. It is well known that the effect of adaptation to training is the sum of modifications brought about by the repetition of daily exercises, which are specific to the type of movement carried out. As far as the training methods employed to develop and increase explosive power are concerned, the work carried out can be transferred, if the temporal sequence of motor unit activation and also their frequency is closely related to the competitive action.

Several methods have been employed to develop maximal strength (isometric, isotonic, isokinetic) but it seems that the combination of “eccentric and concentric” training methods provides the most natural stimulus, because it follows the “ballistic” nature of human movement, which is also the only pattern of motor activity used in track and field events. This method has many variations; hundreds of drills can be used to develop and improve explosive power of the leg extensor muscles. Among these “drop jump exercises” (depth jumps or plyometric exercises) and rebound jumps, with or without loads, are extremely popular. These drills are performed at such a rate that the leg extensor muscles are actively stretched before shortening. This implies that during eccentric work a certain amount of elastic energy can be stored within the muscles and can be reused during the following positive phase in the form of mechanical work, which leads to an improvement of performance.

Additionally, part of the improved performance after pre-stretch has been shown to be
caused by myoelectric potential (BOSCO et al. 1982), see Figure 1.

In Figure 2 it can be seen that as weight decreases there is a drop in the force developed and the shortening velocity increases; it is also suggested that there is a contribution of the fast twitch (FT) and the slow twitch (ST) fibres to the production of force during different jumping performances with and without load. The relationships between \( f \) (force) and \( v \) (velocity) obtained during maximal jumps under squat jump conditions (SJ) and during jumping conditions is shown in Figure 3. As can be seen in ballistic types of motion, e.g. high jump, long jump and running, the use of elastic energy, as with depth jumps, shifts the \( f-v \) relationship to the right and upwards. This means that the leg extensor muscles should develop an average force of 3,000N (about 300kg) during 100ms of the pushing phase. During the same period their muscle shortening velocity should be between 6 and 8rad/s. In conclusion, when the force developed by the muscle is related to the shortening speed, the influence of both contractile component and “elastic elements” should be taken into account.

According to this, methods for the improvement of speed-strength abilities depend on the knowledge of the loads in the competition jumps and the physiological mechanisms which can be derived from this. As the performances get better, these loads become so high that the athlete’s body must be prepared systematically by large-scale strength and jumping training over a period of many years. It is a principle that a correct technique should be developed of as great a variety of jumps as possible. Later, this can be used to prepare and simulate the high competition loads. This is the only way to protect the athlete from injuries and to enable him to improve his performance over several years.

Figure 1: Potentiation effect caused by muscle pre-stretching

Figure 2: Relationship between the average force and the knee angular velocity
Figure 3: Relation for velocity represented for 2 different conditions of vertical jumps, squat jumps and drop-jumps.

Figure 4: Temporal force variations on a dynamographic platform during normal ballistic exercises, 1/2 squat with barbell on the shoulders and without.
Furthermore, Locatelli places great emphasis on strength training with barbells. In the respective preparation phases he tests the athletes’ sprinting ability while, during technique training, he checks the time of foot contact on the take-off board.

For the achievement of training goals, Locatelli uses several tests. The main test is the extension jump, taken from a standing position to a half squat with counter-movement. The extension jump is first of all carried out without external weight and then with an additional weight of 25kg (barbell). Finally it is performed with an additional load of 50kg. With highly trained athletes the additional load can be increased up to the athlete’s own body weight (maximal load).

The results of these jumps give an indication of explosive strength, elastic contribution and maximal dynamic strength. In addition, the athletes carry out jumps over a flight of 5 hurdles at 1m spacings, or they jump without hurdles on a resistive platform connected to a digital timer (Figure 4). Both flight times and contact times are recorded automatically. From the ratio of the heights measured with and without additional load, and from figures based on experience, Locatelli obtains information about the athlete’s current training state. During competition preparation he uses a test battery, which includes the extension jump test with and without additional load, a five step bounding run for distance, from a standing start with the take-off leg at the back and a check of the contact time on the take-off board after a full run-up. Again using figures based on experience, this test battery shows the state of fitness of the athlete and his likelihood of achieving good competition results.

Locatelli provided the following classification of strength exercises and presented numerous concrete training results, also over many years, as well as training patterns for the different jumps and types of jumpers, in the form of a tabular annual plan.

Classification of strength exercises:

a) Basic strength
- traditional exercises
  - clean, jerk, snatch
  - squat
  - half squat
  - step-up
  - standing calf-rise
  - eccentric half squat
- special exercises
  - half squat – timed
  - half squat – continuous jumping
  - half squat – with bounce-jumps
  - special step-up (step-up with load by barbells and with additional step of the free leg against the wall to get the correct take-off position as in normal jumps)

b) Speed strength
- throws (backward and forward with 5-6-7kg)
- bounces
  - standing (long jump / double jumps / triple jumps / 5 jumps / 10 jumps from a 2-4-6 steps approach
  - mixed endurance bounces (50 to 100m)
- uphill sprints (inclination about 15%, length 30-40m)
- harness sprints with cart or tyre (over 30-50m, time differences for 30m 0.8sec)

c) Specific strength
- plyometric exercises (best drop jump)
- reactivity exercises (differing from plyometric only in volume and intensity).

In the subsequent workshop the different groups tried to work out how such a training method might be integrated into training for the combined events and what the consequences might be for the sprint and throwing events. The following points were emphasised:

Most events influence one another by their demand profile. On the one hand, the physiological prerequisites overlap one another and, on the other hand, the previous loads influence the execution of the next discipline. As the speed-strength disciplines are predominant in the combined events, a method of training which is biased towards jumping strength should also be helpful for the throws, particularly in regard to the athlete’s strength/weight ratio (Cf. Elio LocATELLI: Technical and methodological considerations on the jumps. In: NSA volume 2, 1987, no. 2, pp. 23-40).

G. Schäfer presented her ideas about modern combined events training with the example of her work with the world-class athlete, Sabine Braun. She stressed that it is essential for an international top athlete to make use of the knowledge of specialists and special event coaches. According to Schäfer, on the elite level, a long-term improvement can be achieved only if the members of a team do not try to distinguish themselves but use their knowledge to support and prepare the athlete in an optimal way.

The various special coaches should be joined by a physician, who co-ordinates all necessary preventive measures and is always kept fully informed. Medical care should be supplemented by a physiotherapist, whose main responsibility is the prevention of injuries. This physiotherapist also helps to develop modified types of exercises, specially adapted for Sabine Braun.

Schäfer showed very clearly that the principle of team coaching is effective only if it is organised in a hierarchical way. The head coach (in this case G. Schäfer) determines the goals for the new season, the general training plan and the target-oriented preparation for the peak competition. These ideas are discussed by the team and each team member can offer his or her suggestions for improvement. A jointly developed plan is then put into practice for the preparatory training and competition periods.

Absolute priority is given to the top international meeting over all other meetings, the premise being to achieve the performance when it counts. Schäfer stated that, for an experienced and mature athlete, one top class meeting is enough to prepare for the peak meeting. However, she also expressly pointed out that her training plan is specifically designed for Sabine Braun. With other athletes she would possibly choose a completely different approach.

For building up top form, Sabine Braun takes part in a few selected meetings, in order to conserve her high level of performance in certain events or to test new elements under competition conditions. However, according to G. Schäfer's concept of combined events training, this type of training is not just a simple linking of the different forms of the special events but rather a continuous balancing of the different disciplines, in order eventually to achieve the best final result. For example, an emphasis on strength and throwing training would possibly lead to better throwing performances but the resulting increase in the athlete's body weight would possibly have a negative influence on the jumping events. Although a focus on endurance can improve the 800m time, it would at the same time have a negative influence on the sprinting events. This makes it clear that one should always consider whether a greater emphasis on one or two events in the training process could have a negative or positive effect.

Although Schäfer tries to use training sessions of high quality and intensity; more than eight training sessions per week cannot be carried out by Sabine Braun, since this would lead to a decline in performance.

Further discussion brought out the following points:
1) Technical training sessions of high quality and intensity, high concentration demands and of relatively short duration may be best suited to female athletes.
2) A female coach working with a female athlete may create a better motivational climate, reflecting greater sensitivity to the athlete's needs. However, this does not mean a softer approach. Sensitivity can be blended with a persistent pursuit of highest standards of quality work.
3) As far as strength development for the combined events is concerned, an optimal rather than a maximal level should be the objective. The athletes must be able to apply their strength effectively through a sound technique. Therefore, technical work must be constantly controlled and improved to achieve stability.
4) As compared with male athletes, female athletes need to continue to work on strength until later in the training year.
5) Coaches should clearly define objectives and identify development targets against an agreed annual profile of competition. Athletes need a sense of routine and the challenge of change. It is once again a matter of balance.
The following Tables 3 and 4 give an overview of development strategies.

### Table 3: Developing long term plan or theme, technical event

<table>
<thead>
<tr>
<th>Year</th>
<th>Common core features</th>
<th>Special emphasis</th>
<th>Lighter emphasis</th>
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<tbody>
<tr>
<td>1</td>
<td>1. running technique</td>
<td>pole vault - high jump</td>
<td>long jump - javelin</td>
</tr>
<tr>
<td></td>
<td>2. flexibility</td>
<td>discus</td>
<td>shot</td>
</tr>
<tr>
<td>2</td>
<td>1. running technique</td>
<td>shot - hurdles</td>
<td>long jump - javelin</td>
</tr>
<tr>
<td></td>
<td>2. flexibility</td>
<td></td>
<td>shot</td>
</tr>
<tr>
<td>3</td>
<td>1. running technique</td>
<td>discus - high jump</td>
<td>shot</td>
</tr>
<tr>
<td></td>
<td>2. flexibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1. running technique</td>
<td>hurdles</td>
<td>pole vault</td>
</tr>
<tr>
<td></td>
<td>2. flexibility</td>
<td>high jump</td>
<td>discus</td>
</tr>
<tr>
<td>5</td>
<td>1. running technique</td>
<td>long jump</td>
<td>shot</td>
</tr>
<tr>
<td></td>
<td>2. flexibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1. running technique</td>
<td>javelin - discus</td>
<td>high jump</td>
</tr>
<tr>
<td></td>
<td>2. flexibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>1. running technique</td>
<td>pole vault</td>
<td>high jump</td>
</tr>
<tr>
<td></td>
<td>2. flexibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. strength development</td>
<td>special/basic</td>
<td></td>
</tr>
</tbody>
</table>

According to Longden, the stages of development of young athletes are the following:

**Basic learning stage**

Adding skills to those already known or developing core elements for events not competed in.

**Accumulative stage**

Special work on weak events with the aim of points gain.

**Specific stage**

This is for the upper end of the young athletes' development, when it is possible to leave some events alone completely, to work on the higher skill levels required for future top performance.

It was generally deplored that all over the world coaches are confronted with the competition of other sports to an increasing extent. The young combined-events athletes do not only change over to individual disciplines, in which they hope to be more successful, before having achieved their peak performance age, but there are also increasingly fewer young athletes who choose athletics as their sport anyway. This situation can only be changed by making athletics more attractive for children and youths. The long training time which is necessary to achieve the limit of one's performance must not be regarded as the climb to a dangerous peak, full of privation. On the contrary, athletics should mainly be seen as a useful activity for leading a healthy life and as an opportunity for trying to find out one's own limits. In our society performance sport can only justify its existence if it is understood in this way.

By way of summary the following points can be extracted from the discussions:

1) All young people must be encouraged to try as many different movement activities as possible through sport. In athletics a multiple events start may be preferable to a combined events start.

2) If complex gymnastic and aerobic activities can be learned to a high level of sophistication by very young children, why does athletics wait until later?

### Table 4: Winter themes

<table>
<thead>
<tr>
<th>Month</th>
<th>General</th>
<th>Event specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>November</td>
<td>run 3x</td>
<td>general core activities for throws/jumps</td>
</tr>
<tr>
<td></td>
<td>flexibility 5x</td>
<td>pole vault short approach</td>
</tr>
<tr>
<td></td>
<td>fitness or basic strength 2x</td>
<td>long jump short approach</td>
</tr>
<tr>
<td>December</td>
<td>run 3x (2 track/1 long run)</td>
<td>pole vault lengthen approach</td>
</tr>
<tr>
<td></td>
<td>flexibility 5x</td>
<td>long jump, lengthen approach</td>
</tr>
<tr>
<td></td>
<td>fitness 2x</td>
<td>hurdles drills</td>
</tr>
<tr>
<td></td>
<td>strength 1 or 2x</td>
<td>shot drills</td>
</tr>
<tr>
<td>January</td>
<td>run 3x (2 track include hurdles, 1 longer run)</td>
<td>pole vault as above</td>
</tr>
<tr>
<td></td>
<td>flexibility 5x</td>
<td>long jump indoor competition</td>
</tr>
<tr>
<td></td>
<td>fitness 3x</td>
<td>hurdles 60m competition</td>
</tr>
<tr>
<td></td>
<td>strength 1/2x</td>
<td>discus throwing</td>
</tr>
<tr>
<td>February</td>
<td>run 3x (2 track include 1 longer run)</td>
<td>pole vault full approach</td>
</tr>
<tr>
<td></td>
<td>flexibility 5x</td>
<td>long jump full approach</td>
</tr>
<tr>
<td></td>
<td>fitness 3x</td>
<td>work hurdles 7/9</td>
</tr>
<tr>
<td></td>
<td>strength 1/2x</td>
<td>hurdles</td>
</tr>
<tr>
<td>March</td>
<td>run 4x</td>
<td>pole vault as above</td>
</tr>
<tr>
<td></td>
<td>1 short running</td>
<td>long jump full approach</td>
</tr>
<tr>
<td></td>
<td>1 longer running</td>
<td>work</td>
</tr>
<tr>
<td></td>
<td>1 hurdle</td>
<td>hurdles 10 (11)</td>
</tr>
<tr>
<td></td>
<td>1 steady state</td>
<td>shot</td>
</tr>
<tr>
<td></td>
<td>flexibility 5x</td>
<td>pole vault full approach</td>
</tr>
<tr>
<td></td>
<td>fitness 3x</td>
<td>long jump full approach</td>
</tr>
<tr>
<td></td>
<td>strength 1x</td>
<td>hurdles 10 (11)</td>
</tr>
<tr>
<td>April</td>
<td>run 4x (as above)</td>
<td>pole vault full approach</td>
</tr>
<tr>
<td></td>
<td>flexibility 5x</td>
<td>long jump full approach</td>
</tr>
<tr>
<td></td>
<td>fitness 3x</td>
<td>hurdles 10 (11)</td>
</tr>
<tr>
<td></td>
<td>strength 1x</td>
<td>javelin full approach</td>
</tr>
<tr>
<td>May</td>
<td></td>
<td>first competition</td>
</tr>
</tbody>
</table>
3) The children should be given the opportunity to learn the relevant techniques – and have an opportunity to put them into practice and give them an enjoyable level of personal challenge.

4) "Challenge" rather than "competition" is the key to that level of motivation which will attract young people to take up athletics and remain with it.

5) Athletics as a whole must be organised in a more attractive way. As a suggestion how this can be achieved, F. Dick presented the following example from Great Britain: There a play competition was created – called "Startrack" – which is carried out all over Great Britain every year after a big athletics event. Competitions are conducted under simplified or modified conditions. Instead of competing against one another, the main goal in these competitions is to manage a certain task or to try to perform a form of exercise. All participants are awarded a certificate bearing the names and autographs of the British medallists at the respectively previous top meet. This is an exemplary initiative!

The British "Five Star"* is also a good example in this context. The same applies to the German model mentioned above.

6) Involvement of the schools and schoolchildren in attractive open competitions, particularly with relays of any kind, interschool competitions, etc.

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8 Optimization of strength training
– Günter Tidow (Germany)

The title of this lecture is somewhat misleading because there was not enough time for Tidow to deal with the different aspects of strength training for the combined events. He rather repeated the thesis that speed-strength is the predominant quality of the decathlete, since eight of the ten events are basically determined by this physical quality.

Tidow presented a project conducted by the University of Bochum in co-operation with the Humboldt University of Berlin. The goal of this project is to discover, on a scientifically verifiable basis, how speed-strength can be improved.

However, the model experiment presented by Tidow requires quite extensive measurements and seems therefore feasible only in the area of top-level sport, although it may be possible to apply the basic principles to other levels.

1) Speed-strength can be improved only if maximum strength is also increased.

2) Maximum strength can be increased only if muscle mass is also increased.

Starting from these premises, a statistically large enough group of subjects was submitted to the following system of training:

Test exercise: bench press

1) 4 to 6 weeks of hypertrophy training twice a week.

   Load: 70 to 80% of the individual athlete's personal best performance / 6 to 8 repetitions / 3 sets.

   Rest interval: 1-3 min!! Short rest intervals are essential!

2) 2 to 3 weeks of maximum strength training, also twice a week at a load of 30 to 70% of the personal best performance / 3-20 repetitions / 5 sets / rest interval: 5 min.

   It is also extremely important, and this was verified using a series of measurements, that in speed-strength training the individual repetitions within a set should be separated by rest intervals of at least 5, or even better, 12 seconds duration, in order that they may be performed at maximum speed. This means that the athlete must put down the barbell after each trial in the course of a set, so that he is rested well enough to be able to press it up again at maximum speed. This kind of training requires a special arrangement of equipment, because the athlete will not be successful if he rests the barbell on his chest.

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* The 5 star award scheme was originated in 1967 by Tom McNab (at that time an Amateur Athletic Association National Coach) and inaugurated by the English Southern Counties Amateur Athletic Association. It is now conducted, very efficiently, by the Amateur Athletic Association of England (the scheme also covers Wales and N. Ireland).

Originally designed to encourage track and field athletics for all schoolboys and girls, aged 10 to 19, it now also includes race walking, cross country and special events for under 10 year olds, the physically disabled and for indoor athletics. It is basically a standards/triathlon competition for all levels of ability. Boys and girls are allowed to choose three events (for example, 1 field and 2 track or vice versa) and make any number of attempts throughout the year. Special scoring tables give appropriate points for each event (some events are modified for the younger age groups and the physically disabled) and another table indicates the total number of points needed to gain the various levels of award (1 to 5 Star). The award consists of a certificate and badge.
Example: Training pyramid

- Speed-strength training 2-4 reps
- Maximal strength training 2-3 reps
- Training for hypertrophy 4-6 reps
- Strength-endurance training 3-4 weeks.

At the beginning of winter training a preliminary phase of strength-endurance / circuit training should prepare the athlete for this training pyramid. This type of strength training is very suitable for building up the athletic form of an athlete. In order to achieve a peak performance this procedure is carried out in full. In the case of a double periodisation the athlete starts at the base of the pyramid after the first peak. Depending on the available time, the pyramid is carried out with or without strength endurance or with the use of shortened cycles.

The effect of this pyramid principle can be explained as follows: The effectiveness of the individual methods used – training for hypertrophy, maximum-strength training and speed-strength training – are well-known and scientifically confirmed. The important point is that speed-strength training alone, without changing the basics beforehand, does not lead to improvement of the parameters desired (here: maximally fast push-ups of the barbell during bench-pressing).

After a sufficiently long practice of the test exercise, all subjects reached their individual maximum speed-strength values relatively quickly, i.e. a certain peak force in the shortest time possible. Further continuation of speed-strength training did not lead to a significant improvement of this value; nor did an isolated training for hypertrophy lead to an improvement of speed-strength, in spite of increased strength values. Here muscle biopsies proved that there had been a shift of the fibre spectrum from fast to slow fibre types.

After six weeks of hypertrophy training almost no fast fibres could be verified. Really new and highly interesting was the finding that, after stopping hypertrophy training for a period of 4 to 6 weeks, the muscle fibre distribution returned to its original state, thus revealing that there had been a retransformation of the previous shift to slow contractions caused by hypertrophy training. Nowadays it is assumed that the ratio of fast, medium fast and slow muscle fibres is determined individually and genetically and that training can produce a shift only in the direction of the slow fibres and then only for a certain period of time. So far a shift to the fast fibres has not been verified.

This is the basis of the pyramid principle: if the percentage share of the fast fibres cannot be increased, the absolute share, i.e. the muscle mass, must be increased. Maximum training must be used so that the bigger muscle mass, which works slower after hypertrophy training, learns to work more effectively. Working with maximum loads leads to an increase in the rate of impulse transmission from the brain to the muscle. This means that more motor neurons (impulse transmitters at the muscle spindles) are addressed. The muscle learns to innervate a greater proportion of the muscle bundles. Under normal conditions human beings can only realize about 80% of maximum strength per muscle group. The organism keeps 20% as an autonomous reserve. The aim of maximum strength training is to make a small percentage of this protected reserve retrievable and thus usable.

The rate at which maximal-strength training returns the muscle fibre spectrum to its original state prior to the hypertrophy training is very slight. Therefore, during the test exercises no significant speed improvements may be expected, in spite of increased strength values. An increase in speed cannot be seen before the beginning the third phase of the training programme. During speed-strength training with low loads and sufficient rest intervals, even during the individual repetitions, there is a good retransformation rate of the muscle fibre spectrum to its original state. Within 3 to 4 weeks of speed-strength training the former fibre distribution can again be found. However, the higher strength level leads to a better speed-strength development.

The investigation presented by Tidow shows that none of the three strength training methods presented led to a significant improvement of speed-strength. Only a systematic linking together of these methods was successful and this was confirmed by the measurements taken. The investigation was conducted using the bench-press because this exercise can be easily learned so that disturbing factors, such as technique training and practising effects, do not influence the experiment. Furthermore, the bench press is commonly used in strength training.

Questions concerning the relevance of this training method to combined events training were answered as follows: This method can be used for the removal of speed-strength deficits in the throws as well as in the jumps. Since the special strength training is carried out only twice a week, there is still sufficient time for technique and conditioning training.
The technique training should be oriented according to the different strength training cycles. The technique objective must be adapted to the state of the athletes' speed-strength during the current cycles. During the maximum strength phase, sprint and jump training should be regulated very carefully. At this time there is also a high risk of injury because of the very high muscle tone!

The subsequent discussion showed that coaches desire the development of devices which can be used during training for both execution and control, without having to go back to laboratory apparatus. This should be an aspect of further research and development. The question was also raised in regard to possible racial differences which might influence the stimulus and effect of strength training. Do black and white people, for example, have different white and red fibre ratios?

9 International Decathlon Club

As the planned speaker, the former German decathlete Christian Schenk, unfortunately did not arrive, the presentation of this topic by Frank Dick was very brief and general. A brief statement was made about the German "Zehnkampf-Team" and the goals of this team were explained. All nations participating in the congress agreed that an International Decathlon Team would be desirable for the popularization of the combined events and for international cooperation. However, there were no concrete suggestions about how such a team could be formed in the foreseeable future. Even the proposal of the German "Zehnkampf-TEAM", presented during a press conference after the decathlon competition at the World Championships in Stuttgart in 1993, to form an International Decathlon team has so far met with little response. What is lacking is a 'board' to be responsible for the administration and execution of such a project. All want to do something but nobody does anything!

10 Training and competition planning

- Frank Dick (Great Britain)

According to F. Dick the planning of training is of a fundamental character. Coach and athlete jointly want to achieve a goal. In order to achieve a great final goal, perhaps an Olympic medal, a record performance or just a new personal best, short-term and medium-term goals are always necessary. These goals must be formulated and aimed at. Furthermore, the coach must know that the path to the desired goal is never straight but that an advance in performance always includes phases of stagnation or even steps backwards.

The training plan for a season starts with the peak competition and goes back to the beginning of the preparation period (this is also the case in planning the training over a period of many years). The test competitions should be determined and then the training phases in preparation for these competitions should be marked on a calendar.

Thus, starting from the yearly plan, one arrives at different training and competition phases, which can be called macrocycles. Macrocycles can be subdivided into microcycles which most simply are represented by weekly blocks. A series of microcycles may sometimes be linked together as mesocycles. However, all forms of divisions are possible, if they allow a useful combination, the principles of training method.

As far as the combined events are concerned, it was pointed out that, although a considerable alternation is desired with regard to the development of the technique elements, one should never lose sight of the basic work for strength, speed and endurance. Also, a double periodisation is recommended for the combined events athlete, because, according to the opinion of most of the coaches present, the athlete needs a change in training and competition. If the training phases are too long, the athlete will tend to consider training as an end in itself and the actual goal, competition, as a secondary aim.

Finally it was once again pointed out very clearly that the training plan must be tailored very individually to the athlete and all possible internal and external factors must be considered. The athlete cannot achieve everything that the coach desires because of constraints regarding time, money or physical ability. The effectiveness of planning depends on the analysis of all these factors.

Further results of the workshop discussions were:
1) Coaches should realise that there will always be a need to re-adjust and modify the original training plans.
2) Athletes will normally not do more than 3 to 4 decathlons per season.
3) The preparatory programmes of decathletes and heptathletes should be based on double periodisation.
4) Most combined events athletes have time constraints imposed on their preparation
through work or study. Only the very best are full-time athletes. Consequently, whether aiming for the compact programme approach (e.g. Sabine Braun) or the comprehensive approach (e.g. Daley Thompson), the actual programme will be a compromise of some kind.

5) The design of rehabilitation programmes requires considerable first-hand experience. A future EACA conference or workshop should provide guidelines for such a design.

11 The combined events as a basis for the development of athletes
   - Angel Alicea (Puerto Rico)

The speaker gave a short overview of athletics performances in the Central American and Caribbean regions. With the exception of Cuba, which has a special position in this context, the performance standard of this region is very low. However, according to Alicea, this cannot be because of a lack of potential, as is shown by the example of Cuba; the cause must be fundamental faults in developing young athletes to their peak performance age.

Alicea pointed out that during the last two years the emphasis of coach education had been on high-level sport. This led to the fact that the educated coaches start top-performance training with their young athletes very early, without having laid an appropriate basis. Although this resulted in very good performances during the youth or junior age ranges, it was not possible to improve performance after this and only a very few exceptional athletes achieved international level. From all of this one must conclude that the underdeveloped regions possess hardly any training base and particularly no competition structure. So far, there have been no competitions for very young athletes such as are held in many European countries.

It was only as recently as in 1992 that a system was established in Puerto Rico, imitating the Cuban competition programme. This programme starts with eight year old children and includes the 40 metres sprint, long jump, ball throw for distance, 400 metres and the 1000 metres, run as a distance event.

Specialisation takes place only at the age of 15. There are both regional and national competitions for these young athletes.

The report from the Central America and Caribbean region was also significant because it clearly showed that errors in working with young athletes eventually have a performance-limiting effect for the whole sport.

All congress participants stressed that very young athletes in particular should be offered a broad range of events and competitions. The emphasis should be on achieving a certain goal rather than on competing against one another. A combined events badge should be offered to colt athletes at all levels. For this badge a special scoring system should be developed, to include different age groups and as many events as possible. It should also be possible to carry out the tests for this multiple-events badge in school. Athletics must be made more interesting for children and anything to be borrowed from other sports would be entirely welcome. However, care should be taken that the combined events are part of a many-sided education and must not be seen as a special event replacing many-sided basic training!

12 Combined events grand prix
   - Konrad Lerch (Austria)

Concluding the congress K. Lerch presented his ideas for making the combined events more attractive. He argued that, even in athletics, the financial component is becoming more and more important. Regardless of one’s attitude towards this, the trend towards professionalism is not reversible. There are many competitions for the individual events, both on a national and international level, and top athletes in these events have no difficulty in attracting the interest of the media and potential sponsors.

Combined events athletes do not have similar possibilities for demonstrating their class. They can participate in 3 to 5 combined events competitions a year, at the most. On top of this, the prize money offered at these competitions is very low. For this reason, many young athletes either do not take up the combined events in the first place or they change to individual events, as, for example, the Bulgarian Svetlana Dimitrova, who won the heptathlon in Götzis in 1993 and then changed over to the hurdles event, in which she became European Champion in 1994 and the top hurdler of that year. As a Grand Prix winner she could earn $80,000 through hurdlings whereas, in the combined events, in spite of her exceptional performances, she would have won only a fraction of this amount.

In Konrad Lerch’s view, therefore, it was essential for the IAAF to establish a special Grand Prix for the combined events, in order to increase its attractiveness.
His proposal, which he suggested could be implemented very soon after 1996, is: The currently existing international combined events meetings in May (in Götzis/Austria) and in September (in Talence/France) should form the framework for the international top meeting, similar to the World or European Championships or the Olympic Games. The first 20 athletes in the World list would be eligible to compete and the winners and placed athletes would be given points, which would be added together at the end of the season. For the participants a certain pool of prize money would be available. The possibility of winning a great amount of money increases the prestige of a sport or event, both in the minds of the public and the athletes. This is a well-known phenomenon, which Lerch presented in a completely unbiased way.

In addition, he suggested that certain modifications to the organisation of a combined events competition should considered. For example, in events where the athlete's final position is governed by the total number of points gained, the actual winner cannot be identified immediately at the end of the competition. The official result is presented only after a long process of calculation and after an additional check in the competition bureau. For non-experts it is often unsatisfactory to see how the athlete who leads the competition is perhaps the last to finish the 1500 metres race and nobody knows for sure whether he has maintained his point lead or whether someone has caught up with him.

Therefore, Lerch proposed a procedure similar to the one used in the Nordic combination or other combined events: For the final event the athlete who is the leader after nine disciplines starts first, i.e. he is given a start corresponding to his lead in points, as calculated in the 1500 metres scoring table. The athlete in second place is given a corresponding start before the third one, etc., so that all runners start one after the other. The athlete finishing first would also be the winner of the whole decathlon, which would be clearly obvious to all spectators! This type of handicap race (which could also be used for the final 800 metres race of the heptathlon) would give the combined events competition more excitement and would also be very attractive to the media.

Lerch added that he had already talked about this with manufacturers of time-measurement devices who saw no difficulty in conducting such a competition. In order to avoid the risk of a possible false start, measurement barriers are conceivable where – similar to alpine skiing – the start barrier opens only when the correct point in time is signalled. In order to realise very short time intervals one could work with two start barriers. As far as measurement technique is concerned, there are no great problems here. Nor is it planned to transfer this method of organising the 1500 metres race to all levels of competition. It should be used only for important competitions with a good media coverage.

However, the IAAF would have to agree to an appropriate modification of the rules, so that possible records would be recognized. Lerch maintained that, in the face of increased competition from other sports, the internal rules must be adapted more flexibly to new conditions, in order to maintain or even increase public interest. There is a danger that the two day decathlon or multi-day championships become boring for the spectators in our fast-moving times. This danger must be seen and countermeasures must be taken. We must not become paralysed in tradition and boredom!

13 Conclusion

The expectations of participants who had come to this congress in the hope of being confronted with fundamentally new approaches to combined-events training had certainly been too high. However, the workshops and discussion groups gave abundant opportunities for exchanges of opinions on all levels of performance, so that the congress, from this point of view, left nothing to be desired. Those who wanted to learn something and did not neglect the chance of discussing their problems surely got their money's worth. As is frequently the case with such congresses, the real value lay in the informal talks which developed in the breaks, during lunch or in the evenings. However, this does not mean that the lectures were useless. Rather the opposite is true. Each lecture was an introduction to the following workshops, in which interesting points were developed. Unfortunately, lack of time and the fact that not all the speakers were present during the whole time of the congress sometimes prevented a more complete development of the various topics.

14 Varia

14.1 At the General Assembly of the members of the EACA the President, Frank Dick, delivered a report on his term of office from 1991 to 1995.
In the following new elections, Frank W. Dick (GBR) was confirmed in his office as President and Erika Strasser (AUT) and José M. Ballesteros (ESP) were also confirmed as Vice-Presidents. Helmar Hommel (GER) was elected as the new Secretary. Further members of the Council are: Peter Bonov (BUL), François Juillard (FRA), Dane Korica (YUG), Elio Locatelli (ITA) and Jarmo Mäkelä (FIN).

14.2 At the subsequent Council Meeting the following preliminary programme for the future congresses and workshops was confirmed:

1996  “The role of speed in athletic events” (Rome/Italy)
1997  “Youth development in practice”
1998  “Women at the top”
1999  “Endurance events”
2000  “Technology in coaching”
2001  “Strength events”.

14.3 Demand from coaches regarding the weights and measures of implements and equipment. The coaches present made a proposal that, on an international level, the shot and discus used by junior athletes (up to 19 years, men) should have the following weights: shot: 6.25kg, discus: 1.75kg. The height of the 110 metres hurdles should be 1.00 metre. This resolution should be presented to the EAA and the IAAF through the national federations in order to change the rules correspondingly.

14.4 Hungarian proposal of a Combined-Events-Grand-Prix system. Independent of the proposal made by Konrad Lerch, the Hungarian colleagues had also drawn up a plan for a Combined-Events Grand-Prix prior to the congress.